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By

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**The Illusionistic Pergola in Italian Renaissance Architecture:
Painting and Garden Culture in Early Modern Rome, 1500-1620**

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by

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To E & E.

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Natsumi Nonaka, Ph.D.

The University of Texas at Austin, 2012

Supervisors: Miroslava Beneš, Rabun Taylor

The present dissertation is intended to be the first systematic investigation of the illusionistic pergola considered within the framework of the intellectual culture and the garden culture of early modern Rome. The subject is the fresco or mosaic decoration featuring a pergola – a depicted trelliswork covered with plants and peopled with birds – in the loggias, porticoes, and garden pavilions of villas and palaces in Rome and its environs. These pictorial fictions have survived in sufficient numbers to constitute a decorative trend, and moreover, appear in clusters at specific periods, which can be partly explained by means of the cultural factors predominant at the time. The dissertation discusses these pergolas in relation to antiquarian culture, the collecting of plants and birds, the study of natural history, garden furnishings and the art of treillage, thereby contextualizing them within the culture of early modern Rome.

The dissertation assembles the first corpus of illusionistic pergolas in the period 1500-1620, updating a much earlier general corpus of 1967 by Börsch-Supan, and distinguishes three distinct periods of the proliferation of these pictorial fictions in Rome and its environs: the first period (1517-1520), the second period (1550-1580), and the

third period (1600-1620). Important cultural issues relevant to each period are identified, and proposed as the frameworks for study. These include the reference to the antique and to the vernacular, mediation between indoors and outdoors, the tension between art and craft and the ambiguity of the pseudo-architectural, semantic and aesthetic cross reference between architecture and garden, and the reflection of the intellectual culture.

On examination, the illusionistic pergolas are revealed to be a nexus of interrelationships between built structure, ornamented surface, garden and landscape, as well as multivalent embodiments of emerging ideas and sensibilities concerning the experience of architectural space and nature. By taking into account the middle ground of architecture and garden, the study explores the multivalence of ephemeral garden furnishings and their fictive counterparts, opening up a new perspective on the sites examined, and attempts to see a resonance of the tradition in modern times.

CONTENTS

List of Illustrations	x
1 Introduction	1
2 Antiquity and the Classical Tradition	11
Etymological review	11
Agricultural literature.....	14
Ancient Roman gardens	20
Boscoreale luxury villa	31
Nile Mosaic of Palestrina	38
Santa Costanza	42
Catacomb paintings	48
3 Early Sources	54
Architectural drawings	55
Medieval and early Renaissance writers	57
Crescenzi: <i>Il libro della agricoltura</i>	61
Francesco Colonna: <i>Hypnerotomachia Poliphili</i>	67
Madonna of the pergola	72
Jacopo Tintoretto	78
Jacopo de' Barbari: <i>Map of Venice</i>	81
Du Cerceau	85
Giusto Utens	89
Dutch and Flemish garden prints	93
4 Illusionistic Pergolas in Rome I: 1517-1520	97
Lexicographical review	98
Views and visibility	100
Quattrocento Roman houses	105
Giovanni da Udine	110
La Farnesina	114
Loggetta of Cardinal Bibbiena	118
First Loggia of Leo X	121
5 Real Pergolas in Rome and its Environs	136
Pergolas and the art of treillage	138
Giardino segreto of Paul III	142
Approach to the Villa Giulia	149
Ghinucci garden on the Quirinal	154
Villa d'Este at Tivoli	157
Pergolas in French gardens	163

6	Illusionistic Pergolas in Rome and its Environs II: 1550-1580	169
	Central and northern Italy: precedents for Rome	169
	The illusionistic pergola: second period	174
	First Loggia of Gregory XIII	177
	Studiolo of Ferdinando	178
	Villa Giulia	179
	Villa d'Este at Tivoli	188
	Villa Farnese at Caprarola	192
	Green architecture at Caprarola	207
7	Illusionistic Pergolas in Rome and its Environs III: 1600-1620	215
	Palazzo Altemps	219
	Casa Zuccari	225
	Villa Aldobrandini at Frascati	227
	Villa Grazioli (Acquaviva-Montalto)	229
	Palazzo Pallavicini Rospigliosi	231
	Villa Lante at Bagnaia	235
	Borghese Aviary	238
	Villa Falconieri at Frascati	242
8	The Illusionistic Pergolas between Myth and Science	245
	Artists of nature	247
	Gardens as display spaces and museums of natural history	252
	Scholars of natural history	255
	Horticultural treatises	265
9	Epilogue	275
	Appendix 1: List of illusionistic pergolas in Italy, 1500-1700	284
	Appendix 2: Herbals and the study of plants	287
	Appendix 3: Botanical gardens in sixteenth-century Italy	299
	Illustrations	312
	Bibliography	596

LIST OF ILLUSTRATIONS

1.1 Villa Giulia, semicircular portico	313
1.2 Palazzo Altemps, loggia of the piano nobile	314
2.1 House of Octavius Quartio, Pompeii, plan	315
2.2 House of Octavius Quartio, Pompeii, reconstruction of the garden	316
2.3 House of Octavius Quartio, Pompeii, view of the terrace garden	317
2.4 House of Octavius Quartio, Pompeii, axial view of the lower garden	317
2.5 House of the Stags (IV, 2) and House of the Mosaic Atrium (IV, 1-2), Herculaneum	318
2.6 House of the Stags, Herculaneum, view of the pergola from the north	319
2.7 House of the Stags, Herculaneum, view of the pergola from the south	319
2.8 Hadrian's Villa, Tivoli, Canopus Canal	320
2.9 House of the Vettii, Pompeii, Yellow Oecus	321
2.10 Boscoreale Villa, Cubiculum M	322
2.11 Boscoreale Villa, Cubiculum M, north wall, right panel	323
2.12 Villa of the Mysteries, Pompeii, Cubiculum 16, Alcoves A and B	324
2.13 Oplontis Villa, Cubiculum 11	325
2.14 Boscoreale Villa, Cubiculum M, north wall, right panel, detail	326
2.15 Nile Mosaic of Palestrina	327
2.16 Nile Mosaic from Palestrina, section 19 with pergola	328
2.17 Nile Mosaic from Palestrina, section 19, Berlin piece	329
2.18 Nile Mosaic from Palestrina, section 19, Dal Pozzo copy	330
2.19 Santa Costanza, Annular vault of the ambulatory, section IX with vintage scene.	331
2.20 Columbarium of Pomponius Hylas, interior	332
2.21 Francisco de Hollanda, drawing of the interior of Santa Costanza	333
2.22 Francisco de Hollanda, drawing of Santa Costanza cupola and sarcophagus	334
2.23 Santa Maria Maggiore, mosaic of the apse, detail with fishing putti	335
2.24 Pietro Santi Bartoli, cupola decoration of Santa Costanza, after Francisco de Hollanda	336
2.25 Pietro Santi Bartoli, cupola decoration of Santa Costanza, after Francisco de Hollanda	336
2.26 Pietro Santi Bartoli, cupola decoration of Santa Costanza, after Francisco de Hollanda	337
2.27 Pietro Santi Bartoli, cupola decoration of Santa Costanza, after Francisco de Hollanda	338
2.28 The Brescia Casket, back side	339
2.29 Aquileia, Basilica, floor mosaic	340
2.30 Jonah scenes in the Catacomb of Calixtus	341
2.31 William Tronzo, decorative system of the Via Latina Catacomb cubiculum B	342
2.32 Catacomb of Domitilla, vault decoration type 1	343
2.33 Catacomb of Petrus and Marcellinus, vault decoration type 1	344
2.34 Catacomb of Calixtus, vault decoration type 2	345
2.35 Catacomb of Priscilla, vault decoration type 2	346
2.36 Catacomb of Petrus and Marcellinus, vault decoration	347
3.1 St. Gall Monastery, plan	348
3.2 Plan of the Christ Church Priory at Canterbury by Prior Wibert (1165)	349
3.3 Boccaccio, <i>Decamerone</i> (1492), titlepage by De Gregori	350
3.4 Illustration from a manuscript of Boccaccio's <i>Decamerone</i>	350

3.5	Ambrogio Lorenzetti, <i>The Effects of Good Government on the Countryside</i> , detail	351
3.6	Limbourg Brothers, <i>Très Riches Heures du Duc de Berry</i> , The Month of April	352
3.7	Limbourg Brothers, <i>Très Riches Heures du Duc de Berry</i> , The Month of June	353
3.8	Palazzo Schifanoia, Ferrara, Hall of the Months, Labors of the Month of March	354
3.9	Pieter Brueghel the Younger, <i>Spring</i>	355
3.10	Pieter van Heyden after Pieter Brughel the Elder, <i>Spring</i>	356
3.11	Woodcut showing an Italian farmstead from Crescenzi (1492 edition)	357
3.12	Woodcut showing a typical garden with a pergola from Crescenzi (1495 edition)	358
3.13	Illustration from a French manuscript of Crescenzi	359
3.14	<i>Hypnerotomachia Poliphili</i> , Poliphilus and the nymph (before the encounter)	360
3.15	<i>Hypnerotomachia Poliphili</i> , Poliphilus and the nymph (after the encounter)	361
3.16	<i>Hypnerotomachia Poliphili</i> , the Adonaia	362
3.17	<i>Hypnerotomachia Poliphili</i> , the Adonaia with Venus and child	363
3.18	<i>Hypnerotomachia Poliphili</i> , the Adonaia with music-making nymphs	364
3.19	Giovanni Boccati, <i>Madonna of the pergola</i>	365
3.20	Giovanni Boccati, <i>Enthroned Madonna</i>	366
3.21	Giovanni Boccati, <i>Madonna of the Orchestra</i>	367
3.22	Stefano da Verona, <i>Madonna and Child with St. Catherine in a Rose Garden</i>	368
3.23	Stefan Lochner, <i>Madonna in the Rose Arbor</i>	369
3.24	Cima da Conegliano, <i>Madonna of the Vine Arbor</i>	370
3.25	Cima da Conegliano, <i>Madonna and Child with Musical Angels and Saints</i>	371
3.26	Cima da Conegliano, <i>Madonna under the Orange Tree</i>	372
3.27	Cima da Conegliano, <i>Virgin and Child with John the Baptist and Mary Magdelene</i>	373
3.28	Andrea Mantegna, <i>Madonna of the Victory</i>	374
3.29	Andrea Mantegna, <i>The Story of St. James</i> , St. James before Herod Agrippa	375
3.30	Andrea Mantegna, <i>The San Zeno Altarpiece</i> , San Zeno, Verona	376
3.31	Andrea Mantegna, <i>The Story of St. Christopher</i> , the martyrdom of St. Christopher	377
3.32	Andrea Mantegna, <i>Minerva expelling the Vices out of the Garden of Virtue</i>	378
3.33	Lucas Cranach the Elder, <i>Madonna of the Vine Arbor</i>	379
3.34	Jacopo del Sellaio, <i>The Banquet of Ahasuerus</i>	380
3.35	Jacopo Tintoretto, <i>Suzanna and the Elders</i> , Prado, Madrid	381
3.36	Jacopo Tintoretto, <i>Suzanna and the Elders</i> , Kunsthistorisches Museum, Vienna	381
3.37	Jacopo Tintoretto, <i>Suzanna and the Elders</i> , National Gallery of Art, Washington	382
3.38	Jacopo Tintoretto, <i>The Miracle of the Slave</i> , Gallerie dell'Accademia, Venice	383
3.39	Jacopo Bertoja, Room of Ariosto, Palazzo del Giardino, Parma	384
3.40	Jacopo de' Barbari, Map of Venice, bottom left corner	385
3.41	Jacopo de' Barbari, Map of Venice, bottom center	385
3.42	Jacques Androuet Du Cerceau, Blois, general view	386
3.43	Jacques Androuet Du Cerceau, Gaillon, general view	386
3.44	Jacques Androuet Du Cerceau, Gaillon, Lydieu	387
3.45	Jacques Androuet Du Cerceau, Montargis, general view	387
3.46	Jacques Androuet Du Cerceau, Montargis, Pergola Gallery	388
3.47	Jacques Androuet Du Cerceau, model for marquetry	388
3.48	Giusto Utens, <i>Villa Medici at Il Trebbio</i>	389
3.49	Giusto Utens, <i>Villa Medici at Cafaggiolo</i>	389
3.50	Giusto Utens, <i>Villa Medici at Ambrogiana</i>	390
3.51	Giusto Utens, <i>Villa Medici at La Petraia</i>	390
3.52	Hans Vredeman de Vries, <i>Hortorum Viridariorumque Formae</i> , Ionica 13	391

3.53 Hans Bol, <i>La Primavera</i> (1580)	392
3.54 David Vinckboons, <i>Venetian Party in a Château Garden</i>	393
4.1 The House of Cardinal Bessarion, view of the loggia	394
4.2 The House of the Knights of Rhodes, Rome	395
4.3 Fresco fragment from the Casa dei Castellini da Castiglione	396
4.4 Villa Baldassare Turini (Villa Lante al Gianicolo), view from the loggia	397
4.5 Palazzo Farnese, exterior, southwest façade	398
4.6 Raphael and Giovanni da Udine, <i>Santa Cecilia</i>	399
4.7 Raphael and Giovanni da Udine, <i>The Miraculous Draught of Fish</i>	400
4.8 Giovanni da Udine's preparatory drawing/Giovanni Volpato's drawing of Pilaster VII	401
4.9 La Farnesina, Loggia of Cupid and Psyche, view of the vault	402
4.10 La Farnesina, Loggia of Cupid and Psyche, view from the loggia towards the garden	402
4.11 Loggia of Cupid and Psyche, detail of the festoons	403
4.12 Loggia of Cupid and Psyche, detail of the festoons	403
4.13 Loggia of Cupid and Psyche, detail of the festoons	404
4.14 Loggetta of cardinal Bibbiena, exterior, from the Cortile del Pappagallo	404
4.15 Loggetta of Cardinal Bibbiena, general view	405
4.16 Loggetta of Cardinal Bibbiena, stylized pergola with animals	406
4.17 Loggetta of Cardinal Bibbiena, grotesque composition	407
4.18 First Loggia of Leo X, view from the north end	408
4.19 First Loggia of Leo X, decorative scheme of the vaults	409
4.20 First Loggia of Leo X, Vault II	410
4.21 First Loggia of Leo X, Vault V	411
4.22 First Loggia of Leo X, Vault IX	412
4.23 First Loggia of Leo X, vault decoration with vine pergola	413
4.24 First Loggia of Leo X, vault decoration with pergola and jasmine	414
4.25 First Loggia of Leo X, vault decoration with pergola and melangoli	415
4.26 Ancient Roman relief with acanthus scrolls, Uffizi, Florence	416
4.27 Giovanni da Udine, Pilaster IX in the Loggia of Raphael	417
4.28 Tabularium, Rome, interior	418
4.29 Stufetta of Cardinal Riario, Palazzo della Cancelleria, decoration of the vault	419
4.30 Jacques Androuet Du Cerceau, a plate from <i>Fragments d'architectures antiques</i>	420
5.1 Mario Cartaro, View of the Belvedere	421
5.2 Mario Cartaro, Map of Rome, detail with the Vatican area	422
5.3 Stefano Duperac/ Antonio Lafrery, Map of Rome, detail with the Vatican area	423
5.4 Baldassare Peruzzi, plan for a garden with a pergola, drawing	424
5.5 Giovanni Antonio Dosio, Map of Rome, detail with the Vatican and the Villa Giulia	425
5.6 Mario Cartaro, Map of Rome, detail with the Tiber River, the pergola, the Villa Giulia	425
5.7 Villa Farnese at Caprarola, Room of the Farnese Hours, Entry into Paris	426
5.8 Giovanni Colonna da Tivoli, Plan of a pergola for the Ghinucci garden	427
5.9 Giovanni Colonna da Tivoli, Details of the pergola for the Ghinucci garden	428
5.10 Giovanni Colonna da Tivoli, Section of the barrel-vaulted arms	429
5.11 Jacques Androuet Du Cerceau, Gaillon, detail with the parterre garden	430
5.12 Varro's Aviary, engraving after Pirro Ligorio	431
5.13 Girolamo Muziano, fresco depicting the Quirinal Garden	432
5.14 Raffaellino da Reggio, fresco depicting the Quirinal Garden	433
5.15 Stefano Duperac, Villa d'Este at Tivoli	434
5.16 Giovanni Battista Piranesi, <i>Villa d'Este at Tivoli</i>	435

5.17	Girolamo Muziano, fresco depicting the garden of the Villa d'Este at Tivoli	436
5.18	Villa d'Este at Tivoli, view from the loggia towards the garden and beyond	437
5.19	Girolamo Muziano, fresco of the long wall	438
5.20	Curzio Macarone, Fountain, Salone, Villa d'Este at Tivoli	439
5.21	Jacques Androuet Du Cerceau, Bury	440
5.22	Jacques Androuet Du Cerceau, Beauregard	440
5.23	Jacques Androuet Du Cerceau, Montargis, parterre gardens and the pergola gallery	441
5.24	Jacques Androuet Du Cerceau, Gaillon, Hermitage of Lydieu	442
5.25	Henri Mauperché, Château of Liancourt	443
6.1	Giovanni da Udine, Sala degli foliami, Palazzo Grimani at Santa Maria Formosa, Venice ..	444
6.2	Baldassare Peruzzi and Giorgio di Giovanni, loggia, Palazzo Belcaro, Siena	445
6.3	Giorgio di Giovanni, loggia, Palazzo Chigi-Saracini, Siena	446
6.4	Correggio, Refectory of the Abbess, Camera di San Paolo, Parma	447
6.5	Andrea Mantegna, vault decoration, Camera Picta, Palazzo Ducale, Mantua	448
6.6	Parmigianino, Saletta di Diana e Atteone, Rocca San Vitale, Fontanellato	449
6.7	Dosso Dossi, Camera delle Cariatidi, Villa Imperiale, Pesaro	450
6.8	Palazzo Vecchio, Florence, Marco da Faenza, ceiling of the stairs	451
6.9	Palazzo Vecchio, Florence, Marco da Faenza, ceiling of the stairs	452
6.10	Palazzo Vecchio, Florence, Marco da Faenza, ceiling of the stairs	453
6.11	Grotto of Buontalenti, First Chamber, Boboli Gardens, Florence	454
6.12	Grotto of Buontalenti, Second Chamber, Boboli Gardens, Florence	455
6.13	Grotto of Buontalenti, Third Chamber, Boboli Gardens, Florence	456
6.14	Andrea del Sarto, <i>Tribute to Caesar</i> , Salone, Villa Medici at Poggio a Caiano	457
6.15	Bacchiacca, <i>The Gathering of Manna</i> , National Gallery of Art, Washington	458
6.16	Niche of the Unicorn, Grotto of the Animals, Villa Medici at Castello	459
6.17	Alessandro Allori, vault decoration, Palazzo Pitti, Florence	460
6.18	Palazzina Marfisa, Ferrara, Loggia degli Aranci, ceiling decoration	461
6.19	Cristoforo Gherardi, decoration of the loggia, Palazzo Vitelli, Città di Castello	462
6.20	Cristoforo Gherardi, decoration of the loggia, Palazzo Vitelli, Città di Castello	463
6.21	Cristoforo Gherardi, decoration of the loggia, Palazzo Vitelli, Città di Castello	464
6.22	First Loggia of Gregory XIII, decorative scheme of the vaults	465
6.23	First Loggia of Gregory XIII, Vault III	466
6.24	First Loggia of Gregory XIII, Vault VIII	467
6.25	First Loggia of Gregory XIII, Vault IX	468
6.26	Villa Medici, Rome, Studiolo of Ferdinando, vault decoration, Jacopo Zucchi	469
6.27	Villa Giulia, semicircular portico, vault decoration, type (A) pergola	470
6.28	Villa Giulia, semicircular portico, vault decoration, type (A') pergola	471
6.29	Villa Giulia, semicircular portico, vault decoration, detail	472
6.30	Villa Giulia, semicircular portico, vault decoration, type (B) pergola	473
6.31	Villa Giulia, semicircular portico, vault decoration, octagonal opening in rose trellis	474
6.32	Villa Giulia, semicircular portico, vault decoration, type (C) pergola	475
6.33	Villa Giulia, semicircular portico, vault decoration, oval and diamond openings in trellis ..	476
6.34	Villa Giulia, semicircular portico, vault decoration, octagonal opening in vine trellis	477
6.35	Villa Giulia, semicircular portico, vault decoration, octagonal opening in vine trellis	478
6.36	Villa Giulia, view of the Villa Giulia and the Fontana Pubblica	479
6.37	Fontana Pubblica on the via Flaminia, hypothetical reconstruction	480
6.38	Villa Giulia, View of Sunken Nymphaeum, by Hieronymus Cock/Antonio Lafrery	481
6.39	Villa d'Este at Tivoli, mosaic and stucco pergola	482

6.40 Villa d'Este at Tivoli, mosaic and stucco pergola, detail	483
6.41 Villa d'Este at Tivoli, rustic fountain in the corridor on the garden level	484
6.42 Villa Farnese at Caprarola, plan by Giuseppe Vasi	485
6.43 Design drawing of the Villa Farnese at Caprarola by Vignola	486
6.44 Villa Lante at Bagnaia, Palazzina Gambara, fresco depicting the Villa Farnese	487
6.45 Villa Farnese at Caprarola, Pergola in front of the Fountain of the Deluge	488
6.46 The main street of Caprarola, looking back from the Palazzo	489
6.47 Villa Farnese at Caprarola, circular portico, ground level	490
6.48 Villa Farnese at Caprarola, Sala del Mappamondo	491
6.49 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 1W	492
6.50 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 1N	493
6.51 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 2W	494
6.52 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 2N	495
6.53 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 3W	496
6.54 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 3N	497
6.55 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 4W	498
6.56 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 4N	499
6.57 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 5W	500
6.58 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 5N	501
6.59 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 6W	502
6.60 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 6N	503
6.61 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 7W	504
6.62 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 7N	505
6.63 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 8W	506
6.64 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 8N	507
6.65 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 9W	508
6.66 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 9N	509
6.67 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 10W	510
6.68 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 10N	511
6.69 Villa Farnese at Caprarola, loggia (Room of Hercules)	512
6.70 Villa Farnese at Caprarola, corridor of the tower	513
6.71 Villa Farnese at Caprarola, corridor of the tower, detail of vault	514
6.72 Castello Sforzesco, Milan, Sala delle Asse by Leonardo Da Vinci	515
6.73 Villa Farnese at Caprarola, Fountain of Venus, illusionistic pergola on the vault	516
7.1 Matteo Greuter, View of Frascati, detail with the Villa Belpoggio	517
7.2 Palazzo Giustiniani-Odescalchi, Bassano Romano, loggia	518
7.3 Palazzo Altemps, loggia with illusionistic pergola	519
7.4 Palazzo Altemps loggia, vault decoration, second bay from the entrance	520
7.5 Palazzo Altemps, loggia, a pair of hip herms and ram's heads framing a bird	521
7.6 Palazzo Altemps, loggia, terracotta vase with lilies, putti and the Orsini bear	522
7.7 Palazzo Altemps, loggia, white vase with roses, a turkey, putti playing with an ostrich	523
7.8 Palazzo Altemps, loggia, terracotta vases with carnations myrtle, and white flowers	524
7.9 Palazzo Altemps, loggia, first lunette, rear wall, three putti and an ostrich	525
7.10 Palazzo Altemps, loggia, right lunette above entrance, three putti and the Orsini bear	526
7.11 Palazzo Altemps, loggia, left lunette above entrance, three putti and the Altemps ram	527
7.12 Palazzo Altemps, loggia, painted carved wood support of the pergola	528
7.13 Casa Zuccari, Rome, vestibule, vault decoration	529
7.14 Casa Zuccari, Rome, loggia, vault decoration	530

7.15 Villa Aldobrandini at Frascati, view from the north	531
7.16 Villa Aldobradini at Frascati, view from the north terrace onto the Roman Campagna	532
7.17 Matteo Greuter, View of Frascati (1620), detail with Villa Aldobrandini	532
7.18 Domenico Barriere, Villa Aldobrandini at Frascati, plan	533
7.19 Villa Aldobrandini at Frascati, View of the Water Theater	534
7.20 Giovanni Battista Falda, Villa Aldobrandini at Frascati, Room of Apollo	535
7.21 Villa Aldobrandini at Frascati, Room of Apollo, vault decoration	536
7.22 Villa Grazioli (Acquaviva-Montalto), gallery of the piano nobile, vault decoration	537
7.23 Palazzo Pallavicini Rospigliosi, Loggia della Pergola, vault decoration	538
7.24 Palazzo Pallavicini Rospigliosi, Loggia della Pergola, vault decoration, first bay	539
7.25 Palazzo Pallavicini Rospigliosi, Loggia della Pergola, vault decoration, third bay	540
7.26 Tarquinio Ligustri, View of the Villa Lante at Bagnaia	541
7.27 Villa Lante at Bagnaia, Palazzina Gambarà and Palazzina Montalto	542
7.28 Villa Lante at Bagnaia, Palazzina Gambarà, fresco with the view of the Villa Lante	543
7.29 Villa Lante at Bagnaia, Palazzina Montalto, interior of the loggia	544
7.30 Giovanni Pietro Olina, <i>Uccelliera</i> (1622), an aviary	545
7.31 Palazzo Lancellotti, Sala della pergola, vault decoration	546
7.32 Villa Borghese, Rome, Aviary Pavilion	547
7.33 Joseph Heinz, View of the Villa Borghese	547
7.34 Villa Borghese, Aviary Pavilion, fresco with birds by Annibale Durante	548
7.35 Villa Falconieri, Frascati, Stanza della Primavera, Giovanni Francesco Grimaldi	549
8.1 Otto Brunfels, <i>Herbarum vivae eicones</i> (1530), titlepage	550
8.2 Otto Brunfels, <i>Herbarum vivae eicones</i> (1530), wild daffodil and spring snowflake	551
8.3 Otto Brunfels, <i>Herbarum vivae eicones</i> (1530), violets	552
8.4 Leonhart Fuchs, <i>De historia stirpium</i> (1542), chap.239, cherry tree	553
8.5 Leonhart Fuchs, <i>De historia stirpium</i> (1542), chap.254, rose	554
8.6 Leonhart Fuchs, <i>De historia stirpium</i> (1542), portrait of Fuchs	555
8.7 Leonhart Fuchs, <i>De Historia Stirpium</i> (1542), portraits of the three artists	556
8.8 Pedanios Dioscorides, <i>De Materia Medica</i> , Codex Vindobonensis, asphodel	557
8.9 Pedanios Dioscorides, <i>De Materia Medica</i> , Codex Vindobonensis, bramble	558
8.10 Pietro Andrea Matthioli, <i>Commentaries of De Materia Medica</i> , 1598, titlepage	559
8.11 Wolfgang Meyerpeck and Giorgio Liberale, sea lavender carved into a block of wood	560
8.12 Jacopo Ligozzi, Mourning iris	561
8.13 Jacopo Ligozzi, Cypress vine	562
8.14 Giovanni Battista Falda, Plan of the Horti Farnesiani	563
8.15 Cardinal Pio's garden, from Ferrari <i>Hesperides</i> (1644)	564
8.16 Museum of Francesco Calzolari in Verona	565
8.17 Museum of Ferrante Imperato in Naples	566
8.18 Museum of Ferdinando Cospi in Bologna	567
8.19 The Roman College Museum of Athanasius Kircher	568
8.20 Giovanni Battista Ferrari, <i>Flora</i> (1633), titlepage	569
8.21 Giovanni Battista Ferrari, <i>Flora</i> (1633), The Metamorphosis of Limace and Bruno	570
8.22 Giovanni Battista Ferrari, <i>Flora</i> (1633), The Metamorphosis of Melissa	571
8.23 Giovanni Battista Ferrari, <i>Flora</i> (1633), an arrangement of cut flowers	572
8.24 Giovanni Battista Ferrari, <i>Flora</i> (1633), an arrangement of cut flowers	573
8.25 Giovanni Battista Ferrari, <i>Flora</i> (1633), a vessel for the display of cut flowers	574
8.26 Giovanni Battista Ferrari, <i>Flora</i> (1633), a classicizing vase holding cut flowers	575
8.27 Giovanni Battista Ferrari, <i>Flora</i> (1633), a classicizing vase holding cut flowers	576

8.A1	Jacob Meydenbach, <i>Hortus Sanitatis</i> (1491), illustration of narcissus	577
8.A2	Conrad von Megenberg, <i>Buch der Natur</i> (1478), illustration of plants	578
8.A3	<i>Carrara Herbal</i> (1390-1400), two pine trees	579
8.A4	<i>Carrara Herbal</i> (1390-1400), vine	580
8.A5	<i>Liber de simplicibus</i> or Herbal of Benedetto Rinio (1419), poppy	581
8.A6	Hans Weiditz, drawing of a water lily for Brunfels' <i>Herbarum vivae eicones</i>	582
8.A7	View of the Horti Medici Pisani (botanical garden at Pisa)	583
8.A8	Plan of the botanical garden at Padua, Girolamo Porro, <i>Horto dei Semplici di Padova</i>	584
8.A9	View of the botanical garden at Padua, Jacopo Tomasini, <i>Gymnasium patavium</i>	585
8.A10	Circular design for a garden of medicinal plants, Olivier de Serres	586-7
8.A11	Square design for a garden of medicinal plants, Olivier de Serres	588-9
9.1	Dumbarton Oaks, Washington D.C., Wisteria Arbor (winter)	590
9.2	Dumbarton Oaks, Washington D.C., Wisteria Arbor (summer)	591
9.3	Library of Congress, Jefferson Building, vault and lunette decoration	592
9.4	Library of Congress, Jefferson Building, vault and lunette decoration	593
9.5	Smithsonian Castle, entrance vestibule	594
9.6	Smithsonian Castle, entrance vestibule, ceiling decoration	595

1

INTRODUCTION

The present study is intended to be the first systematic investigation of a characteristic form of architectural decoration in sixteenth- and early seventeenth-century Italy – the illusionistic pergola. The term is used to designate the pictorial decoration of a pergola – a trelliswork covered with climbing plants and peopled with birds and small animals – in the architectural space of loggias, porticoes, and garden pavilions in the villas and palaces of early modern Italy (figs.1.1-2). Major villas and palaces in Rome and its environs that have been relatively well studied for their architecture and gardens often had an illusionistic pergola. By using the word illusionistic, I intend not just to refer to the ornamented surface but also to evoke the spatial dimension of the decoration. The marked characteristic of these pergolas is their illusionism, which involves them in a larger dimension of spatial relationships between ornamented surface, built structure, gardens and the larger landscape.

These fictive pergolas have survived in sufficient numbers in Rome and its environs to constitute a decorative trend, and moreover, appear in clusters at distinct periods.¹ We see a proliferation of these decorations, first in the 1510s, second from 1550 to 1580, and third from 1600 to 1620. After the third period, we see relatively few of them, and they appear to have fallen out of vogue. In this study, we will refer to these three periods of the proliferation of the illusionistic pergola as the first, second and third periods. On basis of these manifestations of the illusionistic pergola, our chronological scope is defined from 1500 to 1620. This type of decoration is also seen in Tuscany, Emilia-Romagna, Veneto, and Lombardy, but the examples from these regions do not

¹ Cf. Appendix 1: List of illusionistic pergolas in Italy, 1500-1700.

appear to have constituted a decorative trend in the same way as those in Rome and its environs. The central and northern Italian examples were limited within the sphere of the patronage of a single family, to non-recurrent sporadic manifestations, or to imitations following the trend in Rome. Consequently, our geographical focus will be primarily on Rome and Lazio, and relevant examples from other regions will be brought in as parallels as necessary. The majority of the examples are in fresco, and relatively few are in mosaic or painted stucco, hence our emphasis on painting as the primary medium of these decorations. The study will also seek to shed light on garden furnishings and the art of *treillage* or trelliswork that played a significant role in the garden culture of the time. As the depiction of the pergola would more or less have been modeled on real pergolas in contemporary gardens, it is necessary to consider the real pergolas alongside other ephemeral green architecture.

It is appropriate to situate these three periods in the cultural context of sixteenth-century Rome. The first period corresponds to the antiquarian revival in Rome, when Raphael and his workshop dominated the artistic production. From the early decades of the sixteenth century, a conscious adoption of antique forms and design principles was the dominant current in the artistic milieu of the papal capital. Artists studied and looked to antique architecture for ideas, and designed buildings and landscapes to emulate the grandeur of classical antiquity. This first manifestation of painted pergolas was short-lived, only a matter of about five years, and confined to the city of Rome. The commissions were mostly papal or from the papal entourage. After 1520, we witness a period of relative inactivity in regard to the creation of illusionistic pergolas until around 1550, when these pictorial fictions reappear, this time in the villas in the environs and the hilltowns around Rome. From 1550 until 1580, we see a number of painted pergolas created in the major villas in Lazio as well as in the palaces within the city. The patrons of this period were the powerful aristocratic families – the Medici, the Este, and the Farnese – as well as the cardinals and aristocrats in the ambit of these families, who had obtained a social base in Rome from the first half of the sixteenth century. After a brief interruption of about two decades, the illusionistic pergolas were again created from the

turn of the seventeenth century to 1620. These were commissioned by the newly emerging families, who established themselves in the papal capital from the second half of the sixteenth century, the Borghese and the Aldobrandini among them.

The story of the illusionistic pergola is inextricably related to the classical tradition and the culture of natural history. The pergola played an important role in the social and cultural life of Roman antiquity, as a dining pergola, a vine-covered pavilion, or a shady promenade. Renaissance Italy saw a strong revival of ancient forms, and antique motifs and notions were adopted and ancient customs reenacted in the decorated space of the illusionistic pergola. The painted pergolas also reflected the introduction of new species of flora and fauna and the development of natural history studies. The painted pergolas are fundamentally about horticulture, and their depiction of various plant species in realistic manner make them a showcase of botanical collections and a reflection of the intellectual culture of the period. The pergola is not just a garden furnishing with a utilitarian or ornamental function, but a ‘horti-cultural’ structure, namely a garden structure embedded with cultural meanings. The pergola is a cultivated ‘hortus’ in the vertical dimension so to speak. Although its use and popularity waxed and waned according to cultural concerns, its revival in the period 1880-1930 is suggestive of the timeless significance of the pergola, which continues to find a resonance in modern architecture and landscape design. Considering the recurring use of the pergola, both fictive and real, in interior, garden, and landscape designs from antiquity to the present, the study of the pergola and its painted form is key to the understanding of, and is expected to be a catalyst in the rethinking of, man’s relationship to nature and the landscape. By taking into account the middle ground of architecture and garden, the study explores the multivalence of pictorial fictions and ephemeral garden furnishings, opening up a new perspective on the sites examined, and attempts to see a resonance of the tradition in modern times.

Although examined in some detail or mentioned in passing in the individual

studies dedicated to the buildings to which they belong, the illusionistic pergolas have never been considered as a theme in its own right from a comparative and synthetic viewpoint. By virtue of their quantity, quality, and content, as well as their importance in the ornamentation of Italian Renaissance architecture, they deserve careful documentation, study, interpretation, and contextualization.

Eva Börsch-Supan was the first person in modern art history scholarship to propose a broad perspective on motifs and depictions of nature. Her *Garten-, Landschafts- und Paradiesmotive im Innenraum: Eine ikonographische Untersuchung* (1967) provides a solid groundwork for the study of the depiction of nature, through its documentation of garden and landscape depictions and motifs of nature in interior decoration, as well as its wide chronological and geographical scope covering ancient Egypt and Mesopotamia to eighteenth-century Germany.² The focus is on the iconographical aspect of the illusionistic pergolas, and close attention is paid to details. This work became the starting point for my investigation, and I owe much to it for the basic information on the major examples. The core of my ever-expanding list of illusionistic pergolas derives from the examples treated in her chapter on Renaissance and Mannerism. It is also Börsch-Supan who first used the term ‘illusionistic pergola.’ In a section entitled by the same term, she discusses the illusionistic pergolas in northern Italy as well as the major examples in Rome and Lazio.

Angela Negro’s *Il giardino dipinto del Cardinal Borghese* (1996) is a monograph on the Loggia della Pergola on the Quirinal commissioned by Scipione Borghese and painted by Paolo Bril and Guido Reni in 1611-1612. Negro identifies the sixteenth-century tradition of painted pergolas, and points out the use of the decoration in spaces immersed in nature and serving as mediation between indoors and outdoors.³ The Italian word ‘pergola’ or ‘pergolato’ is used to refer to such depictions. Negro cites examples of the so-called Madonna della Pergola, and also touches briefly on the connection of the painted pergola with the classical tradition. The work refers to the Vatican Loggias and the semicircular portico of the Villa Giulia, as well as works contemporary to the Loggia

² Börsch-Supan 1967, 251-260.

³ Negro 1996, 51.

della Pergola, namely the decoration of the cloister of Santa Maria sopra Minerva and the Palazzo Lancellotti, both in Rome. A number of works focused on a single site also discuss the illusionistic pergola, among them, Philippe Morel's "Un teatro di natura" in *La Villa Médicis* (1991), Patrizia Cavazzini's *Palazzo Lancellotti ai Coronari* (1998), and Isabella Dalla Ragione's *Tenendo inanzi frutta* (2009) on the Palazzo Vitelli a Sant'Egidio in Città di Castello and Castello Bufalini in San Giustino in Umbria. These are excellent works in terms of the documentation and the descriptive analysis of the iconography and the interpretation of the illusionistic pergolas.

Maria Adriana Giusti's chapter "Illusione del giardino" in Fagiolo and Giusti's richly illustrated volume *Lo Specchio del Paradiso: L'immagine del giardino dall'Antico al Novecento* (1996),⁴ is no doubt an excellent source on the pictorial depiction of gardens including illusionistic pergolas. It differs from Negro's work, a monograph on a single site, in that it is thematically structured. By using the term 'illusion,' Giusti suggests the ephemerality and the theatrical quality of the garden. She also identifies the origins of the illusionistic representation of nature in classical antiquity, the issue of the transition between indoors and outdoors, and the fusion of architecture and nature.

Alongside works on painted pergolas, those relevant to real pergolas also need mention. David Coffin's *Gardens and Gardening in Papal Rome* (1991) includes a section on pergolas in the chapter on garden design and furnishings.⁵ It provides a valuable documentation of pergolas from the tenth to the sixteenth century in Rome and its environs. Claudia Lazzaro's *The Italian Renaissance Garden* (1990) is an enormous contribution to the study of planting in Italian Renaissance gardens, and contains mention of the pergola in various parts of the book. Katherine Swift and Paul Edward's *Pergolas, Arbours and Arches* (2001) is a guidebook to England's historic gardens with surviving pergolas and arbors and a practical manual for constructing such garden furnishings. It contains a set of essays by garden historians, which provide a rough outline of the pergolas in ancient, medieval, and early modern Europe, as well as Victorian England and the modern and contemporary periods, and thus delineate a continuity of the pergola

⁴ Fagiolo and Giusti 1996, 30-41.

⁵ Coffin 1991, 178-181.

tradition.

A unique approach to pergolas is proposed in a chapter in a survey of decorative arts, Alain Gruber (ed.), *History of Decorative Arts: Renaissance and Mannerism* (1994). Gruber, in the chapter on knotwork or interlace, approaches the topic from a broad perspective, and insightfully includes examples of painted trelliswork featuring knotwork. The examples discussed are the painted pergolas created in the cultural centers of northern Italy by Mantegna, Correggio, and Parmigianino. Gruber points out the existence of ephemeral structures that were put up for processional or theatrical purposes, and which have not survived except in paintings and trompe-l'œil decorations.⁶ Gruber's statement raises an important issue for the study of the pergola and similar ephemeral architecture in the visual arts. The possibility of situating them within the rich history of knotwork or interlace ornament opens up a fruitful avenue for us to pursue in our study of the painted pergolas.

However, it still remains for us to consider the illusionistic pergolas for what they may have been, namely a cultural phenomenon of the Renaissance and a kind of formal and artistic code for the expression of cultural identity on the part of the patrons. Given the lack of a systematic study on the illusionistic pergola that provides both concrete descriptive information and cultural context, my intention is to undertake a first attempt for such a comprehensive work. I am aware that the objective is far too ambitious to be accomplished within the scope of a dissertation. The present study will build on Börsch-Supan's groundbreaking work, strives for a refinement and an update on the corpus for the period 1500-1620, and proposes an adequate framework for the contextualization of the subject.

Because the illusionistic pergolas have not hitherto been studied systematically, our first task is to make a preliminary catalogue of the major examples, to examine the iconography and style of their painted form, and to classify them in chronological

⁶ Gruber 1994, 78.

categories. The main objective of this study is to interpret them within the framework of the classical tradition and the intellectual and garden culture, thereby situating them in the cultural context of early modern Rome. It defines the illusionistic pergola as a Renaissance invention, a cultural phenomenon that started in Rome in the early sixteenth century. My ultimate purpose is not merely to characterize these exquisite pictorial fictions as cause and effect, but to excavate some of the emotional and intellectual impulses behind their emergence. The illusionistic pergolas are revealed to be a nexus of interrelationships between built structure, ornamented surface, garden and landscape, as well as multivalent embodiments of emerging ideas and sensibilities in regard to the experience of nature. Bound into these ideas and sensibilities, however, are more fundamental values and strategies that reflect the cultural dynamics of early modern Rome.

The two chapters following the Introduction, namely chapters 2 and 3, provide a historical survey of precedents and prototypes, and the background for the study proper of our illusionistic pergolas. Chapter 2 focuses on the pergola in Roman antiquity; depictions of the pergola in ancient Roman and Late Antique art, archaeological remains of gardens in the Vesuvian region, as well as the treatment of pergolas in the agricultural literature will be discussed. Chapter 3 focuses on the depiction and treatment of the pergola in literary texts, painting and the graphic arts from the early medieval period to the seventeenth century. Italy remains our main focus, but the countries north of the Alps – France, the Netherlands, and England – will also be covered. Early illustrated books, maps, prints and drawings represent the pergola as fully integrated in the pleasure garden, in some cases indulging fanciful designs. With the diffusion of printing and the wide circulation of printed illustrated books and prints, the pergola gains a significant presence in the world of garden prints and illustrations. There, it starts to develop a virtual life of its own, independent of that of its real counterpart in the garden.

Chapters 4 through 7 constitute the core of our study of the illusionistic pergola. Because this is the first systematic study undertaken of the illusionistic pergola, a significant part of each chapter will be devoted to the descriptive analysis of the

decorations. The architectural context of the painted pergola, as well as its function as a space for the experience of nature will be taken into consideration. Attention will also be paid to the painted pergola's possible interaction with other prominent features within or relevant to the compounds, and its place and function within the larger scheme of the circulation system of the entire estate.

Chapter 4 focuses on the first period of the proliferation of illusionistic pergolas in Rome, 1517-1520. The popes and cardinals, the so-called princes of the Church, were the major patrons of these works. The chapter begins with an etymological survey of the loggia, as the loggia was the semi-interior space frequently decorated with nature motifs. It also includes a survey of quattrocento Roman loggias, and the discussion of the notion of the view, which was an important design concept in loggias. My argument anchors the involvement of Giovanni da Udine, one of the painters in Raphael's workshop, in all projects of the painted pergola from this period. Giovanni da Udine, a painter trained in northern Italy and specializing in the depiction of nature, is credited as the inventor of the illusionistic pergola, in that he first applied the design in an architectural space of considerable scale.

Chapter 5 focuses on the real pergolas in the villas and gardens of Rome and its environs in the sixteenth century. The design and the construction technique of the pergola, as well as its use in the larger system of circulation networks within the estate will be discussed. The villa was a locus of a lively interaction with nature and the sensuous experience of the outdoors, engaging the visual, aural, olfactory and haptic senses to the full. A heritage of the classical tradition, the villa epitomized the values of the *rus* and *otium*, as an antithesis to the *urbs* and *negotium*. The informality of the villa extended beyond its material manifestations, and embraced the liberation and relaxation of the mind.

Chapter 6 focuses on the second period of the proliferation of the illusionistic pergolas in Rome and its environs, 1550-1580. The examples from this period constitute the finest examples of the illusionistic pergola, in terms of artistic quality, spatial effect, and scale. These are mainly found in the villas in the environs or the hilltowns around

Rome. Commissioned by the powerful aristocratic families who established themselves in Rome from the early sixteenth century, the Medici, the Farnese, and the Este among them, the illusionistic pergolas of this period were used in representational spaces as tools of dynastic display and visual encyclopedias of flora and fauna. They were decorations of semi-interiors – mediating spaces situated along the blurring boundary of indoors and outdoors, such as loggias, porticoes, and garden pavilions. These pictorial fictions developed in parallel with ephemeral green architecture – real pergolas, walkways covered with vegetation, and tree houses – which were equally ambiguous spaces in terms of indoor-outdoor relationships. During the second period, real pergolas and painted pergolas were consciously used in combination within the same estate as aesthetic and semantic counterpoints.

Chapter 7 focuses on the third period of the proliferation of the illusionistic pergolas in Rome and its environs, 1600-1620. Created under the patronage of families who arrived in Rome from the second half of the sixteenth century – the Borghese and the Aldobrandini among them – the painted pergolas from the third period are characterized by the variety of the depicted flowers and birds, as well as a marked emphasis on elaborate design. They also represented the new botanical and ornithological species introduced from the Orient or the Americas: thus they embody the collecting culture widespread among the educated class at that time. The painted trelliswork reflected the practice of treillage, which was developing into a highly sophisticated art. The appearance of the painted pergolas in clusters, as outlined above, reveals the social competition and cultural emulation among prominent aristocratic families in early modern Rome.

Chapter 8 provides the context of the intellectual culture, the background of the illusionistic pergolas. It is by no means an exhaustive survey of relevant topics, but a selection of major issues that would highlight the intersection between the artistic manifestations and the cultural context, key figures among artists and scholars, displays of collections in gardens and museums, and horticultural treatises, among them. It proposes the hypothesis that the coexistence of myth and lore with scientific interest in

the mentality of the intellectuals of the age formed the cultural climate from which the illusionistic pergolas sprang and in which they flourished.

Our story concludes with an epilogue on the meaning and legacy of the illusionistic pergola, ending with its revival in Europe and in the United States around the turn of the twentieth century.

ANTIQUITY AND THE CLASSICAL TRADITION

Prior to the discussion of the painted pergola in Renaissance Rome, it is necessary to trace the development of the pergola and examine how it has been represented in literary and artistic sources since classical antiquity. This chapter will cover the pergola in the Roman world from the Republican period to the Late Antique period. In antiquity, the pergola appears prominently in the following three areas: first, agricultural and villa literature; second, archaeological remains of gardens; and third, pictorial representations in domestic and funerary contexts. The first area consists of practical writings on viticulture, in particular by Columella, and the letters of Pliny the Younger, which include the description of pleasure villas. The second area concerns the gardens of Pompeii and other centers of the Vesuvian region, as those are the sites that have been best documented so far. The third area covers a wide range of pictorial representations executed in fresco and mosaic. Among the examples treated are the more or less straightforward depictions of pergolas – the fresco from the Boscoreale luxury villa and the Nile mosaic of Palestrina. Also included are the examples more evocative in terms of relevance – the vault decorations of Santa Costanza and late antique catacombs around Rome whose architectural and ornamental structure bears a formal similarity to the illusionistic pergolas of the Renaissance.

Etymological review

It is appropriate to begin our discussion of the pergola in Roman antiquity from the basic overview of the etymology and the lexical connotations of the word. Salvatore Battaglia's modern Italian dictionary, *Grande dizionario della lingua italiana* (1986)

gives us the most familiar definition of the ‘pergola’ in the modern sense: “a framework covered with climbing plants, most typically vine, used as a decorative feature in gardens.”*¹ The listed sources show that the word had been used in this sense since as early as the thirteenth century. However, the original meaning of the Latin word ‘pergula,’ from which the modern Italian word ‘pergola’ was derived, was not the ornamental garden structure covered with climbing plants, but a modest appendage to a building, often with a utilitarian function. Dictionaries of the Latin language and encyclopedias of antiquity all list “a more or less open attachment in front of a building, serving as booth, shop, or stall” as the primary meaning, and “a framework supporting vine” comes only second.² Georges Lafaye, author of the entry ‘pergula’ in *Dictionnaire des antiquités grecques et romaines*, mentions that the word, derived from the verb ‘pergere’ (to go forward), may originally have been used to mean an open passage linking parts of an estate, as seen in the pergola in the Boscoreale cubiculum painting (c. 40 B.C.), and that from there, a prolonged trellis in the form of a tunnel covered with vegetation along a promenade came to be included in the meaning of the ‘pergula.’³ The etymology of the word seems to suggest a connotation of forward movement.⁴

* Translations of Latin and Italian texts are mine unless otherwise indicated.

¹ Armatura costituita da graticci di legno o di ferro, orizzontali o incurvati a formare una volta a botte, sostenuti da due file di colonnine o anche appoggiati su un lato al muro di un edificio, funge da sostegno per piante rampicanti e specialmente per le viti, dando luogo a gallerie vegetali che sono spesso allestite a scopo ornamentale nei giardini.

² Cf. *Thesaurus Linguae Latinae* (1900-); Lewis-Short *Oxford Latin Dictionary* (1996); Pauly-Wissowa, *Paulys Real-encyclopädie der classischen Altertumswissenschaft* (1903-); Saglio ed., *Dictionnaire des Antiquités Grecques et Romaines* (1877).

³ Saglio, Edmond (ed.), *Dictionnaire des Antiquités Grecques et Romaines*, Paris: Hachette, 1877, v.4, 392-393: “Le mot semble avoir désigné à l’origine un passage non clos (etym *pergere*) mettant en communication diverses parties d’une même propriété ... De là vient qu’on l’a appliqué par exemple à une treille dont les arceaux se prolongent le long d’une allée [*trichila* = bower, arbor, summer house].”

⁴ In English, the word *pergola* has two different meanings: first, a garden structure for walking through, consisting of a usually wooden framework covered with vegetation; second, a bower or vegetal canopy above a seating area. The connotation of movement in the first forms a contrast to the sedentary character of the second. The word *arbor* was also used with both meanings, thus interchangeably with *pergola* (*Oxford English Dictionary*, 1989). The French *berceau* (Emile Littré, *Dictionnaire de la langue française*, 1957-1960) and the Italian *pergola* (Salvatore Battaglia, *Grande dizionario della lingua italiana*, 1986) also had both meanings, and were used with both sedentary and kinesthetic implications. The English *pergola* was derived from the Italian *pergola*, which in turn had its origins in the Latin *pergula*.

The usage of the word in its primary meaning seems to have been far more common than in the second. The primary meaning itself was a rather loose definition designating any kind of space that is attached to a main building, often of a temporary or flexible character. The ‘pergula’ could be a space used for various purposes, not only for mercantile activity, such as a banker’s or money-exchanger’s shops,⁵ but also for artists’ studios and show-rooms, classrooms for young pupils, dining spaces in front of an inn.⁶ Given the preference of the ancient Romans for outdoor dining, the pergola as an outdoor space of an inn appears to have been significant, as we see a number of references to inns equipped with a pergola.⁷

Sometimes the ‘pergula’ was located not in front of a building but in the upper part of it, usually above a shop or store.⁸ Wallace-Hadrill refers to ‘pergula’ as an “upper room.”⁹ The common feature was that the ‘pergula’ was not a solid structure, but a flexible space that could be easily adapted to the needs and condition of the locus. More often referring to modest structures made of inexpensive makeshift materials, the word came to be used metaphorically in the expression “natus in pergula” to mean a person of humble origin.¹⁰ It appears that, contrary to the modern assumption, plants were initially not considered the essential component of the ancient Roman pergola. Rather than the aesthetic aspect of the design, the function of the structure and the space it constituted would have been its foremost characteristic. Since there is an example of the usage of the word ‘trichila’ (arbor or bower) and ‘pergula’ in the same sentence, we can assume that there would have been an awareness of the distinction between the two. ‘Trichila’ probably meant the trellis that provided a shady space beneath it that was used for dining. While ‘pergula’ could have had the same meaning, it would also have been used with a

⁵ Pliny *Naturalis Historiae* 21.8: argentarium sua pergula in forum prospexisse (the money-exchanger has his shop facing the forum).

⁶ CIL, IV 138: locantur tabernae cum pergulis suis (Inns with pergolas to let).

⁷ Année Epigr. 1968 n.165 [Etr.; saec. II]: tabernas cum pergulis ... aedificare (to build inns with pergolas). Année Epigr. 1986 n. 25 (*Romae*; a. 6): trichilam cum pergulam et pavimento (*in sepulcro communi*) (pavilion with pergola and pavement).

⁸ Suet. Aug. 94.12: Theogenis mathematici pergulam ... ascenderat (Ascended to the room of the mathematician Theogenes).

⁹ Wallace-Hadrill 1994, 130; 132.

¹⁰ Petronius, *Satyricon*, 74,14: hic in pergula natus est, aedes non somniatur (one born in an upper room of a shop does not dream of a house).

connotation of movement, with emphasis on the kinesthetic movement necessitated by the passage through that space.

Agricultural literature

An essential component of Roman agricultural treatises is the section on viticulture in which vine-training is described in detail. By looking at the relevant sections in the writings by Cato, Varro, Columella and Palladius, we will be able to observe when the word ‘pergula’ first started to be used in the context of viticulture.

While the earliest Roman agricultural manual by Cato (234-149 B.C.) does not mention any kind of trellis or support for the vine,¹¹ Varro (116-27 B.C.) gives us more details on vine-training.¹² Varro mentions two types of supports for the vine: *pedamenta* and *iuga*. *Pedamenta* are stakes or props on which the vine runs vertically; *iuga* can be translated “yokes,” on which the vine runs transversally.¹³ There were four types of *pedamenta* or props: 1) *ridica* (a stout post of oak or juniper); 2) a stake made from a tough branch; 3) a bundle of reeds tied together with bark and placed in *cuspides* (earthenware pipes with open bottoms); 4) *rumpi* or natural prop (formed by the vines growing across from tree to tree).¹⁴ There were also four types of *iuga* or ‘yokes’ according to the material and the regions in which they were used: 1) poles; 2) reeds; 3)

¹¹ Marcus Porcius Cato, *De Agri Cultura*, XXXII-XXXIII.

¹² Marcus Terrentius Varro, *Res Rustica*, I.viii.

¹³ Varro, *Res Rustica*, I.viii.1: Quibus stat rectis vinea, dicuntur pedamenta; quae transversa iunguntur, iuga; ab eo quoque vineae iugatae. (Those on which the vine runs vertically are called *pedamenta* (stakes) and those on which it runs transversely are called *iuga* (yokes); and from this comes the name ‘yoked vines.’) (translation Loeb edition).

¹⁴ Varro, *Res Rustica*, I. viii.4: Pedamentum item fere quattuor generum: unum robustum, quod optimum solet afferri in vineam e quercu ac iunipiro et vocatur ridica; alterum palus e pertica, meliore dura, quo diuturnior; quem cum infimum terra solvit, puter evertitur et fit solum summum; tertium, quod horum inopiae subsidio misit harundinetum. Inde enim aliquot colligates libris demittunt in tubulos fictiles cum fundo pertuso, quas cuspides appellant, qua umor adventicius transire posit. Quartum est pedamentum nativum eius generis, ubi ex arboribus in arbores traductis vitibus vinea fit, quos traduces quidam rumpos appellant. (Likewise, there are, as a rule, four types of props. The best for common use in the vineyard is a stout post, called *ridica*, made of oak or juniper. The second best is a stake made from a branch, and preferably from a tough one, so that it will last longer; when one end has rotted in the ground the stake is reversed, and what had been the top becoming the bottom. The third, which is used only as a substitute when the others are lacking, is formed of reeds; bundles of these, tied together with a bark, are planted in what they call *cuspides*, earthenware pipes with open bottoms so that the casual water can run out. The fourth is the natural prop, where the vineyard is formed of vines growing across from tree to tree; such traveses are called *rumpi*.) (translation Loeb edition).

cords; 4) vines;¹⁵ and two types according to their form: 1) ‘yokes’ in straight lines; 2) ‘yokes’ both lengthways and sideways in the form of a compluvium.¹⁶ The latter form, also mentioned by Columella¹⁷ and Pliny the Elder,¹⁸ was a vine-trellis of rectangular form – a framework sloping inwards from the four corners towards a quadrangular opening at the center, so called from its formal resemblance to the Roman house-roof.

It is interesting to note that the word ‘pergula,’ in reference to viticulture, which did not appear in the works of Cato or Varro, started to be used by Columella (first century A.D.), a contemporary of Pliny the Elder (A.D. 23/24-79). Columella’s *Res Rustica* is a comprehensive treatise arranged systematically in twelve books covering all aspects of agriculture and husbandry, from the choice of land and arrangement of farm buildings, soil and crops, cultivation of fruit trees, olive and the vine, to the keeping of cattle and other domestic animals, poultry, fish, and bees. Columella mentions a variety of vine called the vitis ‘pergulana,’¹⁹ but Pliny the Elder does not mention it in his discussion of the variety of vines grown in Italy.²⁰ The name is more likely to have been derived from a toponym than from a variety of vine particularly suited to be grown on pergolas as Lafaye presumes.²¹ What is more important is that Columella refers to a type of vine-training not mentioned in earlier authors. In a passage describing the properties of the Aminean variety, he remarks that the vine is “so fruitful that on a single trellis they

¹⁵ Varro, *Res Rustica*, I.viii.2: Iugorum genera fere quattuor, pertica, harundo, restes, vites; pertica ut in Falerno, harundo ut in Arpano, restes, ut in Brundisino, vites, ut in Mediolanensi. (Four kinds of ‘yokes’ are usually employed, made respectively of poles, of reeds, of cords, and of vines: the first of these, for example, around Falernum, the second around Arpi, the third around Brundisium, the fourth around Mediolanum.) (translation Loeb edition).

¹⁶ Varro, *Res Rustica*, I.viii.2: Iugationis species duae, una directa, ut in agro Canusino, altera compluviata in longitudinem et latitudinem iugata, ut in Italia pleraeque. (There are two forms of trellising: in straight lines, as in the district of Canusium, or yoked lengthways and sideways in the form of the *compluvium*, as is the practice generally in Italy.) (translation Loeb edition).

¹⁷ Columella, *Res Rustica*, IV.xxiv.14: iugorum compluvia (roof-like trellises) (translation Loeb edition).

¹⁸ Pliny the Elder, *Naturalis Historia*, XVII.164: compluviatae quadriplici (trellised with four bars in a rectangle); XVII.166: compluviata copiosior vino est, dicta a cavis aedium compluviis (More wine is produced by a rectangle-frame vineyard [the name is taken from the rectangular openings in the roofs of the courts of houses]) (translation Loeb edition).

¹⁹ Columella, *Res Rustica*, III.ii.28.

²⁰ Pliny the Elder, *Naturalis Historia*, XIV.34-43.

²¹ *Dictionnaire des antiquités grecques et romaines*, vol.4, 392.

yielded three *urnae*, while on pergolas they produced ten *amphorae* to each vine.”²² From the way it is brought into contrast with the traditional trellis, namely the *iuga* mentioned by Varro, we may suppose that the *pergula* would have been a relatively new type of vine support that had come into use sometime around the turn of the first century A.D. In the treatise by Palladius (fourth century A.D.), ‘pergula’ and ‘iuga’ are used to refer to two different types of vine-training.²³ Pliny the Elder mentions that not just vine grapes of high quality but other varieties were also grown on pergolas,²⁴ and that gourds and cucumbers were grown on pergolas too.²⁵ Pliny also mentions the species to be used for support – willow, poplar, reed, chestnut, and oak,²⁶ the chestnut preferred above all others, because of its durability and abundance. Columella mentions the species that were coppiced for the provision of props, frames and withies for the vineyards – the osier-willow, the reed, and the chestnut.²⁷

Later writers refer to the aesthetic dimension of the cultivated landscape, the second nature according to Cicero.²⁸ The flourishing vine covering a vast expanse of the

²² Columella, *Res Rustica*, III.ix.2: ita fertiles ut in iugo singulae ternas urnas praeberent, in pergulis autem singulae denas amphoras peraequant (translation Loeb edition).

²³ Palladius, III.xii.5: quae altius coluntur, ut in iugo vel pergula (vine that are grown higher, on yokes or on a pergola).

²⁴ Pliny the Elder, *Naturalis Historia*, XVII.215: vitium generosarum pergulas quinquatribus putandas It is said that espaliers for vines of high quality should be cut about March 19th-23rd; XIV.42: In pergulis vero seruntur escariae appellatae e duracinis, albae nigraeque (The kind called ‘table-grapes,’ one of the hard-berry group, are grown on trellises – they are both white and black.) (translation Loeb edition).

²⁵ Pliny the Elder, *Naturalis Historia*, XIX.69: aliqui malunt ex kal. Mart. cucurbitas et nonis cucumeres et per Quinquatrus serere, simili modo reptantibus flagellis scandentes per parietum aspera in tectum usque natura sublimitatis avida. Vires sine adminiculo standi non sunt, velocitas pernix, levi umbra camaras ac pergula operiens. (Some people however prefer to start sowing gourds on March 1 and cucumbers on March 7, and to go on through the Feast of Minerva (April 21, festival in celebration of the founding of Rome). These two plants both climb upward with shoots creeping over the rough surface of walls right up to the roof, as their nature is very fond of height. They have not the strength to stand without supports, but they shoot up at a rapid pace, covering vaulted roofs and trellises with a light shade.) (translation Loeb edition).

²⁶ Pliny the Elder, *Naturalis Historia*, XVII.141-151.

²⁷ Columella, 4.30-33.

²⁸ Cicero, *De natura deorum*, “we sow corn, we plant trees, we fertilize the soil by irrigation, we dam rivers and direct them where we want. In short, by means of our hands we try to create as it were a second nature within the natural world.” The first nature is wilderness, the realm of the Gods, and raw material for second nature. The second nature is the cultural landscape (agriculture, urban development, roads etc). In the Renaissance, humanist and historian Jacopo Bonfadio defined the garden as a third nature in 1541, and Bartolomeo Taegio also referred to the third nature, the garden, in his dialogue *La villa* (1559). Cf. Hunt 2000, 32-42; Büttner 2008, 72.

land is a handsome view to behold, as one can imagine even today from the landscapes of the vine-growing regions of Tuscany and Burgundy; the impression that one gains from such a view is quasi-universal. Gregory of Nyssa (c.335-c.394) describes the vines spread out over the slopes along the river, in a letter addressed to Adelphius, *scholasticus* (legal officer in the imperial service). He was referring to a visit made probably in 379 to the latter's villa located in Vanota (identified with modern Avanos) on the River Halys, Cappadocia, a day's journey west of Caesarea.²⁹ Gregory also refers to the agreeable shady path under the vine trained on a pergola.³⁰ Cassiodorus (c. 485-585) describes the beauty of the landscape with vine on supports covering the entire slope overlooking Lake Como.³¹ Cassiodorus also mentions vine grown on pergolas.³² Viticulture and the landscape of vine-growing appear to have changed little over time.

The first use of the word 'pergula' in reference to the space of a covered walkway is found in Pliny the Elder's passage on the Portico of Livia in Rome, where "a single vine protected the open walks with its shady trellises."³³ It may even be possible that the

²⁹ Cf. Gregory of Nyssa, Letter 20 in Gregory in Silvas 2007, 181-187. Gregory of Nyssa, Letter 20.7, Silvas 2007, 185): But the native forest, in descending the hill-side meets at its foot the work of husbandry. For immediately vines spread out over the slopes and flanks and hollows at the mountain's base, cladding all the lower region with colour as with a green mantle. In this climate the season has also enhanced the scene, displaying the divinely sweet treasure of its grapes, which rather surprised me, because the neighbouring country was displaying its fruit still unripe, whereas here it was possible to enjoy the grapes and take one's fill of their ripeness as much as one wished.

³⁰ Gregory of Nyssa Letter 20.13, Silvas 2007, 186: Who could describe adequately in words the path under the overhanging vines and the sweet shade of the grapes and the new kind of wall made of lattices where the roses with their shoots and the vines with their trailers intertwine themselves together, making a wall fortified against attack from the sides, and the cistern of water at the summit of this course, and the fish being bred there?

³¹ Cassiodorus, *Variae*, 11.14.3: Circa quem conveniunt in coronae speciem excelsorum montium pulcherrimae summitates, cuius ora praetriorum luminibus decenter ornata quasi quodam cingulo Palladiae silvae perpetuis viriditatibus ambiuntur. super hunc frondosae vineae latus montis ascendunt. apex autem ipse quasi quibusdam capillis castaneorum densitate crispatus ornante natura depingitur. (Surrounding it [= Lake Como] like a crown are the beautiful peaks of the lofty mountains; the coast is adorned by the view of handsome villa buildings nestled amidst the evergreen grove of olives; above, leafy vines climb the mountain slopes; the summit, with the thick curly hair of chestnut trees, is as though painted by the decor of nature).

³² Cassiodorus, *Variae*, 12.4.4: autumnno lecta de vineis in pergulis domesticis uva ... suspenditur (in autumn, grapes picked from the vineyard are hung in the pergolas of the houses).

³³ Pliny the Elder, *Naturalis Historia*, XIV.11: una vitis Romae in Liviae porticibus subdiales inambulationes umbrosis pergulis opacat, eadem duodenis musti amphoris fecunda (a single vine in the colonnades of Livia at Rome protects the open walk with its shady trellises, while at the same time it produces 12 amphorae of juice yearly). (translation Loeb edition).

vine was planted at same time as the Portico's dedication in 7 B.C., and by the time Pliny the Elder was writing his *Natural History*, it had been standing there for several decades and had grown to an enormous size. The focus here is not the decorative feature of the vine and its potential for use in pleasure gardens, but rather the extraordinary character of this particular vine, capable of providing shade for the entire walkway as well as producing a large amount of grape juice yearly. Although the kinesthetic experience of strolls in the shade of the vine is implied, the main focus remains the utilitarian function of the pergola as support for the vine. It is in the letters of Pliny the Younger that we find descriptions of spaces shaded by vine, which can be interpreted as intended purely for the enjoyment of the outdoors.

The two letters by Pliny the Younger (A.D. 61/62-113) are valuable sources on ancient Roman gardens, one describing the villa at Laurentinum (letter II.vii to Gallus) and the other the villa in Etruria (letter V.vi to Domitius Apollinaris). A "shady walk of vines" is mentioned in his letter on the Laurentian villa:

On the inner side of the path surrounding the garden was a shady walk of vines, soft and yielding to the tread even for barefoot strollers.³⁴

It is not clear from the text whether the vine was supported by a framework, or grown without props to form a natural bower. But as an outdoor walkway made of vegetal materials, it would fall into the broader category of the pergola. The description certainly conveys the agreeable sensation of walking through a covered walkway formed by vines and the coolness of the shade, perceived by the sense of the touch.

It is in Pliny's letter on the Etruscan villa that we find the full description of a dining pergola:

At the upper end is a semicircular bench of white marble, shaded with vine supported by four small columns of Carystian marble. From the bench, the water, gushing forth through

³⁴ Pliny the Younger, letter V.vi: *Adiacet gestationi interiore circuitu vinea tenera et umbrosa nudisque etiam pedibus mollis et cedens.*

several small pipes as though pressed out by the weight of the people reclining on it, is caught in a stone channel, and received in a slender marble basin and thus inconspicuously restrained, so that the basin would always be full without ever overflowing. At supper, the heavier dishes are placed around the margins, while the lighter ones swim around in the form of boats and water birds. Opposite is a fountain which is constantly emptying and refilling; for the water, shooting high up in the air and falling unto itself, is received and elevated in connected basins.³⁵

In this passage the word ‘pergula’ is not used; but the description of the structure, namely the four small marble columns supporting the framework covered with the vine above and the stibadium below, points to a typical outdoor dining space that has been documented by archaeological evidence. Thus in Pliny’s villas described in his letters, we have two types of pergolas: the arbored passageway and the dining pergola.

The notion of the interpenetration of indoors and outdoors can also be observed in Pliny the Younger’s descriptions of garden structures. Pliny describes a garden room in his villa in Etruria where the walls were decorated by the depiction of foliage and birds perched among the branches,³⁶ and another in which the vine climbs up to the roof and covers the entire building so that one would have the sensation of being in a wood.³⁷ The

³⁵ Pliny the Younger, letter V.vi: In capite stibadium candido marmore vite protegitur; vitem quattuor columellae Carystiae subeunt. Ex stibadio aqua velut expressa cubantium pondere sipunculis effluit, cavato lapide suscipitur, gracili marmore continentur atque ita occulte temperatur, ut impleat nec redundet. Gustatorum graviorque cena margini imponitur, levior navicularum et avium figures innatans circumit. Contra fons egerit aquam et recipit; nam explusa in altum in se cadit iunctisque hiatibus et absorbetur et tollitur.

³⁶ Pliny the Younger, letter V.vi: Est et alium cubiculum a proxima platano viride et umbrosum, marmore excultum podio tenus, nec cedit gratiae marmoris ramos insidentesque ramis aves imitata pictura. Fonticulus in hoc in fonte crater; circa sipunculi plures miscent iucundissimum murmur.

(There is another room, close to the nearest plane tree, which enjoys the verdure and the shade; the podium is decorated with marble all over, and the wall above painted in imitation of boughs and birds perched among the branches, which has an effect non the less lovelier than the marble. In this room is a small fountain, whose water, flowing through several small pipes into a basin, produces a most agreeable murmuring sound.)

³⁷ Pliny the Younger, letter V.vi: Mox zotheca refugit quasi in cubiculum idem atque aliud. Lectus hic et undique fenestras, et tamen lumen obscurum umbra premente. Nam latissima vitis per omne tectum in culmen nititur et ascendit. Non secus ibi quam in nemore iaceas, imbrem tantum tamquam in nemore non sentias. Hic quoque fons nascitur simulque subducitur.

(Next one retreats to a small alcove in the same room but separated from it. There is a couch and windows on every side, but the light is dim and the room is in the shade. For a flourishing vine climbs up to the top

presence of fountains in these rooms is yet another indication of the outdoors brought into the indoors.

The dichotomy of indoors and outdoors, and house and garden has been used as a theoretical framework for the understanding of Roman garden spaces.³⁸ Stackelberg has characterized the ancient Roman *horti* as liminal, mediating, interstitial spaces where there is need to address the other, the locus of a dialectical engagement between two different social roles, relationships, or identities. Stackelberg's framework is useful for the understanding of the social aspect of garden spaces. However, for the psychological understanding of the architectural space of the ancient Roman house and garden, it is necessary to introduce the notion of a middle ground or in-between space. I would propose that there is yet an intermediary space between the house and garden, which is neither the indoors nor the outdoors. The ambiguity of these liminal spaces would evoke various physical and psychological reactions on the part of the occupant. The atrium, the peristyle garden, the *diaeta* (a garden room or pavilion) — ambiguous spaces in regard to their physical characterization — abound in the ancient Roman architectural complex, and the pergola can be considered one of them. Our survey of the etymology and the agricultural and villa literature suggests that the pergola, which presumably originated as a humble structure made of inexpensive materials and having a utilitarian function, acquired an independent architectural space and became an entity on its own from the turn of the first century A.D.

Ancient Roman gardens

The excavation of the gardens in the Vesuvian region by Wilhelmina Jashemski has shown that the pergola was a popular component of ancient Roman gardens.³⁹ Among the sites documented by Jashemski, some nineteen gardens have remains of pergolas. The plots range from middle-class and upper-class residences, a public garden, a sacred precinct, to an inn. From these surviving examples, we see that the supports of

and covers the entire roof. Here you can imagine yourself lying in a wood, except that you would be protected from the rain. Here, too, a fountain rises and instantly disappears.)

³⁸ Stackelberg 2009, 50-65.

³⁹ Jashemski 1979 and 1993.

the pergola were masonry columns or wooden posts. The upper framework, where the plant was to climb and form a vegetal ceiling, appears to have been in wood. According to their function, these pergolas can be classified into three types: first, the dining pergola; second, the arbored passageway; and third the decorative pergola (a freestanding structure of a decorative nature, often shading a pool). The dining pergola and the arbored passageway may have dated from earlier times, but archaeological remains of pergolas of a purely decorative nature date from the first century A.D. In pictorial representation, decorative pergolas go even further back, to the first century B.C., as we see on the rear wall of the cubiculum of the Boscoreale luxury villa.

Table 1: Pergolas in the gardens of Pompeii and Herculaneum

Site	Type of plot	Material of framework	Function of pergola
House of Pacius Proculus I.vii.1	residence	columns	dining pergola
House of the Ephebe I.vii.10-12/19	residence	columns	dining pergola
House of Placidus and Ascula I.viii.9	residence	columns	dining pergola
House I.x.7	residence/workshop	wooden posts?	dining pergola
Garden of the Fugitives I.xxi.2		masonry columns wooden posts	dining pergola
House of Octavius Quartio II.ii.2	residence	masonry pillars wooden posts	dining pergola arbored passageway decorative pergola
House V.ii.15	residence	columns	dining pergola
House VI.v. 5/21	residence	painted columns	decorative pergola
House VI.vii.23	residence	columns	dining pergola
House of the Centenary (IX.viii.6)	residence	wooden posts	decorative pergola
Garden west of the Great Palaestra II.ix.6	public garden	columns, stuccoed	dining pergola
Temple of Dionysus	sanctuary	wooden posts	dining pergola
Vineyard II.v	vineyard	wooden posts?	arbored passageway
Vineyard III.vii	vineyard	wooden posts?	arbored passageway
Caupona VI.i.1	inn	wooden posts	dining pergola
House of the Golden Bracelet VI. Insula Occidentalis 42	luxury house	columns	Decorative pergola over pool painted blue inside
Villa of Diomedes	luxury villa	columns	dining pergola
Villa of the Mosaic Columns	luxury villa	columns with mosaic decorations	decorative pergola
Oplontis Villa	luxury villa	masonry pillars	decorative pergola
Casa dei Cervi	luxury residence	stone pillars	decorative pergola

* The location of the sites is Pompeii except for the Oplontis villa, Torre Annunziata, and the Casa dei Cervi, Ercolano.

Table 1 is an analytic list of the documented sites, indicating the type of the plot, and the material and function of the pergolas. The majority (12 out of the 19 samples) are pergolas that shaded a triclinium. The equivalent of the modern parasol attached to an outdoor dining table, these ancient Roman pergolas would have provided a pleasant shade for the diners enjoying an outdoor meal. From the mention of inns with pergolas in the written sources, we may assume that there were inns that were equipped with outdoor dining space shaded by pergolas. The explicit mention of pergolas seems to suggest that inns with pergolas as part of the property were more prized than those without pergolas. The pergola, serving as an intermediary space between the interior and the exterior, may have extended the space of the inn to the public street. Justinian's *Digest* states that streets could be used by anyone for public use.⁴⁰ What can be included in public use can be controversial but we would be tempted to assume that the use of streets for setting up temporary stores and food vending facilities as well as dining spaces may have been interpreted in a rather lenient way. There is prohibition of building or any kind of activity that would cause damage or would invade the interests of individuals,⁴¹ but dining spaces

⁴⁰ Mommsen and Krueger, *The Digest of Justinian*, 1985, vol. IV, 573 (Book 43, 7, Public Places and Ways, 1): Pomponius libro trigensimo Sabinum. Cuilibet in publicum petere permittendum est id, quod ad usum omnium pertineat, ueluti uias publicas, itinera publica: et ideo quolibet postulante de his interdicitur. (Pomponius, Sabinus, book 30: It is open to anyone to claim for public use what belongs to the use of all, such as public roads and public ways. Therefore, interdicts are available to safeguard these at anyone's demand.) (English translation Alan Watson).

⁴¹ Mommsen and Krueger, *The Digest of Justinian*, 1985, vol. IV, 573 (Book 43, 8, To prevent anything from being done in public places or ways 2-3): 2 Ulpianus libro sexagensimo octauo ad edictum. Praetor ait: 'Ne quid in loco publico facias inue eum locum immittas, qua ex re quid illi damni detur, praeterquam quod lege senatus consulto edicto decretoue principum tibi concessum est. de eo, quod factum erit, interdictum non dabo. 1 Hoc interdictum prohibitorium est et 2 tam publicis utilitatibus quam priuatorum per hoc prospicitur. Loca enim publica utique priuatorum usibus deseruiunt, iure scilicet ciuitatis, non quasi propria cuiusque, et tantum iuris habemus ad optinendum, quantum quilibet ex populo ad prohibendum habet, propter si quod forte opus in publico fiet, quod ad priuati damnum redundet, prohibitorio interdicto potest conueniri, propter quam rem hoc interdictum propositum est. 3 Publici loci appellatio quemadmodum accipiatur, Labeo definit, ut et ad areas ad insulas et ad agros et ad uias publicas itineraque publica pertineat.

(Ulpian, *Edict*, book 68: The praetor says: "You are not to do anything in a public place, or introduce anything into it, which could cause any damage to such a one, except for what has been permitted to you by statute, *senatus consultum*, or edict, or decree of the emperor. Against what has been done I will grant no interdict. 1 This interdict is for prohibition. 2 It provided for both public and private uses, that is to say, as the property of the *civitas* and not of each individual, and we have as much right to enjoy them as anyone of the people has to prevent their misuse. On account of this, if any work should be undertaken in a public place that causes private damage, suit may be brought against it under this prohibitory interdict on account

or food vending would have been a relatively minor issue, especially if they were temporary or seasonal. It seems probable that inns extended their dining spaces onto the streets in front of them. The familiar scene of dining tables occupying the street or piazza in front of the restaurants in Italian cities may even be a continuation of such an age-long tradition. More or less a temporary, makeshift structure, the pergola may have played an interesting role in the use of public streets by food vendors and restaurateurs.

As for the materials, columns would have been more expensive and affordable only to persons with resources. The wooden posts used in the dining pergola at the Caupona and the arbored passageways of the vineyards indicate owners of more modest means. In some cases wooden posts were considered temporary materials; they would have been easier to procure, faster to assemble, and less costly. In the Garden of the Fugitives, after the original masonry columns of the pergola fell down in the earthquake of 62 A.D., the triclinium continued in use but was shaded by a pergola supported by wooden posts.⁴²

The large number of triclinia among the examples here considered is striking, and tempts us to jump to the conclusion that the primary function of the ancient Roman pergola was to provide shade for an outdoor dining space. But the number may be due mostly to the durability of the masonry couches; they would be more likely to survive than wooden posts supporting arbored passageways. Providing shade for a dining space would certainly have been a significant function of the pergola, but the arbored passageway and the decorative pergola are also important, especially in view of the later development of the pergola. The arbored passageway is documented only in three sites, and the decorative pergola in six sites. But again this may be so because they were more likely to have been made of perishable materials, or because freestanding, light structures of a certain height would have been difficult to survive in the aftermath of the eruption.

Here we must examine more closely one of these gardens, the garden of the House of Octavius Quartio (II.2.2), a middle-class residence in the southeast quarter of

of which thing this interdict is available. 3 The term “public place” should be understood, as defined by Labeo, to apply to open public spaces, tenement buildings, fields, roads and highways.) (English translation Alan Watson).

⁴² Jashemski 1993, 69.

Pompeii (figs. 2.1 and 2.2). Francesca Tronchin has studied the painting and sculpture collection of this house, most of which were displayed in the garden area.⁴³ This house stands out among the rest of the sites for preserving the remains of all three types of pergola. The garden on the south side of the house is disproportionately large in comparison with the modest size of the residential quarters, occupying approximately two-thirds of the property. It can be divided into two parts: the terrace garden, on the same level as the house, with a canal shaded by a vine pergola, and the planted garden, on a lower level, with a long canal articulated by a series of fountains and basins.

The terrace garden, circa 20 meters long and 6.6 meters wide, runs across the rear or southern side of the house (fig. 2.3).⁴⁴ At the west end is a small peristyle garden with two *diaeta* (day rooms) and a triclinium opening on to it. At the east end is an aedicula (pedimented shrine) preceded by a biclinium (dining area with two masonry couches) and flanked by paintings of mythological subjects (left, Narcissus; right, Piramus and Thisbe). The north wall of the terrace is decorated with paintings depicting animals. A narrow canal, 1.0 meter wide and 1.4 meters deep, runs its full length. The interior of the canal was painted blue. Above the canal was a wooden vine pergola, supported by the house wall on the north and by eight masonry pillars on the south. Along the edge of the canal were placed a total of ten small marble sculptures including a Dionysus, a baby Hercules, a sphinx, a lion, a greyhound and a bearded river god. From the collection of statues, Zanker interprets the canal as a euripus (a miniature watercourse evoking the Euripus, a canal near Alexandria in Egypt), a fashionable design element in Roman gardens of the time.⁴⁵ The canal runs right to the aedicula, between the couches of the biclinium. As there is no table, Richardson interprets the space as a place for conversation, reading, or

⁴³ Cf. Francesca Tronchin, *An Eclectic Locus Artis: The Casa di Octavius Quartio at Pompeii*, dissertation, Boston University, 2006: <http://www.tronchin.com/abstract.html>. Tronchin's dissertation documents the painting and sculpture of the House of Octavius Quartio, delineates the house's decorative scheme, and seeks to reconstruct the meaning of the collection in the context of Roman houses. The appendix includes more than 140 photographs, plans and diagrams; more than half of the photographs were newly taken by the author. I owe the reference to Rabun Taylor.

⁴⁴ Jashemski 1993, 78-82.

⁴⁵ Zanker 1995, 147; cf. Grimal 1984.

simply lounging and enjoying the cool.⁴⁶ But as Pliny the Younger writes of a dining space in the garden where food containers were floated on the water, there is no reason that the biclinium here would not have served as a dining space.⁴⁷ Even if the euripus was too low for serving food on floating platters, it would have been easy to place a purpose-made table or trays on the couches.⁴⁸ The sculptural and pictorial decoration of the terrace points to its function as a pleasure garden. The terrace garden was intended as a *pinacotheca*, a display space for paintings in luxury villas. The pergola in the terrace garden would have served two purposes: to provide a shade for the dining area, and to enhance the coolness and the pleasant atmosphere of the garden. The garden itself was a display space for the owner's collection of artwork, a museum of painting and sculpture so to speak.

From the terrace garden, one descends a flight of steps into the planted garden, lower by circa 0.9 meter, and approximately 55 by 29 meters in size.⁴⁹ A long narrow canal, circa 50 meters long, starts at a two-storey construction with an aedicula on the upper level and a nymphaeum on the lower, and runs the entire length of the garden (fig. 2.4). The long canal makes a slight deviation mid-way, but nevertheless sets the garden's visual axis. From the triclinium on the terrace garden, one enjoyed an axial vista of the lower planted garden, the city, and the mountains beyond, the aedicula above the nymphaeum serving as a frame for the entire view.⁵⁰ The water of the canal in the terrace garden cascaded into the nymphaeum, and from there flowed into the long canal in the planted garden. The long canal was interrupted by three structures along its way: first, a rectangular basin containing an elaborate fountain, consisting of a central square platform from which water cascaded down the steps on the four sides, and twelve bases for fountain figures around the periphery, the whole shaded by a vine-covered pergola; second, an aedicula supported by four columns, with stuccowork depicting erotes and swans above the arches; and third, another rectangular basin from which rose a jet, also

⁴⁶ Richardson 1988, 340.

⁴⁷ Salza interprets the space as a dining area. Cf. Salza 1987, 171.

⁴⁸ Thanks to Rabun Taylor for the idea.

⁴⁹ Jashemski 1993, 82-83.

⁵⁰ Zanker 1995, 149.

shaded by a vine-covered pergola. As Zanker and Jashemski note, the interrupted canal resulted in a series of pools of varying size and depth, which were intended as fishponds, a well-known feature in luxury villas on the seaside.⁵¹ The two vine-covered pergolas shading the rectangular basins containing fountains are equally decorative as they are utilitarian. Utilitarian because the vine covering the pergolas was intended for the production of grapes; the fishponds also required at least partial shade during the day.⁵² And decorative because the pergolas were intended for the enjoyment of the outdoors – the vegetation, the shade, and the coolness – together with the fountains that enhanced the sensation of the outdoors.

However, the pergolas shading the fountains were not the only ones in the planted garden. Jashemski found cavities along the long canal, which indicate that there had been arbored passageways on either side.⁵³ The arbored passageways were also covered with vine. Moreover, parallel to the vine-covered passageways were regular rows of root cavities. The root cavities indicate that large trees would have been planted along the sidewalls of the property, while smaller trees or shrubs had been planted between them and the arbored passageways. The species of the trees has not been determined, but it is likely that they were fruit-bearing trees. Given the presence of fishponds and the vines that covered the pergolas and the passageways, the lower planted garden had a more productive character than the upper terrace garden. The arbored passageways would have been used for promenades along the canal to enjoy the cool of the shade, and the fountains and the water basins would have provided visual and aural pleasure. At the same time they would also have been used for the inspection and maintenance of the trees and the fishponds.

Zanker interprets this garden as a “miniature villa,” namely a space in which are crammed, without much consistency or artistic taste, miniaturized elements of a typical

⁵¹ Zanker 1995, 154; Jashemski 1993, 82.

⁵² Cf. Higginbotham 1997, 25-29. Fish needed to find shade and a respite from the heat of the day. Supplementary architecture was employed to shade exposed *piscinae*. *Pergulae* or vine arbors provided shade not only for dining areas but also for fishponds as well. I owe this reference to Rabun Taylor.

⁵³ Jashemski 1993, 82-83.

luxury villa in the countryside or seaside owned by aristocratic patrons.⁵⁴ In the original model of the country or seaside villa, the outdoor dining space, the canal, the nymphaeum, and the fishponds would have been more evenly distributed within the large property, as we see, for example, in Hadrian's Villa. In the House of Octavius Quartio, the components are all crammed together in a small space, causing a sense of confusion and crowdedness, while there was sizeable open space around. The planted area in the lower garden could have accommodated some of these components. The pergolas too were invested with a double function, the utilitarian and the decorative. The pergola in the terrace garden covered with vine, provided a shade for the *biclinium*, the dining area, as well as for the *pinacotheca*, the display space of artworks. The pergolas shading the fountains in the lower planted garden were also covered with vine, as were the arbors over the passageways.

To get back to our list of pergolas in Pompeii and Herculaneum, of the remaining decorative pergolas, three are freestanding structures in the middle of a garden. One belongs to the so-called Casa del Granduca Michele di Russia (or Casa dei Vasi di Vetro) (VI.v.5/21), a residence of modest scale. The pergola stood at the center of the peristyle garden, and was supported by four slender columns painted with leaves and scales. Another belongs to the House of the Centenary (IX.viii.6). The pergola stood in the middle of the peristyle garden, shading a pool which was the focal point of the garden. A third belongs to the garden of the Villa of the Mosaic Columns, northwest of Pompeii. A pergola supported by four columns decorated with floral and scale patterns in mosaic stood above a basin with a fountain jet. The species of the plants covering these pergolas is not determined. Jashemski suggests the vine, as it was the most common plant to be trained over a pergola,⁵⁵ but there is room for other possibilities. The decoration of the columns supporting these pergolas, and the location in the middle of the garden or above a water feature that is the garden's visual focus underscore the ornamental nature of these pergolas.

⁵⁴ Zanker 1995, 155-156.

⁵⁵ Jashemski 1993, 244.

The garden of the luxury villa at Oplontis had a decorative pergola.⁵⁶ The pergola shaded the *ambulatio* (91), a strolling space along the fountain garden on the south side of the large swimming pool (60 x 17 m). The large pool surrounded by promenades was part of the villa's eastern block, an expansion executed in the 60s A.D. The east and west sides of the pool were also fashioned as strolling spaces. Along the west side of the pool, there was a Portico or colonnade (60); the marble columns of the colonnade were taller and more widely spaced in front of Room (69), to allow for a transverse axial vista across the pool and beyond to the Lattari Mountains. Along the east side of the pool was the Sculpture Garden (93), where statue bases were found. Root cavities behind each statue base show that various species of trees, including plane trees, oleander, and lemon, were planted.⁵⁷

In the House of Stags (Herculaneum IV.2), an elegant patrician residence overlooking the Bay of Naples, a decorative pergola stood, not in the middle of a garden, but on a cliff at the edge of the property (fig. 2.5). Numerous sculptures of high artistic quality have been found in the large garden, including a satyr with a wineskin (Herculaneum inv.no.520), a drunken Hercules (Herculaneum inv.no.525), an Eros (Herculaneum inv.no.2077), and the two stags attacked by dogs (Herculaneum inv.nos. 519, 524), the namesake of the house. The pergola was flanked by two small gardens on the terrace overlooking the sea, and commanded a magnificent view (fig. 2.6). Enjoying considerable visibility from the sea, it was a belvedere for taking in the seascape, on axis with the oecus, the garden and the triclinium. From the triclinium on the north side, there is a magnificent view through the garden, the oecus, and beyond the pergola, to the sea. The pergola served as a framing device for the magnificent view of the Gulf to be enjoyed from an elevated viewpoint. The supports of the pergola were four sturdy pillars (fig. 2.7). The tiled roof is a modern restoration; originally a framework probably in wood covered by plants formed the roof. Jashemski found terracotta pots beside the pillars of the pergola that were more decorative than any she had found elsewhere and

⁵⁶ Jashemski 1993, 293-301.

⁵⁷ Jashemski 1993, 298-301.

which apparently contained the plants displayed on the pergola.⁵⁸ The plant may not necessarily have been the vine; it could have been some other climbing plant of a decorative nature, such as the ivy or the rose, both of which are known to have been used on pergolas in ancient Roman times.⁵⁹

Jashemski writes that the desire for a bit of green was an intrinsic part of the Roman character, that those without gardens would grow vines on their balconies to create an arbor of shade, and that vine-covered pergolas were not the monopoly of the wealthy.⁶⁰ Indeed the pergola would have been far from a luxury item accessible only to the upper class. On the contrary, it appears to have been a possible substitute, for those of more modest means, for what the affluent patrons would have constructed as architectonic structures. A comparison with Hadrian's Villa (118-137 A.D.), the grandest Roman villa that was ever built, although at a date when the Pompeian and Herculanean houses had already been buried under the ashes of Vesuvius, may serve to illustrate this point.

Decorative pergolas have not been documented in the gardens of Hadrian's Villa, nor have agricultural production facilities including vineyards, but examples of outdoor dining spaces and covered promenades are found in abundance. Dining pavilions and promenades, which would have been constructed of more ephemeral materials elsewhere, were here substituted by real architecture. The Canopus and Serapeum complex is a grand dining space with garden-bordered porticoes along a monumental canal (121 meters long and 18 meters wide) (fig. 2.8). Colonnaded porticoes were built on either side of the canal, one with a double row of columns on the east side, another with a single row on the west side.⁶¹ Bordered with plantings, they served as places of leisurely strolls and conversations, for the enjoyment of the outdoors, the appreciation of the statues and their reflection on the water surface, and probably also as dining spaces. The Stadium

⁵⁸ Jashemski 1993, 264-265.

⁵⁹ Farrar 2000, 36.

⁶⁰ Jashemski 1979, 337.

⁶¹ MacDonald and Pinto 1995, 108; 189. Salza maintains that the colonnaded portico was built only on the east side, which was hit by the sun's rays in the afternoon when the dining took place; the west side was already in the shade by that time, and thus there was no need to build a portico. Cf. Salza 2001, 249.

Garden complex, another elaborately designed space for entertaining and banqueting,⁶² can be divided into three sections. The northern section included a small pavilion with an impluvium and three basins: the one at the center was a fountain, flanked by those that were planters. The central section was an open space, which Salza interprets as a space for the performing entertainers, but Franceschini suggests also the existence of plantings.⁶³ The southern section included a pavilion surrounded by a low wall, in which stood the columns that support the roof. The two pavilions, one in the northern section and the other in the southern, were dining spaces accommodating tricliniar couches.

A common need to be fulfilled, in the gardens of Hadrian's Villa, in the garden of the House of Octavius Quartio, and in any outdoor space in the Mediterranean world, was protection from the sun. How to fulfill that need depended on the resources of the patron. In Hadrian's Villa, built by an emperor who had vast resources to his disposal, structures providing shade, whether a dining pavilion or a covered walkway, were made of architectonic materials, experimenting with the cutting edge technology of Roman construction. In the garden of the House of Octavius Quartio, the owner, apparently not having the means to construct a full tectonic portico or a garden pavilion, would have decided upon the pergola, fulfilling the same functions, but easier to build and less costly. Artistic taste set apart, it may be the wisdom of the modest class to invest more than one function to an object, a structure, a space, so as to draw maximum effect through minimum cost, amount of materials, and labor. The vine would grow and produce grapes, and at the same time, bring a bit of nature into the living environment, enabling one to experience on a reduced scale the luxury of the gardens of the wealthier class. The result may be a mish-mash of disparate elements crammed together in a small space, causing confusion and conflict with each other, described as a Disney world by Zanker.⁶⁴ The reason for the existence of all three types of pergolas in the garden of the House of

⁶² For the Stadium Garden, see Hoffman 1980. The name is derived from its form; gardens in the form of a hippodrome or stadium were common in ancient Roman times, as Pliny the Younger describes one such garden in his villa in Etruria. Cf. Grimal 1984, 252-255.

⁶³ Salza 2001, 223; 355; Franceschini 1991, 222.

⁶⁴ Zanker 1995, 156.

Octavius Quartio, which appeared so striking to us in the first place, may have been the same.

For the wealthy, there would have been no need to think of combining two functions in one structure. If one wanted a bit of nature in the living environment, one could simply construct a nymphaeum or introduce planters. If one wanted covered walkways, one could have porticoes, or even cryptoporticoes, which would be even more costly and would require more manpower. Hadrian could even order the making of underground galleries to keep slaves and other visually less pleasing elements out of view. Considering the etymological connotation of the ‘pergula,’ the pergola as a garden structure may originally have been born of the modest desire to possess a garden among the lower ranks of society. And because of its spatial ambiguity – a semi-indoor space in the outdoors and a convenient space to experience the outdoors while protected from its more unpleasant aspects, the pergola gained popularity among all ranks of society. And later on, if aristocratic property-holders such as those of the House of Stags found it elegant enough to serve as a belvedere and a visual focus, they would have started to see a new charm in its rustic simplicity, in line with their intrinsic taste for a bit of the countryside in their urban living, perhaps in a way comparable to Marie Antoinette and her entourage who found it amusing to play shepherdesses at the Hameau at Versailles.

Boscoreale luxury villa

Jashemski, in her *The Gardens of Pompeii, Herculaneum and the Villas Destroyed by Vesuvius*, includes a catalogue of all garden representations known at the time of the book’s publication.⁶⁵ The examples range from famous garden paintings, such as those from the Villa of Livia at Prima Porta, the House under the Villa Farnesina, and the Auditorium of Maecenas in Rome, as well as the Oplontis villa in Torre Annunziata, the House of the Golden Bracelet and the House of the Orchard in Pompeii, to small depictions of gardens inserted as decorative motifs in the dados and predellas of the walls in smaller houses. A large number of these stylized depictions of the gardens survive in

⁶⁵ Jashemski 1993, Appendix II: Catalogue of Garden Paintings, Mosaics Derived from Garden Paintings, and Garden Representations, 313-404.

the middle-class houses of the Vesuvian region.⁶⁶ The depictions are more or less similar in that they show a garden space enclosed by latticed fences with pergolas and pavilions. Sometimes, *oscilla* are hung above the fences, disk-shaped elements that often denote boundaries. The trelliswork fences, pergolas and pavilions depicted in these paintings are the prototype for the *treillage* structures which would play a significant role in the gardens of the early modern age.

The pergola was a common ornamental motif of the Fourth Style, along with the *aedicula* and the *candelabra*. In the Pentheus Room of the House of the Vettii, unknown in the Renaissance, a pair of pergolas is depicted on either side of the central panel of the Punishment of Dirce (fig. 2.9). However, the most famous representation of a pergola in the entire corpus of ancient Roman painting is the decoration of the *cubiculum M* of the Villa of Publius Fannius Synistor at Boscoreale,⁶⁷ frequently cited in works on Roman painting as one of the typical examples of the Second Style (fig. 2.10).⁶⁸ The Villa is located in Boscoreale, two kilometers north of Pompeii, on the southern slopes of Mount Vesuvius. Publius Fannius Synistor was the name of one purported owner; the name was inscribed on a bronze vessel found in one of the rooms. The Villa was decorated around the middle of the first century B.C., around 40-30 B.C., in mature Second style.⁶⁹ The pergola is depicted on the north or rear wall of the *cubiculum M*, in the alcove area where the couch would have been placed.

The decoration of the north wall is composed of three panels separated by bright scarlet monolithic shafts. The shafts rise from a calyx of gilded *acanthus* leaves and are crowned by gilded Corinthian capitals. Spiraling golden tendrils climb up the shafts forming circular whorls encrusted with gems. The panel on the right shows a grotto with a spring-fed fountain, overhung by ivy and inhabited by birds of various colors (fig.

⁶⁶ Jashemski 1993, 394-404.

⁶⁷ Metropolitan Museum of Art, New York, Inv. Nos. 03.14.13a-g. For the Boscoreale frescoes, see Lehmann 1953.

⁶⁸ A pair of pergolas is also depicted in the Pentheus Room in the House of the Vettii in Pompeii. However, the depiction is not in the central panel where the mythological scenes are painted, but in the flanking panels with architectural elements of a decorative nature. The depicted pergolas are of wooden construction.

⁶⁹ Pappalardo 2009, 32-37.

2.11). Beside the fountain is a statuette of the goddess Diana-Hecate. Above the grotto is a stone pergola overhung with vine, a stone wall with scale patterns in stereotomy, and the blue sky beyond. The panel at the center, the left part of which is disrupted by the real window, is a monochrome yellow picture. It depicts a landscape with fishermen on a bridge and strolling figures on a hill. Above the picture is a glass bowl containing fruit (*xenia*), a large bird perched on a curtain, an arcaded structure, and the blue sky beyond. The panel on the left, the right half of which is disrupted by the real window, forms a pendant to the panel on the right. A grotto with a spring-fed fountain overhung with ivy and inhabited by birds is depicted, and above it the pergola, the stone wall with scale patterns in stereotomy, a tree, and the blue sky.

The panels on the lateral walls of the alcove are mirror images of one another. In each panel, in the foreground is a red partition wall with an entrance at the center and a broken pediment supported by fluted columns with Corinthian capitals. A thymiaterion (incense-burner) is placed in front of the entrance, a votive twig on the gate, and fruit on the side pilasters in one, and pinecones and plane leaves in the other. Beyond is a black curtain suspended behind the partition wall, a tholos composed of rose-colored columns surrounded by a colonnade on three sides, and the blue sky.

Beyen characterizes the Second Style as a process of the opening up of the wall.⁷⁰ Early examples of the Second Style, for example, the decoration of the House of the Griffins (first quarter of the 1st century B.C.) in Rome, exhibit architectural forms – painted walls articulated by columns – in perspective, but the walls are still closed and do not allow for a glimpse of the landscape or the sky beyond. A few decades later, in the Villa of the Mysteries (60-50 B.C.) and in the Oplontis Villa (50-40 B.C.), we start to see the upper part of the wall opened and the plane beyond revealed, with architectural elements such as receding porticoes or tholoi that emphasize perspective and depth, vegetation, and the sky. The painted black curtain, hung between the wall in the foreground and the architecture in the background, thus obstructing the vista, becomes lower and lower and finally disappears. This development of the Second Style can also be

⁷⁰ Beyen 1960, Bd.1; Ling 1991, 23.

read as a process of the opening up of the wall to create an illusion of the exterior, by means of the introduction of elements of landscape and nature onto the painted walls of the interior. A succession of fictive planes opens up in the wall, creating an illusion of the expansion of space. The gradual opening up of the walls can be observed chronologically from the Villa of the Mysteries, the Oplontis Villa and to the Boscoreale Villa, and culminates in the garden paintings in the Villa of Livia at Prima Porta (c. 20 B.C.). The tradition is continued further on in the garden paintings of the Third Style, the House of the Golden Bracelet (A.D. 25-50) and the House of the Orchard (A.D. 40-50) among them.

A comparison of the wall paintings of the cubiculum M at the Boscoreale villa with their parallels in the cubacula of earlier villas would illustrate this process of the opening up of the wall. Cubiculum 16 in the Villa of the Mysteries (60-50 B.C.) has two alcoves (fig. 2.12). In alcove A, the rear wall is painted with a high partition wall and columns supporting three barrel-vaulted ceilings. Bits of the blue sky are barely visible on the other side of the ceilings. Alcove B shows more of what is behind the partition wall. In the foreground, the partition wall with orthostats (large stone slabs set vertically as a revetment at the lower part of the wall) is still high, and the columns support architraves with an arch in the middle, in the manner of a *serliana*, *avant la lettre*. The partition wall does not have a door that would lead to the space beyond. Behind the partition wall is hung a black curtain, beyond which is visible the upper part of a *tholos* against a blue sky.

Cubiculum 11 of the Oplontis Villa (50-40 B.C.) also has two alcoves (fig. 2.13). In the left alcove, the left part has been lost, but the surviving part shows a columnar structure the intercolumniations of which are closed by a partition wall. The partition wall has an opening at the center through which is visible another columnar structure composed of squatter columns, in which is a standing female figure. There may have been a black curtain below, but the lower part has been lost. In the right alcove, of which the decoration is mostly surviving, there is also a columnar structure closed by a partition wall, with an opening at the center. The black curtain is hung low covering only the

lowest quarter of the height. Through the opening is visible a trabeated structure supported by columns against a blue sky that occupies approximately half of the space of the opening.

Finally, the north wall of the Boscoreale Villa (40-30 B.C.) is almost completely open to the landscape but for the partition screen, the yellow monochromatic picture (fig. 2.11). This yellow picture almost seems a remnant of the partition wall, as though it were a last resistance to the entire opening up of the walls onto the illusionistic exterior. Masks and *oscilla* that usually denote boundaries⁷¹ are largely absent, but the *xenia*,⁷² the curtain, and the birds seem to function as markers of boundaries in this context. The dove, on the foreground in front of the raised platform, the bowl of fruit placed on the partition screen, and the long-tailed green parrot perched on the curtain seem to indicate the various cognitive thresholds ranging between the real and the illusory.

Within the Boscoreale cubiculum, the process of the opening up of the walls towards the exterior is also observable through the comparison of the lateral panels and the north wall (fig. 2.10). Looking, in sequential order, at the lateral walls of the *procoeton*, at those of the alcove, and finally at the rear wall, we may observe a gradual *diminuendo* of the partition walls, which tend to become lower and lower until they eventually disappear. The black curtain is hung lower in the lateral panels of the alcove than in the middle panels of the lateral walls of the *procoeton*. The rear north wall is almost completely open towards the landscape, but for the partition screen. But the screen itself, although it obstructs the view, has a different character from the regular partition walls. It is in the form of a *tableau* of monochrome landscape painting, which makes it far more evocative of the real landscape outdoors than the regular partition screen. Another step forward and this screen will be completely eliminated, as we see in the garden paintings from the Villa of Livia at Prima Porta.

The pergola depicted on the right panel of the rear wall is a solid structure, asserting its presence against the blue sky. The stone pillars support a segmental arch,

⁷¹ For depicted masks in Roman painting, see Allrogen-Bedel 1974; Gallistl 1995. For *oscilla* see Taylor 2005.

⁷² On the discussion of *xenia* as a boundary, see Bryson 1990.

which sets the curve of the wooden trellis framework of the roof. The three pillars on each side are held together by wooden beams. Adjoined to the pergola is a stone fence à jour with scale patterns wrought in stereotomy, similar to those in the garden paintings from the Villa of Livia. The vine, growing on the right side of the pergola, climbs up and covers the trellis, heavy with ripe fruit. Gifts of bountiful nature, the grapes are the symbol of abundance and exuberance, as well as an allusion to the Dionysiac pleasures of life.

The Romans did not use linear perspective; the pergola is represented in a rather naïve manner, and the right and left sides do not line up symmetrically (fig. 2.14). The structure depicted in the middle panel of the rear wall (fig. 2.11), with gilded bucrania decorating the spandrels, at first glance looks like the side of the pergola in the right panel, from the wooden beams connecting the pillars; but it cannot be, because of the lateral arched opening. Then what was the function of this structure built so close to the pergola? The pergola on the left panel, although it may have been intended as a pendant to the one on the right, is not so, strictly speaking; no vine covers its trellis roof. If we reconstruct in imagination the cut-out part by the real window and presuppose that the depiction were intended to be a real landscape viewed from openings framed by the depicted red columns – French windows on either side and a regular window in the middle, all thrown wide open – too many contradicting details make the presupposition improbable.

The depicted landscape is not in any way an accurate representation of the real landscape. Rather, it is more of a compilation of images of the countryside stored in the memory and an idealized representation of nature. The grotto with a fountain offering a cool shade to the wayfarer is a *locus amoenus*, frequently associated with the worship of a deity. The statuette of Diana-Hecate, goddess of nature, evokes the sacral setting of the grotto. The overhanging ivy leaves allude to Dionysos, the deity associated with the sensuous pleasures of life. The spring-fed fountain brimming with water is yet another image of abundance. Birds of various colors are present, perched on the solid rock, on the rim of the fountain, or maintaining a precarious balance on the ivy. Here we can almost

hear the rippling of water, the chirruping of the birds, or feel the refreshing air and the coolness of the grotto. In addition to vision, the sense of the ear and the touch, namely the aural and the haptic are called into motion. More than any other wall in the cubiculum, the north wall evokes a sensation of animation and movement. In stark contrast to the absence of human figures and the relative quietude of the cityscapes depicted on the lateral walls, we are confronted by an enlivening landscape animated by birds, rippling water, green foliage, ripe fruit, lit by bright sunshine. It is as though, all of a sudden, everything has come alive, inviting the viewer to participate in the pleasures of life, to enjoy the bounties of nature, and to celebrate its animating exuberance. It is tamed nature we are looking at, an idealized nature that is adapted and embellished to the needs and taste of man. It is a 'cleaned up' version of the real agrarian landscape. The emphasis is on the beautified and idealized aspects of rural life rather than on the reality of its rustic frugality and hard labor.

Depicted in frontal manner, the pergola shows the other side of the tunnel structure, as though inviting the viewer to walk through it. The connotation of movement is present. The painting presupposes the real and the illusory worlds and the boundary between them, and the pergola seems to invite the viewer to cross the boundary and to enter the other world, namely the fictive world created by the illusionism of painting. The blue sky visible through the pergola structure, the *Durchblick* so to speak, suggests the depth of the world beyond.⁷³ The depth of the depicted landscape may metaphorically allude to the wealth that could be attained by means of agricultural production. The façade of the pergola with its segmental arch echoes the form of the rear wall with the arch of the barrel-vaulted ceiling, as though the pergola were a structure symbolizing the cultivated agrarian landscape depicted on the rear wall. The *Durchblick* of the blue sky through the pergola also finds a parallel in the real window, which would have allowed for a view of the real agrarian landscape with Mount Vesuvius in the distance.

⁷³ For *Durchblick* see Ling 1991, 71.

Nile Mosaic of Palestrina

The Nile Mosaic of Palestrina (120-110 B.C.) is an ancient Roman mosaic showing various scenes of the Nilotic landscape, with a variety of flora and fauna, the inhabitants and the architecture of Egypt (fig. 2.15).⁷⁴ The mosaic, measuring 5.85 m wide at the base and 4.31 m long, originally decorated the pavement of a fountain in an apsidal recess at the north end of a large rectangular building behind the area of the forum of Praeneste, below the seventh level of the Temple of Fortuna Primigenia.⁷⁵ It is currently reconstructed and housed in the Archaeological Museum of Palestrina. The mosaic was known in the Renaissance, as it was mentioned in works by antiquarians and travelers that date from the late fifteenth to the early sixteenth century. The earliest mention known to us is in Flavio Biondo's *Italia Illustrata* (1450), in which the author refers to the mosaic dating to Sulla's time.⁷⁶ A relatively early mention is Antonio Volsco's *De antiquitate Latii*, written sometime between 1477 and 1507.⁷⁷ Volsco

⁷⁴ Meyboom 1995, 3-5; Whitehouse 1976, 1-10; Whitehouse 2001, 71-73.

⁷⁵ Whitehouse 1976, 3.

⁷⁶ Census <http://census.bbaw.de/> (Temple of Fortuna Primigenia). Biondo, *Italia Illustrata*, 1450, fol.107r-107v. Biondo 2005, 178-179: Eam vero civitatem dicit Strabo habuisse insigne templum Fortunae a Sulla aedificatum, a quo petebatur oraculum. Additque Plinius simulacrum id Fortunae adeo fideliter fuisse inauratum ut crassissimae inaurationes dicerentur Praenestinae. Et alio loco de pavimentis tractans, dicit lithostrota acceptavere iam sub Sulla, parvulis certe crustis, quod in Fortunae delubro Praeneste coepit. (Strabo says that the city had a remarkable temple to Fortune built by Sulla, where oracles were once sought. Pliny adds that the statue of Fortune there had been so durably gilded that the thickest kind of goldleaf was called Palestrina leaf. And elsewhere, dealing with floors, Pliny says that mosaics came into use as early as Sulla's time, with tiny cubes at least, a development that began in the temple of Fortune at Palestrina. (English translation by Jeffrey White). Biondo's mention is based on Strabo (5.3.11) and Pliny the Elder (NH 33.61-62; 36.189), thus he may not have seen the mosaic firsthand.

⁷⁷ Cf. La Malfa 2003. La Malfa cites Antonio Volsco's *De antiquitate Latii* which refers to the Nile mosaic, as evidence of the mosaic being known from the late fifteenth century. The treatise can be dated between 1477 and 1507 from its dedication to Cardinal Recanati, Girolamo Basso della Rovere. 1477 is the year in which Girolamo became cardinal, and 1507 the year of his death (British Library MS Harl. 5050 fol.1r). The relevant passage in Latin and in English is cited as follows (British Library MS Harl. 5050 fol.23v): Templi pavementum litostratis Sylla ornavit quorum tempestate nostra licet intueri monumenta. Sunt lytostrata e parvulis crustis et tessellis pavimenta picturae ratione variata. Qualia Zenodotus Pergami fecit, qui ita distinxit pavementum picturis ut coenae purgamenta relicta ever[r]i viderentur et ob id ἀσαρωθὸν vocavit. Erat quoque videre columbam bibentem et aquam capite inumbrantem, aliamque quae escam subripiebat, sedentem aliam in labro cantari. Alias vero apicantes a sese scabentes. Non minus variam picturam in pavimentis Praenestiae Fo[r]tunae intueri licet, quae non situs, non aetas, non tot ruinarum iniuriae violarunt.

(Sulla decorated the floor of the temple with mosaics, examples of which one may inspect in our own time. There are mosaic floors made of very small inlays and cubes and arranged in the pattern of a picture. [Mosaics] of this kind were made by Zenodotus of Pergamum, who embellished the floor with pictures in

belonged to the circle of scholars around Pomponius Leto and was a member of Leto's academy. Volsco's description indicates that he had firsthand knowledge of the mosaic, which may be considered one of the earliest recorded viewing of ancient work in the Renaissance. There is also a plan by Giuliano da Sangallo of the apse, the original location of the mosaic. Giuliano's plan, dated to around 1500, would suggest that the artist would also have been familiar with the mosaic.⁷⁸ Leandro Alberti saw the mosaic in 1526, and recorded it in his *Descrittione di tutta Italia* (1550). Contrary to the general understanding that the mosaic was rediscovered in 1620,⁷⁹ there is ample evidence that it was well-known to antiquarian scholars and architects who engaged in the study of the antique from the late fifteenth century.

The mosaic has had a complex history from the early seventeenth century. Between 1624 and 1626, upon Cardinal Lorenzo Magalotti's request, the mosaic was cut into sections, without a plan of the original being made. The reason was to facilitate the transportation to Rome, where it entered the collection of Cardinal Francesco Barberini, Cardinal Magalotti's nephew. Around 1630, watercolor copies of the various sections were made for Cassiano Dal Pozzo.⁸⁰ The sections were repaired by Giovanni Battista Calandra, head of the mosaic works at the Vatican, and were returned to Palestrina in 1640. Upon arrival in Palestrina, the packing boxes were crushed and the pieces were damaged. Calandra restored them based on the Dal Pozzo watercolor copies and reassembled them in an apse in the Palazzo Barberini, integrating the fragments that had

such a way that the refuse left from the dinner table seemed to be swept out, and for this reason, he called it in Greek, 'the Unswept Room.' In addition, one could see a dove drinking and casting the shadow of his head on the water and another one who had snatched some food, another sitting on the brim of a large drinking vessel, while others are sunning and preening themselves. One may also inspect the equally varied picture in the floor of the Fortune at Palestrina, which has not been spoiled either by the place, or by the time or by the large amount of damage to the ruins.)

⁷⁸ Meyboom 1995, 3, n.3.

⁷⁹ Cf. Whitehouse 2001. Patricia Fortini Brown mentions that it was first recorded at the end of the sixteenth century. Cf. Brown 1996, 289.

⁸⁰ Cf. Giuseppe Maria Suares (librarian to Cardinal Francesco Barberini), *Praeneste Antiquae Libri Duo*, Rome, 1655: In the meantime, the pieces of the mosaic in Rome passed from Perretti's heir, Francesco Peretti, to Cardinal Lorenzo Magalotti, who gave them to his nephew, Cardinal Francesco Barberini. Magalotti kept one piece, which was replaced in the mosaic by a copy. (Cited in Whitehouse 1976, 6). Whitehouse also cites a Da Pozzo note published by Lumbroso in 1875: *Il Cardinal Magalotto ... riserbato per se un solo pezzo, qual donò al Gran Duca*. (Cited in Whitehouse 1976, 93, chap. II, n.42).

remained on the site. In 1853, the mosaic was transported to Rome for repair, and again during World War II. Its present state in the Archaeological Museum of Palestrina, the former Palazzo Barberini, is an assemblage of authentic parts and restored parts put together.

The section of the mosaic that concerns us is section 19, which depicts a banquet scene under a pergola (fig. 2.16).⁸¹ A pergola of reed latticework, standing in the middle of the water on two small islets, forms a vault spanning the channel. It is covered by vine bearing abundant fruit. Inside the pergola, on either side of the channel, there is a stone bench on which participants of a drinking party are reclining. On the far side, a woman and two men recline on the stone bench lined with red cushions. Another woman is standing behind the couch holding a triangular harp.⁸² The women wear white chitons with narrow shoulder-straps which have slipped down. The men have red or white mantles wrapped around their bodies. All hold drinking bowls, except for the standing woman, who is playing the triangular harp. On the near side, there are two men, one wearing a white mantle playing a transverse flute and the other wearing a red mantle holding a rhyton with an animal protome towards the overhanging grapes, and a woman who also points to the grapes. The pergola with banqueters was a typical motif of Nilotic scenes and represented the feasting of the people at the time of the inundation of the Nile.⁸³ The pointing of the revelers to the grapes may have had a symbolic meaning in the Egyptian context.⁸⁴

The dining or banqueting function of the pergola as well as the movement of passing through it is here highlighted. In the water, there are lotus flowers, buds, roots, leaves and stalks. A man wearing a pilos (a felt or leather cap) and a loin-cloth is punting a papyrus canoe, carrying lotus flowers that he has gathered, to take home or to the market to sell. In Egypt, the lotus was plucked and dried and was used to make flour for bread.⁸⁵ The canoe is depicted in such a way that we could sense its swift movement in

⁸¹ Meyboom 1995, 33-34; 70.

⁸² Meyboom 1995, 33; 261.

⁸³ Meyboom 1995, 34.

⁸⁴ *Lexikon der Ägyptologie* VI, 1176.

⁸⁵ Meyboom 1995, 34, n.138.

the water, and the direction of the man's rowing pole suggests that he has just passed through the pergola. The man, going briskly about his simple everyday labor, is an antithesis to the banqueters, idly indulging in revelry. His clothing indicates that he belonged to the class of poor fishermen and peasants.⁸⁶ We see a stark contrast between social classes in this scene.

The history of the original piece of section 19 is even more complex than the rest of the pieces of the mosaic. Cardinal Magalotti, who had the mosaic brought to Rome between 1624 and 1626, kept one single piece to himself, namely the one depicting the pergola, and gave the rest to his nephew, Cardinal Francesco Barberini. In 1628, Cardinal Magalotti presented the pergola piece to the Grandduke of Tuscany, Ferdinando II de' Medici. The piece was subsequently acquired by A. F. Gori in 1742, and from Gori's possession went to Bayreuth, eventually ending up in Berlin, where it is currently housed in the Pergamon Museum (fig. 2.17).⁸⁷

After the presentation of the pergola piece to Ferdinando II de' Medici, the missing section was filled in by a copy in oilpaint, made while the original was still in Rome. The Dal Pozzo watercolor copy (fig. 2.18) was based on this replacement in oilpaint. In the actual section that was reconstructed based on the Dal Pozzo watercolor copy, the pergola has been restored in an unnatural way in regard to the width of its sides: the left side of the pergola is disproportionately narrower than the opposite side. In the original piece in Berlin, the width of the pergola is represented correctly. The narrow width derives from the restoration based on the Dal Pozzo copy, where only a small portion of the left side of the pergola was included. Thus the restorer had reconstructed literally only the part that was depicted in the Dal Pozzo copy.⁸⁸

It is quite suggestive that Cardinal Magalotti put the pergola piece aside, giving the rest to his nephew. Apparently, for him, in terms of the subject matter, the piece stood out among the rest of the mosaic. When he presented it to Ferdinando II de' Medici, he would have hoped to impress the Grandduke, one of the most important art collectors of

⁸⁶ cf. Meyboom 1995, 28, n.82.

⁸⁷ Meyboom 1995, 33, n.128.

⁸⁸ Meyboom 1995, 259.

the time and a man of taste, and to gain his favor. Obviously the piece would have been prized for its artistic value as an authentic work of ancient Roman mosaic, but it may also have been that the banqueting scene under a pergola still had resonance among the cultured class of the early seventeenth century. During the decades around the turn of the seventeenth century, the loggias at the Palazzo Altemps and the Borghese estate on the Quirinal had been decorated with illusionistic pergolas, and were probably used as dining spaces. It was also around this time that in the Horti Farnesiani on the Palatine, the Ninfeo della Pioggia, whose vault was painted with a vine pergola with musicians, was constructed as a dining area in the garden, and the connecting space between the twin aviary pavilions were decorated with reliefs celebrating the marriage of Odoardo Farnese, Duke of Parma, and Margherita de' Medici (1628).

Santa Costanza

The Mausoleum of Santa Costanza, adjacent to the Basilica of Sant'Agnese fuori le mura on via Nomentana, was constructed by Constantia, Constantine's daughter, in the second half of the fourth century A.D.⁸⁹ The structure was intended as a mausoleum for Constantia and her sister Helena, but at least from the middle of the ninth century, it appears to have become a church dedicated to Santa Costanza. Preceded by a narthex, the centrally-planned structure has a dome, 22.5 meters in diameter, supported by twelve pairs of granite columns with pulvinated impostes and marble Composite capitals. The building is of crucial importance for the understanding of the architecture and decoration of interiors in the Renaissance. The site was well-known and frequently visited from the 1450s, and many artists including Giuliano Da Sangallo, Sallustio Peruzzi, and Giovannantonio Dosio, have made drawings of it.

The annular vault of the ambulatory is decorated with mosaic, one of the earliest examples of mural and ceiling mosaics to survive.⁹⁰ As the vault was supported by twelve pairs of columns, the annular vaulted ceiling was divided into eleven sections. In the

⁸⁹ For basic facts on the construction and history of Santa Costanza, see Polacco 1983, Frutaz 1960, LTUR Suburbium vol. 2, 140-147, and Census: <http://census.bbaw.de/> (Santa Costanza).

⁹⁰ Cf. Sear 1977, 131-132. In the same work, Sear has documented other examples of mosaics depicting nature motifs.

eleven sections can be distinguished six different patterns of decoration; each of them are repeated twice, except for the crosses, hexagons and octagons in Compartment I:⁹¹

- Compartment I: crosses, hexagons and octagons
- Compartment II: stars and diamonds
- Compartment III: circles
- Compartment IV: vintage scene
- Compartment V: roundels
- Compartment VI: votive offerings
- Compartment VII: votive offerings
- Compartment VIII: roundels
- Compartment IX: vintage scene
- Compartment X: circles
- Compartment XI: stars and diamonds

The different patterns are repeated in such a way that the compartments on either side of compartment I correspond symmetrically to one another: compartments II and XI, III and X, IV and IX, V and VIII, VI and VII. Thus starting from compartment I, located at the entrance from the narthex, whichever way one chooses to go, one would see the remaining five patterns in the same order. According to Matthiae's investigation, approximately 71.8 percent of the actual mosaics are nineteenth-century restorations, leaving only the remaining 22.2 percent to be originals surviving from the fourth century.⁹²

Our interest is focused on the two compartments depicting the vintage scene (IV and IX), and the way they were used in the architectural space. Only the vintage scene and the scene with the scattered votive offerings (VI and VII) can be considered more or less realistic depictions. The decorations of the remaining compartments are abstract or stylized patterns based on the repetition of geometric forms. In the vintage scene, the vault is covered by vine growing from the four corners of the compartment (fig. 2.19). The vine spreads in informal scrolls all over the ceiling, bearing abundant fruit, and is populated by harvesting putti and birds. At the center of both compartments is a bust figure. The one in compartment IX is original. Attempts have been made to identify the bust figure with a historical personage – Constantia or Flavius Hannibalianus, nephew of

⁹¹ The numbering of the compartments is based on Matthiae 1967.

⁹² Cf. Matthiae 1967, 5; and reconstructions of the compartments I-XI in vol. II, *Grafici dei restauri*.

Constantine.⁹³ The identification with Christ may also be possible: Christ as symbolized by the vine, the wine made from the grapes being his blood. Christ used the metaphor of the vine in his parables.⁹⁴ However, the representation appears to be more human and individual than the transcendental figure of Christ in later Christian iconography. At the groundlines on each side of the scene is depicted a putto with a whip directing the oxen pulling a cart loaded with grapes towards a roofed structure, where three other putti are treading the grapes. The trough in which the grapes are dumped for the three putti to tread has, on the exterior, three fountainheads in the form of lion heads, from which water is pouring forth. In compartment IX, with a larger percentage of original mosaics than compartment IV, another putto is present beside the cart; on one side, one carrying a bucketful of grapes on his shoulders, and on the other, one cracking the whip at the oxen. Overall, the depicted vine forms an illusionistic arbor that becomes part of the colonnaded space of the ambulatory.

A prototype of the pictorial decoration of vine scrolls⁹⁵ used to form part of the architectural space can be found in the interior of the Columbarium (communal urn-burial tomb) of Pomponius Hylas (A.D. 19-37) (fig. 2.20). On the barrel-vaulted ceiling were painted informal vine-scrolls inhabited by putti and birds. On the upper wall of the apse, similar vine scrolls with two Victories and a female figure were painted. The vine used as decoration in a funerary context may have been derived from the vine actually grown in tomb gardens.⁹⁶

At Santa Costanza, the ambulatory was not the only place adorned with ceiling mosaics; originally, the cupola was also decorated with mosaic. The present decoration of the fresco *Christ among the choir of angels* dates only from 1620, when Cardinal Fabrizio Veralli, on the occasion of the restoration of the church, had the mosaic of the cupola and the marble intarsia of the drum destroyed and had the cupola painted anew. The purpose of the restoration was probably to remove the overtly pagan elements of the

⁹³ Matthiae 1967, 22.

⁹⁴ "I am the true vine, and my father is the husbandman." (John 15.1); "I am the vine, ye are the branches." (John 15.5).

⁹⁵ On the scroll motif as an ornament, cf. Riegl 1893 (English translation 1992).

⁹⁶ Farrar 2000, 178-179.

decoration in conformity with Counter Reformation principles.⁹⁷ The original decoration of the cupola is known only from Renaissance and Baroque drawings. Prominent architects including Antonio da Sangallo il Vecchio, Giacomo Barozzi da Vignola, and Jacopo Sansovino have left drawings. But their drawings show that their interest was focused mainly on the structure of the building rather than the decoration of the interior. Sebastiano Serlio recorded the patterns of the cross, hexagon and octagon, but not in a way that takes into account the overall context. Only Francisco de Hollanda and Pietro Santi Bartoli have left drawings of the interior, and these are crucial for the reconstruction of the original decoration of the cupola.⁹⁸

Francisco de Hollanda (1517-1584), painter at the court of the king of Portugal, was sent to Italy to study military construction, and was in Rome around 1540. He has left two watercolor drawings of Santa Constanza made from direct observation: one depicting the interior,⁹⁹ and the other part of the mosaic of the cupola and the porphyry sarcophagus of Constantia¹⁰⁰ (figs. 2.21 and 2.22). The second drawing, showing part of a kind of vegetal canopy supported by caryatids, is particularly interesting. Joseph Wilpert has made a watercolor drawing of this Escorial drawing.¹⁰¹ The three caryatids each stand on a small islet in the water, near the coast of a grassy land. They are grotesques, growing out of acanthus shrubs, and flanked by panthers on either side. Another acanthus grows from their heads and the spreading scrolls form a vegetal canopy above. In the spaces framed by the caryatids, a grassy landscape with various figures is depicted. From the left, in the first: a man holding a large fish, and another carrying a bowl above his head; in the second: a tower-like structure similar to those depicted in Campanian painting, with three figures beside it; in the third, a man clad in yellow holding a book, a seated man on top of four steps, and three men moving towards the right; in the fourth, an open landscape with mountains in the distance, with three standing men, one carrying a lamb. In the foreground is depicted a fluvial or marine landscape, with putti engaged in fishing

⁹⁷ Amadio 1986, 10.

⁹⁸ Cf. Amadio 1986; Polacco 1983.

⁹⁹ Escorial 28-I-20, f. 22.

¹⁰⁰ Escorial 28-I-20, f. 27.

¹⁰¹ Wilpert 1917, pl.88.

activities. Various fishing tools – a rod, a net, and a trident – are depicted, as well as a loop for catching water fowl. Some putti are sitting on an islet’s edge with a fishing rod; others are on a boat, a canoe or a raft. Various fish and bird species are depicted. The scene recalls the fishing putti on the Hildesheim silverware. A similar scene of fishing putti is included in the apse mosaic of Santa Maria Maggiore, at the bottom of the scene of the coronation of the virgin (fig. 2.23).¹⁰² Quite understandably, Frutaz remarks that it is difficult to say whether the decoration of the cupola is pagan or Christian.¹⁰³

The other artist who has left drawings of the cupola, Pietro Santi Bartoli (1635-1700), was a graphic artist specializing in the documentation of ancient Roman paintings discovered in Rome at the time. His most famous work is the illustrations for Giovanni Pietro Bellori’s book on the ancient tomb of the Nasoni family, *Le pitture antiche del sepolcro dei Nasonii* (1680). The tomb, dating from 150-170 A.D., was discovered by workmen repairing the via Flaminia in 1674.¹⁰⁴ Plate 30 shows a hunting enclosure surrounded by a latticed fence and a pergola, with two stags chased by two huntsmen and a dog. A shorter pergola serves as the entrance. The pergolas appear to be the latticework structures familiar to us in Roman painting. The representation is stylized and more evocative than realistic, and the climbing plant covering the pergola cannot be identified. In this funerary context, one would most likely assume it was the vine. The unusual quarter-circular form of the depicted enclosure was the result of having to insert the scene in the lunette space. The use of a pergola in a hunting enclosure may not have had corresponding examples in reality, but would simply have been an evocation of the pleasures of villa life.

By the time Bartoli was active, the mosaic decorations of the cupola of Santa Costanza did not exist any more, but Bartoli is considered to have made, for Cardinal Camillo Massimi, a “book of ancient paintings” which included copies of the drawings of Francisco de Hollanda. Two surviving drawings by Bartoli reproduce the upper part of the second drawing of Francisco de Hollanda (Escorial 28-I-20, f.27), namely the part

¹⁰² cf. Wilpert 1917, 121-122; Karpp 1966.

¹⁰³ Frutaz 1960, 76.

¹⁰⁴ Census: <http://census.bbaw.de/>.

containing the cupola decoration with three caryatids¹⁰⁵ (figs. 2.24 and 2.25). Two others try to put the picture in its context, and attempt at a reconstruction of the part of the cupola decoration that was not included in Francisco de Hollanda's drawing, namely the other caryatids, the figures in between, and the oculus at the center of the dome¹⁰⁶ (figs. 2.26 and 2.27).

The mosaic decoration of the cupola of Santa Costanza, as we see through Hollanda's and Bartoli's drawings, appears to be meaningful for its striking similarity with the Renaissance illusionistic pergola of the anthropomorphic pavilion type, of which a typical example is the one in the Villa Imperiale at Pesaro (1529-1538) (fig. 6.7). Given the fact that Santa Costanza was mentioned in major travel guides from the turn of the sixteenth century, and that many artists were familiar with the building, it is possible to presuppose its impact on Renaissance painting. In Renaissance times, Santa Costanza was known, not as a church, but as "Templum Bacchi." In Francesco Albertini's *Opusculum de Mirabilis Novae & Veteris Romae* (1510), it is mentioned as "temple of Bacchus adjacent to Sant'Agnese, with mosaic depicting vines and fish."¹⁰⁷ In Fra Mariano's *Itinerarium Urbis Romae* (1518), it is described as "adjacent to the church of the divine Agnes is the temple of Bacchus, a rotunda; its dome is supported by twenty-four columns, and entirely decorated with beautiful work in mosaic."¹⁰⁸ The name "Templum Bacchi" derives from a pavement mosaic in which Bacchus was depicted, originally thought to have been located in Santa Costanza. A drawing by Bartoli records the mosaic with the Bacchic scene.¹⁰⁹ For Renaissance artists and patrons, for whom antiquity was a model to be inspired by, Santa Costanza would have appeared all the more attractive under the pagan label of the temple of Bacchus.

The survival of the ambulatory mosaics would have been due solely to their acceptability as Christian imagery; especially the vine fitted well with Christian

¹⁰⁵ Glasgow University Library n.64, f.81; Windsor Eton College, The Braddley Codex CV 105.49.

¹⁰⁶ Windsor Castle, A22, f.9567; Glasgow University Library n.65, f. 83.

¹⁰⁷ Murray 1972: *Templum Bacchi apud exxlesiam [sic] sancte Agnetis depictum opere musiuo com uitibus & piscibus.*

¹⁰⁸ *Contiguum huic templo divae Agnetis, Bacchi templum est, opere rotundo; Cuius testudo supra viginti quatuor binatas columnas erigitur, totum miro ac pulcro opere musivo ornatum.*

¹⁰⁹ Cf. Polacco 1983.

symbolism. Apparently the vintage scene would have been the most impressive among the rest of the more abstract patterns, as Hollanda placed it at the center of his drawing of the interior. Its use as a kind of illusionistic arbor in the architectural space of the annular ambulatory would have left quite an impression on the visitors. It may have been one of the sources of inspiration for other semicircular or circular spaces decorated with a painted vine pergola, such as the semicircular portico at the Villa Giulia or the circular courtyard at the Villa Farnese at Caprarola.

Catacomb paintings

Among the various subjects of catacomb painting, one that interests us most in regard to the pergola is the story of Jonah. According to the Hebrew Bible, the prophet Jonah disobeys the Lord when ordered to prophesy the destruction of Nineveh. Sailing in the opposite direction, he is caught in a storm. The sailors cast lots and decide Jonah is to blame, whereupon he is thrown overboard. Swallowed by a large monster-fish, he stays inside its belly three days and three nights before being spat out. God again orders him to prophesy, and this time he obeys. He then leaves Nineveh, and makes himself a shelter, waiting to see the fate of the city. God causes a plant, the gourd, to grow over Jonah's shelter, to give him shade. Later, God causes the gourd to wither, and Jonah is exposed to the full force of the sun. Because Jonah was gobbled up by the sea monster to be spat out three days later, the story resonates with Christ's resurrection three days after the crucifixion, and was well-adapted to the funerary context. The list of Jonah scenes in catacombs around Rome below is based on Nestori's catalogue of Roman catacombs.¹¹⁰

From our viewpoint, what is most interesting about the Jonah scenes in the catacomb paintings is that, although there is no mention of a pergola in the Bible story, the gourd is always depicted on a pergola. The list of Jonah scenes has revealed that the majority of them were in fact scenes with Jonah reclining in repose under the pergola. The pergola is almost always represented as a framework made of upright poles and horizontal beams, unless depicted in a lunette, when it is made to conform to the curving

¹¹⁰ Nestori 1993.

line of the arch. The depiction is simple and cursory, with not much variation between the parallels. It is a simple structure just enough to serve as a support for the plant, with no further sophistication.

Table 2: Jonah scenes in Roman catacombs

Name of catacomb	Jonah thrown into the sea	Jonah spat out of the monster	Jonah under the pergola, sad	Jonah under the pergola, in repose	Total number of pergola scenes
Callisto*	22; 25	25; 27		2; 6; (21); 22; (23); 24; 25; 27	8
Circo di Massenzio*	1	1		1	1
Ciriaco*				2	1
Domitilla*	36; 74	60; 74	31; 74	27; 31; 60; (62); 74	7
Ermete			3	3	2
Giordani	6	6; 7; 11		6; 7; 11	3
Maius	5; 12; 15; 19	5; 12; 15; 16; 19	12; 16	4; 5; 12; 13; 15; 16; 17; 19	10
Marco e Marcellino				(5)	1
Pietro e Marcellino*	35; 77	22; 39; 45; 49	77	(15); 16; 18; 22; (27); (28); (29); (34); 39; 45; 47; 49; (51); 53; (58); (64); (67); (69); 77; 8	21
Pretestato*	8	17		17	1
Priscilla*	9	7; 9; 15		(5); 9; 15; 32	4
Quattro oranti presso Vibia				(2)	1
Sebastiano*	3	3		3	1
Tecla		3	3	3	2
Via Anapo	9; 10; 11	8	8	9; 10; 11	4
Via Latina	1; 11	1; 3	1; 11	1; 3; 11	5
Via Paisiello	1			1	1

* An asterisk denotes catacombs that were known in the Renaissance according to *Census of Antique Works known in the Renaissance*.

The four categories of Jonah scenes – 1) Jonah thrown into the sea; 2) Jonah spat out of the monster; 3) Jonah under the pergola, sad; 4) Jonah under the pergola, in repose – are based on Nestori 1993.

Numbers refer to the numbering of the chambers in Nestori 1993. Numbers in parentheses are those that refer to the subject as the cycle of Jonah, namely smaller motifs introduced as part of the vault decoration, usually containing the scene with the pergola, but that are not considered individual scenes in their own right.

The Jonah scene was a favorite motif in early Christian art. The representation was not limited to catacomb and tomb paintings. The Brescia Casket (4th C. A.D.),¹¹¹ an ivory casket with relief carvings, contains depictions of Jonah. On the front side are the scenes of Jonah thrown into the sea and Jonah spat out by the monster, and on the rear side is the scene of Jonah under the pergola (fig. 2.28). The pergola is represented as a flat-roofed structure supported by poles at the four angles, with an abundance of gourds. The floor mosaic from the basilica at Aquileia (early 4th C. A.D.) also contains a depiction of Jonah under the pergola. Here Jonah is inserted in a fishing scene, amidst a large number of fish and other marine creatures, boats and fishermen. Next to the scene of Jonah spat out of the monster is shown the scene of Jonah under the pergola (fig. 2.29). He is reclining under the gourd supported by two posts and a transverse pole. The entire scene has become a decorative motif, floating on the waves, as it were.

At least from the fourteenth century onwards, the catacombs appear to have been popular destinations for pilgrims visiting Rome. They are mentioned in early travel guides, which were written for the instruction of the pilgrims. Of the seventeen catacombs that have surviving paintings of Jonah under the pergola, eight are mentioned in both *Edificazione de molti palazzi e tempi di Roma* (c.1363) by an anonymous author and Francesco Albertini's *Opusculum de Mirabilis Novae & Veteris Urbis Romae* (1510).¹¹² These include the catacombs of Calixtus, Domitilla and Petrus and Marcellinus, where a relatively large number of pergola scenes existed. Simple pergolas like the one in the catacomb of Calixtus (fig. 2.30)¹¹³ would have found real parallels in the kitchen gardens along the radiating roads around Rome which the pilgrims followed to reach the city. We may assume that these catacombs were known, not only by the populace but also by artists who were looking to the antique for sources of inspiration. A systematic documentation begins only in the seventeenth century, with Antonio Bosio's study of early Christian catacombs, *Roma Sotteranea* (Rome, 1632).¹¹⁴

¹¹¹ Brescia, Museo Civico dell'Eta Cristiana.

¹¹² Murray 1972; Census: <http://census.bbaw.de/> (catacombs).

¹¹³ cf. Wilpert 1903, pl.47: Catacomb of Calixtus, the vaults of Wilpert n.5 Sakramentskapelle A6/ Nestori 25 and of Wilpert n.4 Sakramentskapelle A5/Nestori 24.

¹¹⁴ Cf. Irina Oryshkevich, *The History of the Roman Catacombs from the Age of Constantine to the*

It has already been suggested that the decorative scheme of vaults in catacomb paintings may have been one of the sources of Renaissance pictorial decoration.¹¹⁵ If the vault decoration of the catacombs may be schematized, like the decorative scheme proposed by William Tronzo for the Via Latina Catacomb (fig. 2.31)¹¹⁶ discovered in 1955, at least two types of decorative schemes can be distinguished: 1) circle or square at the center, semicircles on the four sides (figs. 2.32 and 2.33)¹¹⁷; 2) circle at the center, with four radiating diagonal bands (figs. 2.34 and 2.35).¹¹⁸ A typical composition in the vault decoration would be a central circle at the crown of the vault containing the Good Shepherd and semicircles or squares on the four sides containing scenes or episodes such as those of Jonah (figs. 2.33-34).¹¹⁹ This composition can be characterized as axial, as the four semicircles or squares are arranged axially on the four sides. Several variations of this arrangement are possible: the central circle can be further surrounded by concentric circles;¹²⁰ the central medallion can be an octagon,¹²¹ in addition to the four side scenes, four other scenes can be arranged diagonally (fig. 2.35);¹²² the compartments containing scenes from a story can also be radial departing from the central circle.¹²³ A composition with four circles and four squares arranged around the central figure, in addition to the scenes on the sides, appears to be especially relevant to our painted pergolas (fig. 2.36).

Renaissance, Ph.D. dissertation, Columbia University, 2003. I owe this reference to Louis Waldman.

¹¹⁵ Edwards remarks that ancient vault patterns used by catacombs painters would have had an influence on the decorative scheme of the Renaissance stufetta in Rome. Cf. Edwards 1982, 72-73.

¹¹⁶ cf. Tronzo 1986, fig. 39.

¹¹⁷ Fig. 20 Wilpert 1903, pl.56: Catacomb of Domitilla, the vault of Wilpert n.6 Kammer III/ Nestori 31; fig. 21 Wilpert 1903, pl.100: Catacomb of Petrus and Marcellinus, the vault of Wilpert n.13 Krypta des Orpheus/ Nestori 64.

¹¹⁸ Fig. 22 Wilpert 1903, pl.38: Catacomb of Calixtus, the vault of Wilpert n.2 Sakramentskapelle A2/Nestori 21; fig. 23 Wilpert 1903, pl.42: Catacomb of Priscilla, the vault of Wilpert n.5 Kammer III/ Nestori 14. I am grateful to Rabun Taylor for suggesting the examination of the decorative schemes of catacombs .

¹¹⁹ Wilpert 1903, pls. 56, 104, 130, 171.

¹²⁰ Wilpert 1903, pl. 51b.

¹²¹ Wilpert 1903, pls. 55, 131, 151.

¹²² Wilpert 1903, pls. 61, 72, 217.

¹²³ Wilpert 1903, pl. 196.

Representations of the antique made by Renaissance artists show vault decorations that bear a similarity in scheme to the catacomb paintings.¹²⁴ Hetty Joyce has studied the basic design concepts in the vault decorations for works dating from the second and third centuries A.D.¹²⁵ Joyce distinguishes five different design concepts in ancient ceiling decoration – concentric, converging, radial, axial, and diagonal, which can be applied to the vault decorations in catacombs. These concepts can also be applied in the analysis of Renaissance vault decorations, especially the painted pergolas. It is interesting to note that, if we reduce the vault decoration of the First Loggia of Leo X at the Vatican to its basic geometric components, it is possible to see a degree of similarity between the composition of the vault decoration of the Vatican loggia and the catacombs. The First Loggia of Leo X is composed of thirteen bays, of which eight have vaults painted as illusionistic pergolas. Vaults V and IX resemble the first type of the above (circle or square at center, semicircles on the four sides), and Vaults II and XII the second type of the above (circle at center, four radiating diagonal bands). The formal similarities suggest that certain vault geometries in Renaissance decoration may have come from catacomb and tomb decorations.¹²⁶ While a number of works from antiquity were yet to be discovered, it is possible to hypothesize that the catacombs could have served as mediators between antiquity and the Renaissance. They had preserved, as in a kind of hidden treasure box, not the refined motifs of a Domus Aurea but simplified basic forms from antiquity, which the Renaissance artists could readily draw from.

A number of observations can be drawn from our examination of the pergola in Roman Antiquity. First, the etymology of the word unexpectedly revealed an interesting development of the pergola, from a modest appendage or space in front of or in the upper part of the main building, a utilitarian structure for agricultural production, a trellised structure providing shade for outdoor dining, to the freestanding structure in pleasure

¹²⁴ Cf. Guillaume 2010, 119, fig. 146, *Fragments d'architecture antiques d'après Thiry*, Orleans 1550. Du Cerceau's drawing shows an arch with ceiling decoration schematically similar to catacomb paintings.

¹²⁵ Joyce 1981, 69-93.

¹²⁶ I owe this idea to Rabun Taylor.

gardens. Second, its function was also varied. It could serve as a support for promoting the growth of fruit; a space-making and a shade-creating structure; a visual focus in the garden; a display of plants; or a framing device for landscapes. Third, the experience of the pergola could be both sedentary and kinesthetic; one was encouraged to enjoy the shade and the coolness of its space on the one hand, and the dynamic passage through the structure on the other. Fourth, it was a mediating structure between the house and the garden, and created an ambiguous space that enabled one to experience the outdoors while enjoying the sense of enclosure characteristic of the indoors. The tension between the architectonic and the organic and the ambivalence of the pseudo-architectural were acknowledged. Because the pergola was a flexible structure that could be applied to various contexts by manipulating its scale and materials, it appealed to every level of the social hierarchy, and was able to fulfill the needs of them all.

We may observe that some of the meanings of the pergola, which we will explore later in the sixteenth-century pergolas, had already emerged in Roman antiquity. It is the Renaissance that invests a cultural meaning to the pergola by bringing it into the discourse of the classical tradition; by involving it in the tension between the antique and the vernacular, art and craft, myth and science; and by incorporating it into a spatial system where aesthetic and semantic counterpoints interact with one another. In order to span the gap between antiquity and the Renaissance, it is now necessary to turn to our next examination of the pergola in the early sources.

3

EARLY SOURCES

In this chapter, we will focus on the pergola and its representation from the Middle Ages to the beginning of the seventeenth century in Europe. Chronologically, we will pick up where we left off in Late Antiquity, and examine medieval architectural drawings and Latin texts, illustrated books, northern Italian paintings, architectural treatises, and Dutch and Flemish garden prints. Geographically, we will look at relevant materials, not only from Italy, which remains our main focus, but also from the regions north of the Alps – France, Netherlands, and England. The examination necessarily becomes selective, but it stems from the need to gain a broad understanding of the historical background of the painted pergolas of Renaissance Rome.

The real pergola was a constant component of gardens throughout the Middle Ages and the early modern period in Europe. A typical structure commonly found in gardens, its utilitarian function would have been the reason for its continuous use. However, our examination of the early sources shows that the function and role of the pergola was more than just a support for climbing plants, or to provide agreeable shade. From a design perspective, the pergola was a structure that had a central presence in gardens, often as a visual focus. In spatial terms, the pergola created an ambiguous space between the indoors and outdoors, a semi-interior in the midst of the garden. In tectonic terms, it embodied the pseudo-architectonic, using more light and transparent materials, but by borrowing forms and structural principles from stone architecture, it created a different kind of architecture. In artistic terms, the pergola occupied an ambivalent place between design and function, between art and craft. From the Renaissance period onwards, its aesthetic and ornamental properties were expanded, and it enjoyed enduring popularity in pleasure gardens, where it retained all of its previous connotations.

Architectural drawings

Since the word *pergola* implies a movement through an artificial structure, as we have seen in the previous chapter, it is appropriate to begin the discussion of the pergola in the early modern period from that of covered walkways in medieval architectural complexes. Sylvia Landsberg distinguishes two types of covered walkways in the medieval period: first, a covered passageway connecting separate buildings in a monastic or castle complex; second, a support for climbing plants that also served to provide a shady path in a garden.¹

The plan of the Monastery of St. Gall (ca. 820) (fig. 3.1) is the oldest surviving architectural drawing from the medieval period.² It shows a model layout for a Benedictine abbey; the abbey is the largest building at the center and various buildings are located around it. The plan sets forth the idea of a self-sustaining community, with living quarters – dormitory, refectory, bath, and latrines, facilities that would provide for sustenance – kitchen garden, orchard, granary, mill, bakery, wine press, brewery, barns and stables for farm animals, coop, craft workshops, a library and an infirmary. All buildings were oriented to the points of the compass, the abbey's entrance facing west, as was usual in medieval church architecture.

Two types of garden spaces can be distinguished in the plan: first, utilitarian gardens for the production of vegetables, fruit and herbs: the kitchen garden, the orchard (which also served as the cemetery), and the garden for medicinal plants; and second, a garden for walking, meditation, and contemplation: the cloister. The cloister interestingly occupies a central location within the monastery, on the south side of the abbey, which underscores its importance. It is composed of a quadripartite garden with probably a well at the center, surrounded with covered walkways on all four sides. These walkways served a crucial role in the circulation system of the monastery, by connecting separate buildings and providing easy access from them to the cloister garden. Except for the wine

¹ Landsberg 2001, 22-23.

² Sankt Gallen Stiftsbibliothek. For the Plan of St. Gall and its influence in monastic design, see Horn and Born 1979.

and beer storage on the west side, the cloister was adjacent to buildings that were fundamental to monastic life: the abbey, the dormitory, and the refectory. The arrangement of these buildings in proximity to the cloister suggests that walking and meditation in the cloister garden would have been intended as an essential part of the monks' daily lives. The architectural descendant of the ancient Roman peristyle garden, the cloister with its surrounding walkways open to the garden satisfied the basic need to be protected from the weather, and simultaneously allowed for an enjoyment of the outdoors. In the seclusion of monastic life, the cloister became the locus of the experience of the outdoors and the elevation of the mind through communion with nature.

While the ninth-century plan of the Monastery of St. Gall does not reveal any information about the structure or material of these walkways, the twelfth-century drawing of the Christ Church Monastery at Canterbury (ca.1165)³ (fig. 3.2) is more suggestive in this regard. The drawing was made by the Prior Wibert (Prior 1153-67) himself or his engineering assistants, to record the system of water distribution and drainage of the Monastery.⁴ It is a bird's-eye view from the north of the various buildings and open spaces within the Monastery. The waterwork system is minutely shown. The individual buildings and structures are not drawn to a uniform scale. The two cloisters – the Great Cloister adjacent to the cathedral, and the Infirmary Cloister adjacent to the Infirmary - are represented larger and with more details than the buildings - the refectory, dormitory, and infirmary. They were also the spaces where the water distribution was more complex than the buildings, as both cloisters had a well (*puteus*) necessary for the irrigation of the garden. Particular attention is paid to architectural details such as the columns with bases and capitals, the arches, and the shingles or the tiles of the roofs.

The Great Cloister had a colonnaded walkway all around, supported by masonry columns and covered with a roof that appears to be of timber construction. Timber roofs are used for all major and large buildings including the Cathedral, the dormitory, the refectory, the infirmary, and the wine cellar. The Great Cloister provided access to the Cathedral, the dormitory, the refectory, and wine storage (*cellarium*), according to the

³ The plan was inserted in the Great Psalter, Library of Trinity College, Cambridge U.K.

⁴ Willis 1869, 3-6, 174-180.

model arrangement set forth in the Plan of St. Gall. The Infirmary Cloister, slightly smaller in size, was also surrounded by a colonnaded walkway supported by masonry columns, but covered by a tile roof. Tile roofs were used only for smaller buildings, such as the Prior's Old Mansion, the Prior's New Mansion, and the Guest House. The Infirmary Cloister also had a well, but approximately half of the open space was occupied by the garden for medicinal plants (*herbarium*), enclosed by a trellis fence with diamond patterns. A trellis fence with the same diamond patterns also appears in the kitchen court, between the kitchen (*coquina*) and the refectory. We see here that the trellis fences were used to delineate plots for growing herbs and vegetables. These would have been a continuation of the trellis fences in ancient Roman gardens.

Medieval and early Renaissance writers

Medieval writers have referred to the agreeable shade created by the foliage of trees and the bower of vines, and the sensuous pleasure of experiencing the outdoors. A sedentary experience of nature is occasionally mentioned, but it was more by walking and moving through space that one experienced the outdoors. From writers such as Albertus Magnus (c.1193-1280) and Jean Froissart (c.1338-c.1410), we learn that shady walkways played an important role in the experience of the medieval garden.

Albertus Magnus' treatise on plants formed Part XVIII of his encyclopedic work on natural history. The work, largely based on an earlier incomplete encyclopedia, *De proprietatibus rerum* (On the nature of things) by Bartolomaeus Anglicus (fl. 1220-1240), made Aristotelian knowledge accessible and available, with the addition of Albertus Magnus' own observations on all branches of natural history. The treatise on plants was published independently in modern times as *De vegetabilibus Libri VII*.⁵ Book I chapter 14 entitled 'De plantatione viridariorum (On plantings in gardens)' includes a theoretical statement on the layout and use of the garden (I.xiv.119-125). The concepts of utilitarian (*utilitas*) and pleasure (*delectatio*) are presented in contrast to one another, with emphasis on the latter. Albertus Magnus stresses the sensuous enjoyment of the garden,

⁵ The edition consulted is: Albertus Magnus, *De vegetabilibus Libri VII*, Berlin, 1867.

in particular, through the visual and the olfactory senses.⁶ He recommends that benches be placed in the flower garden to enable one to meditate in quietude amidst delectable nature.⁷ The trees should be planted and vines trained along the paths, so that the turf bed would profit from the cool, pleasant shade provided by the bower of their foliage,⁸ and that the middle of the turf bed be left free of plantings for preserving clean air.⁹ After the detailed discussion on plantings, he adds that, if possible, a fountain with a stone basin be placed at the center of the garden.¹⁰

Here the garden is presented as a lieu of meditation and contemplation. The sensuous experience of the outdoors and its profound effects on human thinking are underscored. The garden not only offers pleasure to the senses; the sensuous experience in the garden also leads to the elevation of the mind. Trees and vines are considered not only for their productive function but also for their design qualities, especially for their space-defining or space-making qualities. Planted along the periphery of the turf bed, they define and separate it from the paths. Their bower creates a beckoning shady space underneath. The garden needs a visual focus or marker, the fountain at the center. Albertus Magnus' passage clearly emphasizes, not just the utilitarian aspect of the

⁶ *De Vegetabilibus* I, xiv, 119: Haec autem, quia ad delectationem duorum maxime sensuum praeparantur, hoc est visus et odoratus. (For maximum enjoyment, one should engage the two senses, namely, the visual and the olfactory).

⁷ *De Vegetabilibus* I, xiv, 121: Studendum est autem, ut caespis tantae sit mensurae, ut post caespitem per quadratum in circitu omnis generis aromaticae herbae, sicut ruta et salvia et basilicon, plantetur, et similiter omnis generis flores, sicut viola aquilea liliu rosa gladiolus et his similia. Inter quas herbas et caespitem in extremitate caespitis per quadrum elevatior sit caespis florens et amoenus et quasi per medium sedilium aptatus, cum quo reficiendi sunt sensus, et homines insideant ad delectabiliter quiescendum. (Behind the turf in a square bed all kinds of aromatic herbs should be planted, salvia and basil among others, and similarly all kinds of flowers, violets, lilies, roses, gladioluses and such. In the midst of the herbs, the turf bed, flowering and delectable would be apt as a bench, the senses would be refreshed, and men would sit in quiet meditation amidst delectable nature.)

⁸ *De Vegetabilibus* I, xiv, 122: In caespite etiam contra viam solis plantandae sunt arbores, aut vites ducendae, ex quarum frondibus quasi protectus caespis umbram habeat delectabilem et refrigerantem. (In the turf bed, trees should be planted only along the paths, or vines trained on a frame, the bower of which would provide a pleasant cool shade for the turf.)

⁹ *De Vegetabilibus* I, xiv, 124: In medio autem caespitis nihil sit arborum, sed potius ipsa planities libero gaudeat aëre et sincero. (The middle of the turf trees is not to be planted so that there would be a free space and clean air).

¹⁰ *De Vegetabilibus* I, xiv, 125: Si autem possibile sit, fons purissimus in lapide receptus derivetur in medium. (It would be ideal if a fountain with crystal-clear water with a stone basin were placed in the middle of the turf).

garden, but above all its aesthetic aspect, tersely summed up in the concluding sentence of the section: To be sought in gardens is delight, not fruit.¹¹

The pleasure of shady garden paths is also mentioned by other medieval writers, the French chronicler Jean Froissart among them. His *Chroniques* record historical events between 1325 and 1400 relevant to England, France and Spain, precisely the period of the Hundred Years' War (1337-1453). Froissart mentions a visit to Eltham Castle near London in 1395, where he enjoyed strolling in a pleasant garden with vine-shaded walkways.¹² Here again the pleasant experience of the outdoors is typically represented by the promenade under the vine tunnel and the kinesthetic movement in the shady space.

Although the pergola was already widely diffused as a utilitarian structure by the early Renaissance, it soon became an indispensable structure in pleasure gardens for its aesthetic and decorative capabilities. It acquired a central presence in the garden for its visually attractive form and space-making quality, and even took on a symbolic meaning. The pergola in the pleasure garden became an evocation of sensuous pleasure and of abundance. A passage from the Third Day in Giovanni Boccaccio's *Decameron* (1348-1353) illustrates this point. A group of seven Florentine ladies and three gentlemen take refuge from the plague of 1348 and arrive at a residence in the Florentine countryside. The garden is described as an Elysium: "if paradise were to be created on earth, they could not think of it in any other form than that of this garden."¹³ It has wide paths covered with vine pergolas with red and white roses blooming on either side, a flowering meadow with lush green grass surrounded by plantings of trees, and a fountain with abundant water.¹⁴ The striking feature of this *ekphrasis* of the garden is the emphasis on

¹¹ *De Vegetabilibus* I, xiv, 125: Delectatio enim quaeritur in viridario, et non fructus.

¹² Froissart 1871, t. 15, 166-167: en gambiant (proumenant aux) les galleries de l'ostel à Eltem où faisoit moult bel et moult plaisant et umbru, car icelles galleries (les allées) pour lors estoient toutes couvertes de vignes. (We strolled along the walkways at Eltham Castle, where it was very pleasant and cool, as these walkways were all covered with vine.)

¹³ *Decamerone* 1492, 75-76: se paradiso si potesse in terra fare, non sapevano conoscere che altra forma che quello del giardino gli si potesse dare.

¹⁴ *Decamerone* 1492, 75-76: vie ampissime tutte diritte come strali coperte di pergolati di viti ... le lato ... delle quai vie tutte di rosai bianchi & vermigli & di gelsomini erano quasi chiuse, un prato di minutissima herba, & verde tanto che quasi nera pareva, dipinto tutto forse di mille varietà di fiori, chiuso dintorno di verdissima & vivi aranci e di cedri ... non solamente piacevole ombra agli occhi, ma anchora all'odorato facevan piacere, una fonte di marmo bianchissima ... gittava tanta acqua et si alta verso il cielo, che poi

the sensuous experience of nature. The various elements of the garden are described as perceived through the visual, aural, olfactory and tactile senses. Water is not only visual; the pleasant sound of its falling into the basin and the form of its shooting high up in the air are vividly described in such a way that one could almost hear the sound or touch the tiny particles in the air. The trees not only offer a shade agreeable to the eye, the fragrance of their bloom and fruit pervade the air. Here a veritable paradise that cannot be found in the reality of the physical world, reminiscent of Livia's villa, has been created, by means of prose in the vernacular language. The pergola is considered, not as a utilitarian structure for agricultural production any more, but as an almost indispensable component of the pleasure garden. It has a different utilitarian function than promoting the production of fruit, that of providing an agreeable shade or protection from the weather; but it is also an object to be admired on its own for its beauty. The kinesthetic movement of walking through it activates and engages the senses. It is as though the covered walkways connecting buildings in the medieval monastery were brought out into the open and constructed with vegetal materials. By means of its materiality and spatial arrangement, the pergola invites an active interaction with the surrounding garden and nature.

The titlepage of the 1492 edition of the *Decameron* shows the seven ladies and three gentlemen seated in front of an impressive pergola (fig. 3.3). Illustrations for the Third Day from the manuscripts of the *Decameron*¹⁵ also show garden scenes with a pergola (fig. 3.4). While these illustrations would have been based on the *ekphrasis* of the garden in the text, which mentions a pergola as seen above, the frontispiece illustration has no explicit reason to show a pergola unless it were a structure typically understood to represent a garden. The pergola also has a space-making quality and creates a cloistered intimate space, where there would be a degree of privacy and seclusion. This property of the pergola is central to the *Decameron*'s setting, because the protagonists are seeking refuge from the plague. The pergola would have symbolized precisely such a haven,

non senza dilettevol suono nella fonte chiarissima ricadeva.

¹⁵ Bibliothèque Nationale, Paris, c. 1435; Bibliothèque de l'Arsenal, Paris ms. 5070, fol. 168r. Published in Swift and Edwards 2001, 24; Campitelli 2009, 21, fig. 8.

which would enable them to be liberated from social visibility and codes of behavior, and indulge in the sensuous enjoyment of nature.

Crescenzi: *Il libro della agricoltura*

Medieval and Renaissance agricultural treatises mention the pergola as a common garden structure for supporting climbing plants and promoting the growth of their fruit. The plant most commonly trained on pergolas was the vine, but squash and green beans were also grown on pergolas.¹⁶ Agricultural writers recommend that the pergola be constructed every year in the month of March.¹⁷ Agricultural treatises of this period drew from both the classical tradition and the medieval tradition. The textual tradition of agricultural writings finds precedents in both antiquity and the Middle Ages: the agricultural treatises of Cato, Varro, Columella and Palladius in ancient Rome, and the encyclopedic writings of the medieval scholars, Albertus Magnus and Bartholomaeus Anglicus. The iconographic tradition of the scenes from agricultural life, the labors of the months, was established in the medieval books of hours. These were personal prayer books for laymen, and represent the largest single category of surviving illuminated manuscripts.¹⁸ The books were produced outside of ecclesiastical control, and the standardization of content and decoration developed from practice. The calendar pages were decorated with scenes of the monthly labors and occupations of the peasants, and the pastimes of their feudal lords. January was a time for feasting, March for pruning, April was depicted with a garden scene, July was a time for wheat harvesting, September for vine harvesting, and December was for killing the pig and baking bread. There was no set of standard iconography, and the artists had complete freedom in depicting the scenes according to their own style and imagination. In the architectural context, the iconographic tradition of the peasant's annual cycle of chores, established in the books of hours, first appeared as sculptural decorations on church doorways in the thirteenth century.

¹⁶ Soderini 1814, 19.

¹⁷ Bussato 1592, 44.

¹⁸ Cf. Jones 1986; Webster 1938.

In the fifteenth and sixteenth centuries, the making of the pergola finds abundant parallels in the arts in the secular sphere. It was a typical activity of the months of Spring, and conveyed a sense of the season and the outdoors. The fresco by Ambrogio Lorenzetti, *The Effects of Good Government in the Countryside* (1338-1340) in the Palazzo Pubblico in Siena contains the realistic depiction of the daily activities in the countryside, including the cultivation of the fields, the carrying of goods to the city, and also shows a vine pergola adjacent to a farm building (fig. 3.5).¹⁹

The Limbourg Brothers' *Très Riches Heures du Duc de Berry* (1416) shows pergolas in the scenes depicting April and June (figs. 3.6 and 3.7). *April* shows a betrothal scene of nobles with the Château of Dourdan in the background.²⁰ To the right is depicted an enclosed garden with a pergola constructed against the wall. The pergola is depicted as a framework of coppice poles arranged horizontally and vertically, forming a curved roof. Vine is planted at regular intervals along the pergola, but shown without the foliage; probably the pergola had just been constructed for the season. *June* shows a mowing scene of peasants with the Sainte Chapelle and the Louvre palace in Paris in the background. Within the enclosure walls of the palace is a barrel-vaulted pergola made of coppice poles covered with vine. At the right end of the pergola, there is what appears to be a domed pavilion, also made of coppice poles, and covered with vines, flourishing with exuberant foliage. It is interesting to see that, already at this time, forms other than the typical barrel-vaulted tunnel was experimented. The fresco cycle in the Hall of the Months in the Palazzo Schifanoia (1469-1470) at Ferrara, by Francesco del Cossa and Ercole de' Roberti, includes the construction of a pergola in the month of March (fig. 3.8). Peasants are shown binding the tree trunks that serve as the upright supports and the horizontal poles that form the roof. The upright poles are forked at the top for the horizontal poles of the roof to be laid onto them. Pieter Brueghel the Younger's (1561-

¹⁹ I owe this citation to Mirka Beneš.

²⁰ The illustrations of the months in the *Très Riches Heures du Duc de Berry* are one of the earliest examples of the topographical representation of the patron's landholdings: in the background of each scene is depicted the château in the possession of the Duc de Berry, or his brother, the king of France. The topographical representation of the territorial possessions becomes a popular decoration of sixteenth-century aristocratic villas in Italy.

1638) painting *Spring*²¹ (fig. 3.9) and Pieter van Heyden's print *Spring* (1570)²² (fig. 3.10), both after Pieter Brueghel the Elder, depict the labors of the months of March, April and May. In the foreground, peasants are intent on the planting of the beds. In both of these works, reflecting the recent introduction of new plant species from the East, planted in the beds are tulips, which were not present in the original drawing by Pieter Brueghel the Elder (1565).²³ To the right are depicted two men constructing a pergola made of coppice poles arranged vertically and horizontally. The vertical poles are curved and joined at the ends to form a barrel-vault. For joining the poles, withies were used.²⁴ The supports on the sides are simple poles, while those at the end are carved atlantes in the form of hip herms. Behind the pergola is depicted a sheep-shearing scene, and in the background to the left a gathering of merrymaking peasants.

The most important literary source on medieval gardens is Crescenzi's *Libro di Agricoltura*.²⁵ The author, Pietro de' Crescenzi (1233-1321), was an early humanist and a specialist in law. The treatise, first written in Latin in the tradition of ancient Roman agricultural writers, was widely circulated in manuscript form before being published. The first Latin edition *Opus Ruralium Commodorum*, was published in Augsburg in 1471, antedating by one year the publication of *Rei Rusticae Scriptores* (1472), a compilation of the texts of ancient Roman agricultural writers, Cato, Columella, Varro and Palladius. An illustrated Italian edition came out in 1495, and several editions appeared during the sixteenth century. It was a bestseller, so to speak, of the early Renaissance period, and every cultured aristocrat would have counted the volume in his library.²⁶

The illustrated edition of 1495 includes several woodcuts of genre scenes featuring rural life. The titlepage shows an Italian farmstead (fig. 3.11): inside the enclosure, the medieval-castle-type structure with a tower rising above the crenellated

²¹ Private collection.

²² National Gallery of Art, Washington, 1946.21.201; 1980.45.235.

²³ Vienna, Graphische Sammlung Albertina, 23.750.

²⁴ Landsberg 2001, 30.

²⁵ For Crescenzi and his work, see Bauman 2000 and 2002.

²⁶ Calkins 1984, 160.

terrace, a peacock grandly posing on top of the entrance gate; outside the enclosure, an orchard and a vine pergola on the right shading a well, and open fields and a dovecote on the left. This would have been a typical landscape to be encountered in rural Italy of the time.

The 1495 edition includes another woodcut featuring a pergola, a *serenata* scene set in a small garden (fig. 3.12). A man with a guitar sits on the wall and plays music for his lady who listens standing. Their clothing suggests that the two may not be of equal rank; the woman has a somewhat aristocratic appearance, but the man may be from a lower class. That the man is playing music may suggest that he is not of noble rank. Perhaps we may see here a faint echo of the favorite theme of the troubadours, the love for a noble lady that is more conceptual than real, which is continued on to Dante's Beatrice and Petrarca's Laura. There are vegetable beds in the foreground, and a vine pergola in the background. The carpentry framework of the pergola forms a gabled roof; potted vines intertwine the structure climbing up the supports and covering the roof. The path between the planted beds forms the central axis of the garden, leading to a fountain housed within the pergola, the view of which is framed by the arched opening. Low latticework fences enclose the planted areas, very much like those in the medieval monastery gardens. A rabbit is digging in the vegetable bed. The intimate space of the garden encourages privacy and seclusion, and the props are used both to depict a common everyday setting and to refer to their symbolic cliché meanings that celebrate life and its joys: the fountain as source of life, the vine as exuberance and abundance of nature, and the rabbit as symbol of fertility. Because of the intimate space it creates, the pergola often came to be used as a setting for the encounter of lovers or scenes related to love.

This woodcut appears three times in the work: 1) before the preface in Book VII (on meadows and woods); 2) before the preface in Book VIII (on pleasure gardens); 3) Book XII (on the labors of the months), chapter v, May. A number of other woodcuts are also used more than once, but twice is the average. The inclusion of this pergola image three times would indicate the importance of pergolas in gardens, and it would have made

a strong impact on the readers. The three inclusions may each have alluded to a different meaning of the pergola: the first to its utilitarian function, the second to its decorative function, and the third to a popular motif in the labors of the months. A fifteenth-century French manuscript edition of the treatise includes a color illustration of an autumn scene of chestnut harvesting, with a vine pergola made of coppice poles in the foreground (fig. 3.13).

It appears from these examples that the pergola was a common structure, almost indispensable in any garden. Even before the flowerbed or the fountain, the pergola came to be regarded almost as a structure most typically representative of a garden. The multi-functional nature of the pergola increased its design potential. Alongside its ornamental function is its architectural function – its space-defining or space-making quality. The pergola creates an intimate space protected from the sun, allowing for a pleasant experience of the outdoors, as well as encouraging a degree of privacy and seclusion. Crescenzi mentions the pergola as a recommended structure in “middle-sized gardens for persons of moderate means”: “let there be constructed a pergola in the most appropriate and convenient location in the manner of a pavilion.”²⁷ Following the chapter on the herb and flower gardens, the middle-sized garden is described as an orchard garden with various fruit trees planted in orderly rows. Each species should be planted in the same row: apples and pears would form rows in the cooler part of the garden, and pomegranates and quinces in the warmer part. In Book VIII chapter i, on the herb and flower garden, Crescenzi recommends that trees be planted and a fountain placed at the center of the flowerbed. Book VIII chapter ii, on the orchard garden, focuses exclusively on trees and their arrangement, except for the one sentence referring to the pergola. As book VIII discusses the aesthetic aspect of gardens, the delightful shade and view of the trees in herb and flower gardens is emphasized rather than their fruit. For the pergola, too, the emphasis is on the aesthetic aspect, as it is associated with the pavilion, a structure for recreation in the garden. In the 1561 edition, the sentence is slightly changed: “furthermore, construct pergolas in the most appropriate and convenient location, in the

²⁷ 1495 edition, Book VIII, chapter ii: “si faciano le pergole nel piu aconcio et conuenevole luogo a modo dun padiglione formato.”

form of a house or a pavilion.”²⁸ What is noteworthy about this passage is the way it defines the pergola as a space: not as a structure related to agricultural production, but as a space created within the garden for pure enjoyment. According to Crescenzi’s definition, the pergola could be something that is entirely different from the traditional flat-roofed carpentry trellis supported by masonry columns or the coppice-pole arbor. Not only could the pergola be like a pavilion, it could also be like a house. It is a space created by means of organic materials in imitation of an architectonic form, to be inhabited and to be enjoyed. This unique definition of the pergola is carried on to chapter iii, “gardens of the kings and other illustrious and wealthy lords,” in which there is mention, not of a pergola in the conventional sense, but of one in the form of a house.

The following is the description of the chamber constructed of standing trees:

In the garden also build a palace with walkways and chambers all made of wood, in which the king and queen could come and stay with the gentlemen or ladies when the weather is dry and clear. That palace should be constructed in this manner: measure and note all the space of the walkways and chambers, and instead of the walls, let there be planted fruit trees if it pleases the lord. These trees would grow well, as would cherry trees or apple trees, and elms and willows would also grow well so that the walls and the ceilings would all be made of them. But one could easily and promptly construct the palace of dry wood, and around it plant vines so that they would cover the entire building. In the garden, one could also construct a large canopy of dry wood, or with evergreen trees and cover them with vine.”²⁹

Here, two types of structures are mentioned: first, a house or room made entirely of living trees, namely by planting trees all around the planned space of the room so that

²⁸ “Inoltre vi si faccia le pergole nel piu acconcio & convenevol luogo, in forma di casa, o di padiglione.”

²⁹ Book VIII, chapter iii. “faciasi anchora nel detto giardino un palagio con caminate & camere di soli arbori nel quale possa dimorare il re o la Reina co suoi baroni o donne nel tempo asciuto & chiaro: il quale palagio si potra convenevolmente in cotal maniera formare. Misurirsi & segnarsi tutti li spatii della caminata & delle camere & nelle luoghi delle pareti si piantino arbori fruttiferi se piacera al signore: I quali arbori crescano agevolmente si come sono ciregi & meli ovi si piantino, & varra meglio salci o bedilli o olmi & cosi per tagliamenti come perpali & pertiche & vimini per piu anni si procuri il loro crescimento in tanto che le pareti el tetto si faccia di quelli. Ma potrassi piu tosto & agevolmente fare il palagio o vero casa predetta di legame secco & intorno ad esso piantare le viti & tutto ledificio coprire. Potrassi anchora nel detto giardino fare grande copritura di legname secco: o darbori verde & coprire di viti.”

their trunks would form the walls and their foliage the ceiling; second, a house or room made of carpentry and then covered with vines on the exterior. The idea of an architecture of nature set forth in Crescenzi's treatise may have had far greater impact on Renaissance designs than has been acknowledged. This passage may well have been one of the sources of the rustic column, one of the favorite motifs of Renaissance design, for example, the tree column used by Bramante in the courtyard of S. Ambrogio in Milan. It may also relate to the tree column in Philibert de l'Orme's *Le premier tome de l'architecture* (Paris, 1567). The passage would certainly have been one of the sources of inspiration for the decoration of the *Sala delle asse* in the Castello Sforzesco in Milan (c.1498), and the Corridor of the Torrione in the Palazzo Farnese at Caprarola (1557-1581).

Francesco Colonna: *Hypnerotomachia Poliphili*

Francesco Colonna's prose fiction *Hypnerotomachia Poliphili* (1499) is considered one of the most important sources for artistic and architectural designs in the Renaissance and Baroque eras.³⁰ The book was first printed in 1499 in Venice by the humanist publisher Aldus Manutius. Written in the Venetian dialect, peppered with obscure Graecisms and Latinisms, the story relates the dream quest of the hero Poliphilus for Polia, the object of his love. The book contained 172 woodcuts which had a tremendous impact on contemporary visual culture, and a large number of which featured architecture, antiquities, and scenes inspired by the antique.³¹ The author of these woodcuts is unknown. In 1545, a second Italian edition was published, replacing eight woodcuts. In 1546 the abridged French translation appeared, under the title *Le Songe de Poliphile*, with an entirely new set of illustrations. The French edition was reissued in 1554 and 1600. These are particularly interesting for their illustrations, which are different in style from the 1499 Venice edition and include more details of architecture and garden structures.

³⁰ For the *Hypnerotomachia Poliphili*, see Godwin 2002.

³¹ One famous example is the illustration of the elephant carrying an obelisk, which inspired Bernini in the design of the elephant that stands in the Piazza Santa Maria sopra Minerva in Rome.

A considerable number of the French illustrations that feature garden designs and furnishings were new and were not based on the Venice 1499 edition. For example, the Venice 1499 edition in the section (h, ii – h, iiiii) contains no illustrations at all, except for one showing a triangular obelisk. The corresponding part in the Paris 1554 edition, folios 41 through 44, contains four illustrations featuring gardens and green architecture: 1) a circular arcade with columns intertwined with vegetation, and small trees planted in bases at the center (41v); 2) a perspectival view of a circular labyrinth garden with paths of water, enclosed within a wall and equipped with small towers here and there (43r); 3) a circular architecture with open ceiling and pillars alternating with planted trees whose foliage cover the walls, and at the center, a domed pavilion with a room fashioned inside, made of a framework of withies and covered with vegetation (43v); 4) a circular architecture with an open ceiling and niches accommodating statues all around, alternating with planted trees that climb up to the top of the structure, providing a garden context for the triangular obelisk (shown in the Venice 1499 edition), which stands at the center (44r). The French illustrators seem to have taken liberties to include details that are not found in the text of the original Italian edition. The passage describing a pavilion-like structure in a garden is a good example. The 1499 Italian edition reads: at the center of the space stood a domed structure with a high cupola wrought with gold wires, covered with exuberant florescent roses in an extraordinary way.³² The corresponding French passage relates: at the center of the piazza, there was a bower or round tower in trelliswork, the poles and withes elaborated in gold all over. Layered over them all around were stems of flowering roses, with verdant foliage, intermingled with the flowers of white and red roses, all of silky texture, so close to nature that one might have taken them to have been artificially created to be more beautiful than they are in reality.³³ While the Italian description is terse and focuses on the architectural form of the

³² Venice 1499, h, iiiii, recto: in medio dellarea una rotunda clausula extava, cum una levata cupula di virgule doro, cum multiplici & florigeri rosarii ricoperto egregiamente del dicto operamento.

³³ Paris 1554, 43v: Au mylieu de la place y auoit un berceau, ou tourelle ronde, en forme de treille, dont les perches & les oziers estoient bien estoffees d'or pardessus, & tout a l'entour estoient ploiees des branches de rosiers fleuriz, couuetes de feuilles verdoiantes, meslees de roses blanches & vermeilles, le tout de soie, tant approachantes du natural, qu'on eust iuge les contrefaites plus belles que ne sont les vrayes.

structure, using the words ‘rotunda’ and ‘cupula,’ the French edition characterizes it as a garden pavilion, describing it as a ‘berceau ... en forme de treille.’ The description of the vegetation covering the structure is also expanded in the French edition, with much more detail and with a profusion of vocabulary evocative of gardens such as ‘branches’ ‘feuilles verdoiantes’ and ‘roses blanches & vermeilles.’ Moreover, the French edition includes an illustration with a treillage pavilion, entirely covered with lush vegetation, which effectively visualizes the descriptive language in the text.

Among the scenes of predominantly antique inspiration relevant to the pergola and vegetal structures, two scenes, included in both the Italian and French editions, are worthy of mention. One is the vine-harvesting scene with putti.³⁴ To the right is a pergola of upright poles and a sloping roof laden with grapes. Three putti are on the roof picking the grapes, and two more are climbing the poles. On the ground are other putti who put the grapes in baskets. To the left, putti are making wine, and behind them, a trellis with climbing vine. This is a typical vine-harvesting scene with many parallels in antique art, as we have seen in the vault mosaic of Santa Costanza. Another is the scene of Priapus under a vegetal bower.³⁵ Priapus, a fertility deity and the protector of gardens, is placed herm-like on a high pedestal under an exuberant vegetal bower. Around it, five male and nineteen female figures are depicted, engaged in activities related to his worship, playing musical instruments and bringing offerings of fruit-bearing boughs. The sacrifice of a donkey is taking place in the foreground. The vegetal bower is used to denote the worship of a deity, the rustic substitute of a shrine made of more durable materials.

The beauty of the Isle of Cythera, where Poliphilus and Polia go on a pilgrimage to pay homage to Venus, is described in both the 1499 Venice edition (t-y, without page numbering) and in the Paris 1554 edition (105v-125v).³⁶ The natural landscape, gardens, and the topiary in the Isle are described in detail. The description is a catalogue of plants as one would find in works of literature since Homer’s *Odyssey*. The illustrations

³⁴ Venice 1499, l, iiii; Paris 1554, 62r.

³⁵ Venice 1499, m; Paris 1554, 69r.

³⁶ For the analysis of planting and garden design of the island of Cythera in the *Hypnerotomachia*, see Segre 1998.

depicting various forms of topiary are included in both editions; although they are identical in the contour lines of the forms depicted, the French edition contains more details that visualize the texture of the foliage.

The word ‘pergola’ or ‘pergulato’ in the Italian edition and ‘treille’ or ‘treilliz,’ or occasionally ‘berceau’ in the French edition occur many times. However, whenever the pergola is used to indicate a key turning point in the story, the reference to a pergola in the text is combined with an illustration of a pergola. Both the Venice 1499 edition and the Paris 1554 edition contain two illustrated scenes with a pergola, one relatively early in the story and the other towards the end.

The first scene is the one in which Poliphilus encounters the beautiful nymph bearing a burning torch in her hand. Two illustrations with the pergola are included here: one showing Poliphilus on one side of the pergola and the nymph approaching from the other side, the scene preceding the encounter (fig. 3.14)³⁷; and the other showing Poliphilus and the nymph walking side by side with the pergola in the background, the scene after the encounter (fig. 3.15).³⁸ The description in the Venice 1499 edition reads: I beheld before me a fine pergola with flowering jasmine, with curving roof, painted with fragrant flowers of three kinds.³⁹ The corresponding passage in the French edition is rather short but the language is more appealing to the senses: Looking around myself, I saw a beautiful pergola covered with jasmine, strewn all over with white flowers, which gave out an agreeable scent.⁴⁰ It turns out that Poliphilus falls in love with the beautiful nymph with the torch, and she later declares that she is Polia. Here we may observe that the pergola is used as a setting for love. The pergola is used as a literary topos for a meeting place for lovers, due to its seclusion and its symbolism of the bloom of flowers and the fecundity of youth. Its function as a passageway may also be evocative of the

³⁷ Venice 1499, i, iii verso; Paris 1554, 49v.

³⁸ Venice 1499, 4 folios after i, iiii (without page number); Paris 1554, 51r.

³⁹ Venice 1499, I, iii verso: Et ecco dinanti ad me vedo solo una artificiosa pergola di floroso gelsamino, cum procera incuruatione, depicta degli tutto degli sui odorabili flosculi del triplice colore commixti.

⁴⁰ Paris 1554, 49r: “Lors regardant a l’entour de moy, ie vey seulement vne belle treille de Gensemoy, toute semee de ses fleurs blanches, qui rendoient une odeur fort agreeable.

ritual of marriage. The torch, here borne by the nymph, is an ancient symbol of sexual passion and marriage.⁴¹

The second of the illustrated scenes with a pergola is the site of the sepulchre of Adonis in the garden on the Isle of Cythera, where Venus comes to honor her lost lover every year. Poliphilus and Polia visit the site to pay homage to Venus. The tomb of Adonis is depicted as a sarcophagus with a pergola erected above. Intertwining the pergola is the rose, the flower frequently associated with Venus since antiquity. This time, the illustration of the pergola-sepulchre appears three times in both the Venice 1499 and Paris 1554 editions. The first illustration shows the short side of the sarcophagus with a fountain head in the form of a snake spouting water into a hexagonal basin. The long side of the sarcophagus bears reliefs that depict scenes from the story of Venus and Adonis, the bathing of Venus among others, and a large shield bearing the letters “ADONIA.” The pergola above the sarcophagus is made of poles bound with withies. A trellis fence encloses the garden in which it stands (fig. 3.16). The second illustration shows the pergola-sepulchre with the statue of a seated Venus atop the sarcophagus, holding her child made of sardonyx in her arms. Venus’ chair has an ornamental eagle head at the back and feet imitating a lion’s paws.⁴² The nymphs pay reverence to the goddess, one kissing her foot, and five others kneeling. On the side of the sarcophagus are depicted the scene of the death of Adonis caused by the wild boar, and a large shield bearing the inscription “IMPURA SUAVITAS.” The garden fence shows a variety of patterns (fig. 3.17). The third illustration shows the pergola-sepulchre from a wider angle, from the fountain side of the sarcophagus. Venus is seen from the back, framed by the pergola covered with roses. The plane where Venus is seated is arranged differently from the other two illustrations, which show a flat surface. Here Venus’ chair is placed on a pedestal on the rear side of which is attached the snake fountain head, and the goddess is enshrined in an aedicula. Venus is doubly framed, by the pergola and the aedicula. Beneath the pergola, stone benches are placed on either side. In the foreground, the nymphs play music and Polia makes a garland of flowers, which she prepares to set on

⁴¹ I am grateful to Rabun Taylor for the idea of the literary topos and the reference to antiquity.

⁴² Rabun Taylor suggests a formal similarity with the Roman-style consular chair.

Poliphilus' head. The fence shows a variety of patterns as in the second illustration (fig. 3.18). Venus's presence in the scene appears ironic, because her back is turned to the action, the celebration of the love of Poliphilus and Polia. It appears as though, the ceremonial ritual of paying homage to the goddess being over, they could now indulge in the sensuous enjoyment of nature and life.

The depiction of Venus underneath a pergola in a garden brings together pagan and Christian strands. Venus is the pagan goddess of love, while the representation of a female figure beneath a pergola may have come from the Christian iconography of the Madonna della pergola. Especially in the third illustration, the pergola is a framing device for Venus, as well as for the fountain, the source of life. The spatial arrangement of the pergola above a fountain evokes a similar composition in the Boscoreale fresco, where a stone pergola is depicted above a grotto with a fountain. The flowering garden may allude to the garden in which the Madonna is frequently represented in the fourteenth and fifteenth centuries. The rose is the flower of Venus, but also of the Madonna. There may be a play of forms drawing from both the pagan and Christian traditions.

Madonna of the pergola

There is a tradition of Madonna painting in northern Italy, which depicts the Madonna under a vegetal canopy, commonly referred to as the Madonna of the pergola. The style appears to have been established in the mid fifteenth century. The earliest example to my knowledge is Giovanni Boccati's *Madonna of the Pergola* (1446), followed by Cima da Conegliano's *Madonna of the Arbor* (or *Madonna Enthroned with St. James and St. Jerome*) (1489) and Andrea Mantegna's *Madonna della Vittoria* (1496). Lucas Cranach's *Madonna of the Vine Arbor* (ca. 1500) may also be included in the category.

The *Madonna of the Pergola* (1446)⁴³ by Giovanni Boccati (ca. 1420-1480) shows the Madonna seated on a throne with the saints and angels under a pergola (fig. 3.19). The overhanging vegetation covers all the figures, but a separate canopy made of

⁴³ Perugia, Galleria Nazionale dell'Umbria.

the same vegetal material is depicted above the Madonna's throne. The pergola and the vegetal canopy are made of thick foliage, with a profusion of red and white flowers in bloom. Besides the *Madonna of the Pergola*, his earliest documented work in Perugia,⁴⁴ Boccati has painted a number of embowered Madonnas, exhibiting an interesting variety in the form of the canopy. The *Enthroned Madonna* (1450-1460)⁴⁵ shows an architectural canopy above the Madonna in a garden setting; the hedges on either side marking the confines of the garden space indicate the artist's strong interest in vegetation (fig. 3.20). In the *Madonna of the Orchestra* (ca. 1463),⁴⁶ a large rose trellis is depicted (fig. 3.21). As in the *Madonna of the Pergola*, the large trellis intertwined with abundant red roses covers the entire group of the Madonna and the child and the music-making angels, but a separate architectural canopy with a classicizing frieze, instead of a vault of vegetation, is depicted above the Madonna. The *Madonna with six Angels* (1460-1470)⁴⁷ shows the Madonna and music-making angels underneath a vegetal trellis.

The rose, the predominant plant species found in these pergolas and trellises, had been commonly associated with the Madonna since the twelfth century.⁴⁸ In pagan antiquity, the rose was the symbol of Venus, but the beauty of the flower would have naturally led it to be associated with the Madonna. In the medieval iconography of the Church, the rose came to be accepted as the symbol of the Virgin; the white rose symbolized virginity, and the red rose *caritas*, or Christian love.⁴⁹ In the medieval iconography, the Madonna was also associated with the garden, in particular a rose garden. Boccati's Madonna paintings depict the Madonna in a rose garden, along the lines of Stefano da Verona's (ca. 1374-1438) *Madonna and Child with St. Catherine in a Rose Garden* (fig. 3.22)⁵⁰ and Stefan Lochner's (ca. 1410-1451) *Madonna in the Rose Arbor* (ca. 1435-1440) (fig. 3.23).⁵¹ The rose pergola for the Madonna may have been

⁴⁴ Cf. Zampetti 1971.

⁴⁵ Ajaccio, Museo Fesch.

⁴⁶ Perugia, Galleria Nazionale dell'Umbria.

⁴⁷ Zampetti 1971, fig. 112, current location unknown.

⁴⁸ Clayton 1990, 23.

⁴⁹ Tongiorgi Tomasi 2002, 19; Clayton 1990, 23.

⁵⁰ Verona, Museum of Castelvecchio.

⁵¹ Cologne, Wallraf-Richartz Museum. Oil on panel.

born partly from iconographical conventions, but partly from the need to provide a prestigious setting for an important figure. The idea of the pergola for the Madonna would have developed from the need to have a canopy or *baldacchino* to protect the Madonna and to emphasize the importance of her figure and presence. And through the connection of the Madonna with the garden and the rose may have developed the idea of a vegetal canopy, the rose pergola. The association of the Madonna with the rose was continued in Renaissance paintings. Even if the pergola or trellis is not present, the Madonna is frequently depicted with roses in the background or strewn on the ground at her feet.⁵²

While Boccati was mainly interested in vegetal canopies, Cima da Conegliano (1459/60-1517/18) experiments with a variety of forms for the Madonna's canopy. The *Madonna under the Arbor* (1489)⁵³ shows the Madonna and Child under a stone pergola covered with vine (fig. 3.24). An arched opening in a high marble wall, flanked by Corinthian pilasters with veils, forms a serliana, and a barrel-vaulted stone pergola extends in perspective to serve as the frame for the Madonna seated on a stone throne. The grapevine symbolizes the Church. Cima has painted a number of Madonna paintings, which show that the pergola was only one option of the various canopies that could be adopted for the Madonna. The *Madonna and Child with Musical Angels and Saints* (ca. 1496-99)⁵⁴ shows the Madonna under an architectonic structure with arched openings (fig. 3.25). The arch supported by Corinthian columns bears oculi in the spandrels, and the coffered ceiling shows a geometric pattern. There were various ways to provide a prestigious setting for the Madonna, from architectural elements to natural trees. The pergola in Cima's *Madonna under the Arbor* was a combination of the two, a framework in stone covered with plants, and offered a tension between the tectonic and the organic. The *Madonna under the Orange Tree* (ca. 1496-98)⁵⁵ shows the Madonna seated on a

⁵² cf. Bernardino Luini, *Madonna*, 1510, Milano Brera; Domenico Veneziano, *Madonna and Child*, 1445/1450, National Gallery of Art, Washington inv. 1939.1.221; Jacopo Tintoretto, *Doge Alvise Mocenigo and his Family before the Madonna and Child*, 1573, National Gallery of Art, Washington.

⁵³ Vicenza, Pinacoteca Civica di Palazzo Chiericati.

⁵⁴ Venice, Gallerie dell'Accademia, cat. no. 36.

⁵⁵ Venice, Gallerie dell'Accademia.

throne of rock under an orange tree, with Saint Jerome and Saint Louis of Toulouse (fig. 3.26). Set against a landscape of mountains to the right and a fortified town on an elevation on the left, the background emphasizes the sensation of nature. Trees are also depicted behind or near St Jerome and St Louis of Toulouse. The trees behind the figures denote reverence and provide an appropriate setting for a dignified personage. The orange tree played the same role as the pergola in Boccati's Madonna paintings, namely to provide a prestigious setting for the Madonna. Finally, *The Virgin and Child with Saint John the Baptist and Saint Mary Magdelene* (c. 1511-13)⁵⁶ shows the Madonna seated on throne placed on a balustraded terrace overlooking a riverine landscape (fig. 3.27). A textile canopy with a backdrop exhibiting stylized nature motifs serves as the baldachino for the Madonna and Child.

The *Madonna della Vittoria* (1496)⁵⁷ was commissioned by Francesco Gonzaga from Andrea Mantegna (1431-1506) to commemorate his narrow victory over the French in 1496 (fig. 3.28). The painting depicts the Madonna and Child surrounded by the Saints John the Baptist, Michael, and George under a vegetal bower richly adorned with fruit. Francesco Gonzaga is shown kneeling to the left of the Madonna. Coral is hung above the Madonna. The bower is in the form of a classical niche-recess, a vegetal frame composed of horizontal and vertical elements. The upper part forms a vegetal canopy from which are hung corals in natural form and strings of wrought coral and crystal beads. The halo behind the Madonna exhibits an intricate pattern of interlace, which forms a distinct decorative tradition in the Renaissance.⁵⁸ On the rear side, it has openings through which is visible a cloudy sky.

The bower is most likely derived from the swags in ancient Roman painting and relief sculpture. The material of the bower, the fruit swag, was in fact an important motif that appears in the major works by Mantegna, including *The story of St. James* (fig. 3.29) in the Ovetari chapel (ca. 1455-56) in the Church of the Eremitani in Padua, the *San Zeno Altarpiece* (1456-59) (fig. 3.30) for the high altar of San Zeno in Verona, and the *Camera*

⁵⁶ Paris, Louvre, inv.no. 253.

⁵⁷ Paris, Louvre, inv.no. 369.

⁵⁸ Cf. Gruber 1994, 23-32; 107-108.

degli Sposi (1456-74) in the Castello di San Giorgio in Mantua.⁵⁹ In the *San Zeno Altarpiece*, the layering of the fruit swags is suggestive of the connection to the antique. Behind the Madonna is depicted in relief sculpture a classicizing frieze with putti holding fruit swags, while from the architrave in the foreground are hung swags of green foliage and colorful fruit. The predominant plant species in the bower of the *Madonna della Vittoria* appears to be myrtle, from the form of the leaves and the tiny white flowers scattered all over it. It is adorned with abundant fruit, whose colors in yellow and orange form a contrast with the green foliage. We may distinguish the orange and the lemon, which appear in large numbers, but also melons and pears. Mantegna's pergola anticipates the illusionistic pergola in the loggia of La Farnesina in Rome, painted by Giovanni da Udine in 1518, and can be considered a prototype for the fruit-sweg type pergolas of the first half of the sixteenth century. Not only fruit but also birds and small animals are depicted, like the ancient scroll Roman reliefs; small birds are depicted perched on the vegetal frame. These birds, as well as the fruit, are depicted in realistic manner, anticipating the birds in the painted pergolas of the sixteenth century. They are also evocative of the birds in ancient Roman garden paintings. The study of the antique constituted a significant part of Mantegna's formation, and the depiction of swags with fruit and birds would have been based on ancient Roman models. With his strong antiquarian background, Mantegna played a crucial role in solidifying the connection between the pergola and the antique, and anchoring the pergola motif within the classical tradition. Moreover, it was Mantegna who first applied the decoration of the pergola in a three-dimensional space, on the cupola of a now lost chapel in the Vatican, to which we will return later.

We must add that Mantegna also shows an interest in other types of pergolas, for example, the vine pergola made of upright tree trunks and cross poles like the one depicted in *The Story of Saint Christopher* in the Ovetari Chapel in the Church of the Eremitani (fig. 3.31). The pergola in this painting is constructed around a stone building, where the central action of the scene is taking place. The role of this pergola is to

⁵⁹ Agosti and Thiébaud 2008, 55-101; 151-213.

emphasize the scene in focus, like the fruit-sweg pergolas in his other works. Mantegna's interest in pergolas formed part of his interest in vegetal architecture, typically manifested in his *Minerva expelling the Vices out of the Garden of Virtue* (1499-1502) (fig. 3.32).⁶⁰

Lucas Cranach the Elder's (ca. 1472-1553) *Madonna of the Vine Arbor* (ca. 1500, fig. 3.33)⁶¹ also shows the Madonna under a pergola. The pergola here is not the fruit-sweg type or the rose-trellis type, but a typical rustic vine pergola like the one in Brueghel's *Spring* or Crescenzi's woodcuts. In contrast to the more or less stylized pergola depictions of Boccati, Cima, and Mantegna, Cranach's pergola is realistically depicted. We see that it is made of laths bound together with withies and intertwined with grapevine bearing abundant fruit; the stems, the foliage and the fruit of the grapevine are depicted in minute detail. The grapevine is used for its symbolic evocation of the Church.⁶² The pergola serves as a framing device for the landscape, seen through the central arch and the transparent structure of the pergola covered with climbing vine. As depicted scenery framed by rocky formations with arched openings had been a favorite pictorial motif in antiquity, as seen in the *Odyssey Landscapes*, in the Renaissance, the pergola, which conveniently disposed of arched openings, came to be employed as a framing device for landscapes. In the same way as landscapes were often depicted as though viewed through an open window, so they could be viewed through a pergola. This was a revival of one aspect of the pergola in antiquity, that of the framing device for the appreciation of landscapes, as we have seen in the pergola at the House of Stags in Herculaneum.

In late fifteenth-century Italy, we see the revival of another aspect of the ancient Roman pergola, as it starts to appear in paintings of a subject other than the Madonna. Jacopo del Sellaio's (1441-1493) *The Banquet of Ahasuerus* (c.1490)⁶³ depicts a banquet scene in the garden (fig. 3.34). The right half of the scene depicts a garden divided into

⁶⁰ Paris, Louvre, inv. no. 369.

⁶¹ Melk, Stift Melk.

⁶² Clayton 1990, 30.

⁶³ Florence, Uffizi. Cf. Luigi Dami, 1925, pl. XII.

the foreground and background by means of a three-arched arcade. The background is a walled garden with a fountain, framed by the arches of a tectonic arcade. In the left half of the scene is a banquet table in diagonal arrangement, where the guests are seated. Above the table is a pergola laden with grapes. The pergola is of a simple barrel-vaulted form, with horizontal and vertical framework of laths. The grapevine is shown only with the fruit, and the transparency of the structure rather than the exuberance of the vegetation is emphasized. The scene can be interpreted with a connection to the ancient Roman tradition of outdoor dining, a custom which may have been started to be revived around this period. The painting evokes the renewed interest in outdoor dining, savoring the joys of feasting alongside the enjoyment of nature.

Jacopo Tintoretto

The pergola as pictorial motif continued to be used by northern Italian painters, among them Jacopo Tintoretto (1518-1594). The painter's interest in the pergola is observable, for example, in a number of *Susanna* paintings⁶⁴ and in the *Miracle of the Slave* (1548).⁶⁵ Paintings and prints with Susanna as subject usually show the figure of the chaste woman in a garden setting, in conformity with the details in the Biblical story (Daniel 13). The Prado *Susanna* (ca. 1555) (fig. 3.35), the Vienna *Susanna* (ca. 1555) (fig. 3.36) and the Washington *Susanna* (ca. 1575) (fig. 3.37) appear to us of particular interest, for their inclusion of a pergola. The Vienna painting also depicts a rose trellis with pink roses against which Susanna's mirror is placed, whereas the Washington painting depicts a rose bush with pink roses behind Susanna. Susanna is represented as a beautiful female nude in conflation with Venus.⁶⁶ The depiction of the rose, symbol of Venus in antiquity, reinforces this connection. While the pergola in the Prado painting is used as a garden ornament without a sense of perspective, in the Vienna and Washington

⁶⁴ At least five paintings of *Susanna* by Tintoretto are known and others are documented. Cf. Falomir 2007, 298: 1) Madrid, Museo del Prado, cat. no. 386; 2) Paris, Louvre, inv. no. 568; 3) Vienna, Kunsthistorisches Museum, GG inv. no. 1530; 4) Washington, D.C., National Gallery of Art, inv. no. 1939.1.231; 5) formerly in the Marzell von Nemes collection in Munich.

⁶⁵ Venice, Gallerie dell'Accademia.

⁶⁶ Nichols 1999, 90-93.

paintings, the pergola is depicted in the background at the end of the visual axis and serves the function of a framing device. In the Vienna painting, it frames the landscape beyond and indicates the boundary between the garden and the world outside, creating a sense of perspective. In the Washington painting, it frames two figures that are vaguely suggestive of the Elders. The Elders are relegated to the far background, and depicted in loose brushwork. The pergola indicates the boundary between the scene in focus and the surroundings, in the manner of an actor's entry to a theater stage, as an intimation of the scene to follow.

Earlier, in the *Miracle of the Slave* (ca. 1548) (fig. 3.38),⁶⁷ Tintoretto may have experimented with the representation of this liminal function by means of an architectonic structure. In the foreground, a throng of people surrounds the prostrated body of the slave, those torturing him and the large number of onlookers, when Saint Mark flies into the space to free him. The scene develops under a pergola, of which we see two supporting poles and the roof overhung with vegetation. The role of the pergola here is to emphasize the scene of focus; a similar function of the pergola was observed in Mantegna's *The Martyrdom of St. Christopher* in the Ovetari Chapel. In the background, an architectonic structure with a pediment and four hip herms serves as the boundary between the hither and the thither. The structure has an arched opening extending into a pergola on the other side, where a figure is depicted, as though entering the stage where dramatic action is in progress. The structure extends into latticed walls to the right and to the left through which is perceived the green foliage of the vegetation on the other side. We may observe that Tintoretto was clearly interested in this kind of liminal structures that mark the boundary between two worlds. In the Vienna painting of *Susanna*, we see similar latticed walls as side extensions of the pergola, which indicate the connection between the architectonic structure in the *Miracle of the Slave* and the pergola in the *Susanna* paintings.

The pergola was a pictorial motif with multivalent properties, which could serve at once as a framing device, a representation of boundary, or simply as a vegetal canopy

⁶⁷ Venice, Gallerie dell'Accademia.

above the figure of focus. A vegetal canopy is depicted in Tintoretto's *Summer* (c. 1555),⁶⁸ where a grapevine forms a bower above the reclining allegorical figure of Ceres, and pink roses are depicted alongside the ripening ears of barley. The vegetal canopy above a central figure connects this painting to the tradition of the Madonna of the pergola in the late fifteenth century. The depiction of the pergola in Tintoretto's works can be interpreted within the tradition of the depiction of green architecture in northern and central Italian painting. A number of painters in northern and central Italy show a marked interest in vegetal structures, in particular in their space-making quality and architectonic features. Mantegna has painted a room-like space formed by arched architecture made of vegetation and an anthropomorphic tree in *Minerva Expelling the Vices from the Garden of Virtue* (1499-1502).⁶⁹ Correggio painted the Camera di San Paolo (1518/19) in Parma as an illusionistic pergola inhabited by putti. Parmigianino painted another illusionistic pergola on the ceiling of the Room of Diana and Actaeon (1523/24) in the Rocca Sanvitale at Fontanellato. And Jacopo Bertola (1544-1576) painted the ceiling of the Room of Ariosto (1563) in the Palazzo Ducale at Parma as a scene set in an illusionistic forest with trees appearing to support the central panel (fig. 3.39). The depiction of such verdant garden structures in Italian painting may have been born of northern influence, introduced by the painters of Dutch and Flemish origin.⁷⁰ Many northerners, who excelled in the depiction of nature elements, were employed as assistants in the workshops of Italian masters. Lodewijk Toeput (ca. 1550-ca. 1604), who worked in Tintoretto's workshop, was one such painter.⁷¹

The depiction of animals and birds may also have been related to this northern Italian tradition. Tintoretto's *Susanna* paintings show birds and small animals – the pheasant and frogs in the Louvre painting, water fowl and deer in the Vienna painting – suggestive of the widespread collecting culture and the interest in natural history among the educated class at the time. A colorful parrot appears in *Summer*, somewhat out of

⁶⁸ Washington D.C., National Gallery of Art, inv. no. 1961.9.90.

⁶⁹ Paris, Louvre.

⁷⁰ Thanks are due to Mirka Beneš for suggesting the idea.

⁷¹ On Lodewijk Toeput (Ludovico Pozzoserrato), cf. Rinaldi and Luciani 1988.

place in the rustic setting but evocative of the international dimension of the culture, like the parrot in Veronese's decoration of the Villa Barbaro at Maser (1575). The pergola in the works of Tintoretto provides insight into the current of the depiction of nature in northern Italian painting and the contemporary interest in natural history and the culture of collecting. It may serve as a test case for my hypothesis that the creation of the painted pergola in Rome owes much to the tradition of the depiction of nature in northern Italy.

Jacopo de' Barbari: *Map of Venice*

Jacopo de' Barbari's *Map of Venice* (c.1500), a bird's-eye view of Venice, is one of the earliest surviving examples of topographical representation containing extraordinary architectural and landscape details.⁷² It depicts in recognizable form the iconic monuments of Venice, such as the Campanile of San Marco, the Doge's Palace, and the Piazzetta, as well as the wooden predecessor of the Rialto Bridge. The palace facades along the Grand Canal and the buildings in the densely built-up central area are represented in minute detail. The gondolas on the Grand Canal and the ships moored in the Lagoon with their masts and sails are depicted in realistic manner. Mythological figures that were most relevant to the life of the city were represented - Neptune (god of the sea), Mercury (god of trade and travel) and the four winds - as the economy of the city at this time depended largely on overseas trade and consequently, to a certain degree, on the favorable winds that guaranteed safe marine travel. At this early date, the contextualizing representation of the city is remarkable: the map shows not only the city proper situated in the Lagoon, but also the mainland which constituted the territory of Venice, with the high mountains serving as its grandiose backdrop. The modernity of this map also lies in its orientation with the north at the top. Placing the north at the top has become a cartographical convention in modern times that we do not even think of it, but not all early modern maps were oriented in this way.

⁷² Woodcut printed on six sheets, size of the map: 134.5 × 282 cm. Printed by Anton Kolb, Venice. UT Austin, Harry Ransom Center, Kraus Map Collection, Monumenta Cartographica Catalogue 124, no. 2. The copy in the Harry Ransom Center is dated to ca. 1514.

On careful examination, we are struck by the considerable amount of plantings that are shown in the various open spaces within the city. Mario Pagan's Map of Venice (c. 1559), in color, is also striking for the plantings shown in green, but Jacopo de' Barbari's map includes far more details. Plantings would have stemmed for the need for the production of sustenance, but they cannot be explained from that reason alone. Trees are planted along the enclosure of properties. The existence of plantings in a site of special topographic conditions such as Venice indicates the sensibility of the inhabitants towards nature, and the strong desire to incorporate nature into their living environment. Plantings tend to be found in the periphery of the city, where open spaces would have been more available. With a few exceptions, gardens are scarce in the densely built-up area along the Grand Canal, and are mostly found in the outskirts – the Giudecca, San Giorgio Maggiore, Murano, the area around the Arsenal and San Pietro in Castello among others. Plots that have gardens belong either to religious complexes – monasteries or churches – or private residences. It is interesting to note that wherever there is a garden, there is almost always a pergola.

Five of the six woodcut pieces that constitute the map show a number of gardens, each with one or more pergolas. The piece at the top right corner represents only the sea and the Mainland, thus there are no buildings or gardens, and consequently, no pergolas. The area with the largest concentration of gardens with pergolas is the Giudecca. In the bottom left piece representing the left half of the Giudecca, six residences and one religious complex are shown, each equipped with a garden with one or more pergolas (fig. 3.40). The buildings are located on the north side facing the city, with direct access from the water. Courtyards and gardens are located on the south side of the plots. The religious complex is by far the largest property among them all. Two residences on the extreme left have courtyards with a well at the center, in addition to gardens. There is one residence that has a courtyard, but no garden. The plots are defined by rectilinear contours but are irregular in shape, some with part of their property jutting into a neighbor's land. In this sense, the forms of landowning here recall those at Pompeii, where owners acquired land in pieces, which often resulted in the property being an

irregular shape. Three types of plantings in the gardens can be distinguished: first, trees and high plants that are usually arranged along the enclosure; second, low-lying plants in the middle of the garden space, most of which would most likely have represented vegetable beds; and third, plants grown on a pergola.

The pergolas can be classified into two types according to their form: *tonnelle*-type (barrel-vaulted tunnel) pergolas and flat-roofed pergolas. Freestanding pergolas in the middle of the garden tend to be *tonnelle*-type pergolas; in some cases they are straight, in other cases they are L-shaped. They range from short tunnels in modest residential plots to large-scale pergola walkways in the gardens of monasteries and churches. San Pietro in Castello and San Giorgio Maggiore both have L-shaped *tonnelle*-type pergolas. Flat-roofed pergolas are usually constructed against a wall, but in a few exceptional cases, also freestanding, as in San Giorgio Maggiore. In contrast to the freestanding pergolas, which seem to have a space-defining quality, the flat-roofed pergolas appear to be used more for their utilitarian function, namely as supports for climbing plants. The number of flat-roofed utilitarian pergolas depicted in the map suggests that agricultural production within the city would have been very much a concern. We may observe that L-shaped pergolas, both *tonnelle*-type and flat-roofed constructed along the walls, were in most cases the result of restrictions of space rather than a concern for design. If there were space, they would have been constructed as straight pergolas.

At San Giorgio Maggiore, we can distinguish at least five pergolas (the number varies depending on how one counts them), both of the *tonnelle*-type (barrel-vaulted tunnel) and the flat-roofed type (fig. 3.41). Two flat-roofed pergolas run along the south walls, one straight and the other slightly curved in conformity with the enclosure. These were probably vine pergolas, from their flat-roofed form and relatively large-scale, and their placement in an open space on the south side. There are four *tonnelle*-type pergolas. One of them is composed of two shorter pergolas together forming an L-shape, near the residential quarter of the monastery. This pergola may have been for training climbing plants for the production of vegetables, but may also have served as passageways

connecting one building to another. The three remaining pergolas are located in the open space on the east side of the property, and are arranged in roughly zig-zag form. These three pergolas are particularly interesting, not only for their large scale and location in an open space, but also for their interaction with strolling figures. In the densely built-up city fabric, figures are rarely depicted. Here in the garden of San Giorgio Maggiore, a man and a woman are shown standing inside the *tonnelle*-type pergola, and another pair of figures outside, beside the pergola. Although depicted in minuscule scale and in rough touches, these figures apparently do not represent laborers working in the vegetable garden or toiling on the maintenance of the pleasure garden. From the way they are dressed and their poses, they are clearly intended as upper-class citizens enjoying a leisurely stroll and a cultured conversation in the garden.

The pergolas at San Giorgio Maggiore would have served both utilitarian and decorative functions: passageways connecting separate buildings; support for climbing plants in the kitchen gardens; and shady walkways in pleasure gardens. It appears that, in general, the *tonnelle*-type pergolas were used more for their shade and space-making quality, while the flat-roofed pergolas were more utilitarian and for agricultural production. Apart from fountains in the paved courtyard of some of the residences, the pergola is the only structure constantly present in the gardens. Again one can say that the pergola would have been understood as a structure that most typically represented a garden.

The pergola appears to have been a convenient garden furnishing that could also be adapted to sites with limited land availability. The relatively widespread use of pergolas in the Venetian context indicates the flexible nature of the pergola, which could be easily applied to gardens with various functions and to existing topographical conditions of the site. Even in sites with limited land resources such as Venice, there was desire for an experience of nature and the outdoors, and the pergola most readily responded to such needs. One may also note, in terms of the flexibility of the pergola, that near the Arsenal is depicted a boat with a pergola-canopy of the *tonnelle*-type form.

Pergolas were not only used as garden structures, but could also be used on boats and gondolas, to offer an experience of nature in a variety of ways.

Du Cerceau

Jacques Androuet Du Cerceau's *Les plus excellents bastiments de France* (vol. I 1576, vol. II 1579) includes the earliest representations of real châteaux and their gardens in the medium of print.⁷³ The two volumes, both dedicated to Catherine de Médicis, document, through etched plans, elevations and perspectives, the royal and aristocratic residences of sixteenth-century France. The Limbourg Brothers' *Très riches heures du Duc du Berry* (1416) contained depictions of the châteaux in the possession of the patron's family, but they were included as a backdrop to the scenes depicting the monthly labors. Du Cerceau's work is significant in that the châteaux themselves are treated as a subject in their own right, a portraiture of the châteaux in that sense, and for the systematic approach in the representation of both architecture and garden. The prominent feature of the gardens of these French châteaux is the compartment beds or parterres within a walled enclosure, often with galleries on one or more sides. Most relevant for the study of pergolas are the sites of Blois, Gaillon and Montargis.

Blois (1499-1515) on the Loire was a medieval château that was renovated with gardens under the French king Louis XII. The garden was the work of Pacello da Mercogliano (died 1534), a Neapolitan gardener recruited by Charles VIII. Du Cerceau describes the château of Blois as follows: "beautiful and grand gardens, each one different from the others, some having large walkways all around, covered with a carpentry framework, or with hazel or vine."⁷⁴ The plan shows three parterre gardens, the main garden and two adjacent gardens on either side, one large and the other small, each as a separate enclosure. In the illustration "Blois: elevation of the building and the gardens from the entrance side,"⁷⁵ one sees that each of the three gardens has one or more

⁷³ Clayton 1990, 47-51. For Du Cerceau as printmaker, see Guillaume 2010.

⁷⁴ "de beaux & grands iardins, differens les uns des autres aucuns ayans larges allees à lentour, aucunes couuertes de charpenterie, les autres de coudres, autres appliquez à vignes."

⁷⁵ "Blois: Elevation du bastiment et iardins du coste de l'entree / Elevatio aedificii et hortorum spectantium."

pergolas (fig. 3.42). A pergola serves as the connecting covered walkway between the château complex and the gardens. In the main parterre garden, the pergola walkway runs almost the full length of the enclosure. In the adjacent large parterre garden, the pergola forms an extended walkway out into the garden. In the small parterre garden, twin structures covered with vegetation stand against a building with a colonnaded space on the upper storey. These twin structures could have been garden pavilions housing aviaries.

The scale of the gardens is large, and the pergolas are arranged in such a way that one could reach the gardens from the château without having to walk or ride in the open. In that sense, they serve the function of the covered walkways connecting separate buildings in monasteries. The apparent absence of systematic arrangement and of the connection between the château building and the garden are striking characteristics of the French garden of this period. The parterre gardens have a central axis, but the pergola walkways do not reinforce the axis in any way. The pergolas appear to have been created more out of the practical concern for a promenade protected from the weather. They may have been constructed along the enclosure so that the wall could be used as part of the covered walkway. The resulting spatial experience was that one would have had to go the entire distance of the series of covered galleries in order to reach the small parterre garden, and one would probably have had to follow the same course on the way back. Antonio de Beatis, who visited Blois in 1517-1518, has written in his travel diary that the pergolas at Blois could be entered on horseback.⁷⁶ The monotony of the itinerary would have been compensated by the movement on horseback, as well as by the diversity of the planting patterns in the individual parterres. The route may have provided the opportunity to enjoy the garden from different angles. The intended spatial experience was different from that of a stroller. The arrangement of the pergola galleries presupposes the visual appreciation of the parterres from a certain distance, and the planted beds were designed more to be seen than to be entered and experienced by means of bodily movement.

⁷⁶ Antonio de Beatis 1979, 134-135.

Gaillon⁷⁷ near Rouen in Normandy was a château constructed in 1502-1506 for Georges d'Amboise, Archbishop of Rouen, who later became cardinal. The main garden was laid out in 1506-1510, and the retreat of Lydieu was built in 1503-1510. Pacello da Mercogliano and Pierre Valence were responsible for the gardens. The general view of the estate (fig. 3.43) shows two gardens: the main garden near the château and a larger garden nearby. The main garden is connected to the château by means of a covered walkway, and is enclosed on two sides by elongated buildings, the galleries. Inside the garden, the parterres including two mazes are arranged on either side of the central axis, with a carpentry pavilion at the center housing a fountain and aviaries. The relatively small scale of the garden and the absence of walkways along the enclosure suggest that this garden would have been for strolling. It would also have been intended to be seen from within the galleries. The larger garden is an independent enclosure not connected to the château in any way. The design is formal, with parterres divided by a grid of paths at the center, and larger spaces planted with trees surrounding them. A pair of arched pergolas leads the visitor from the garden's entrance to the formal parterres.

In the retreat of Lydieu, we see the familiar formal parterre compartments with a variety of planting patterns, but we also see a number of new design elements (fig. 3.44). One is the set of three pergolas arranged side by side beside the parterres, which are referred to in the descriptive text as “pergola walks covered with hazel.”⁷⁸ Multiple pergolas arranged side by side is a specifically French design feature, and is seen in exaggerated form in the garden of Liancourt (1620-1630). Another is the set of three room-like spaces on the other side of the parterres: the central one a quarter-spherical trelliswork cover above a tiered mountain-like structure, and those on the sides an arched roof with a semicircular rear screen made of trelliswork, serving as the shelter for a dining space. The new form of these trelliswork structures would have offered a new kind of spatial experience.

Montargis was a château located near Orléans on the river Loing (fig. 3.45). A medieval fortified building existed on the site, but the one we see in Du Cerceau's

⁷⁷ For Gaillon, see Bardati 2009.

⁷⁸ “allees bercees, couveueertes de couldres.”

etchings is the château renovated (ca. 1560) for Renée de France, daughter of the French king Louis XII and spouse of the Duke of Ferrara Ercole d'Este. The overall plan shows the fortified residential core, surrounded by two concentric half-rings of planted areas that are divided by radial and circumferential paths: formal parterre gardens adjacent to the château and plantings of trees in the outer periphery. In the inner half-ring, consisting of formal gardens with compartments of herbs and flowers and low shrubs, tunnel pergolas are placed along two of the paths that lead to the outer ring, and a pair of elaborate pergola galleries flank a monumental approach from the château to the gardens. Du Cerceau includes a separate illustration, showing a close-up view of the pergola galleries (fig. 3.46). Each pergola was composed of three pavilions interconnected by barrel-vaulted galleries. The structures were made of carpentry and intertwined with ivy.⁷⁹ The galleries had three arched openings on the sides, and an elaborately wrought parapet ajouré in between. The pavilions had arched openings on all four sides and ogival roofs accented by four ribs terminating in volutes at the corners and crowned by egg-shaped finials with spiraling lines, the trelliswork in between the ribs also conforming to the curved roofline. The etching shows that, already in the sixteenth century, the craftsmen had the skills to create complex curves and elaborate ornaments. The ogival roof appeared in French garden design from the 1490s, but was not observed in Rome and its environs until around 1600.

The balustrade's decorative pattern is evocative of the technique of stereotomy. The idea of curvilinear patterns may have been borrowed from other artistic categories, for example, marquetry. Du Cerceau is known to have created designs for marquetry, as we see in a set of 29 prints referred to as *Entrelacs* (interlace) (c. 1565-1570), most likely intended as a pattern book for furniture craftsmen (fig. 3.47).⁸⁰ Here the transposition of ornamental ideas across different artistic categories may have been at work, from marquetry design into garden design.⁸¹

⁷⁹ Deambulationes lignae horti quae nunc hedera circumvestiuntur / Les galleries de charpenterie du Gardrin lesquelles de pont sont couvertes de lierre.

⁸⁰ Guillaume 2010, 316-317; Gruber 1994, 73.

⁸¹ Cf Gruber 1994, 73. Gruber suggests that the design proposed for marquetry would have worked just as well for a garden terrace or iron railing.

The scene is enlivened by the presence of figures, gentlemen and ladies in groups of twos and threes, strolling or conversing. The human figures give us a sense of the scale, at least the intended effect of it. The tension between the evocation of loftiness and durability through its form and the aethereal and translucent character of its materials created an aesthetic effect that could not be produced by stone architecture. Du Cerceau's role at Montargis remains unclear; he was involved in the renovation and recorded the pergola gallery in the illustration, but cannot be identified for sure as the designer.⁸² But the unique character of this representation focusing on a single structure and the meticulous attention to details may point to Du Cerceau as the designer. Du Cerceau's involvement in the restoration of Verneuil may also indicate his strong interest in the pergola gallery, if not his direct involvement in its creation. At Verneuil, there was also a pergola walkway composed of two pavilions interconnected by a barrel-vaulted gallery, a reduced version of the Montargis structure. At Verneuil, the pergola is used, not as a walkway in a planted garden, but as a bridge across a canal. At the top right of the view, simple tunnel pergolas were placed to serve as walkways amongst plantings.

Pergolas in French Renaissance gardens, as we see in the etchings of Du Cerceau, served as covered walkways connecting the residential quarter and the garden and as shady walkways within the garden for the enjoyment of nature. Here the utilitarian function of support for vegetables and climbing plants is not emphasized, probably because the clientele was the royal and aristocratic class, who, in this period, would have been more interested in the grandiose representation of their landholdings than of the agricultural labor that supported them.

Giusto Utens

The Flemish artist Giusto (Justus) Utens, commissioned by Ferdinando I de' Medici, painted a series of lunettes depicting the Medici villas in 1598/99.⁸³ The paintings were executed in tempera on wooden panels, and installed as decorations on the

⁸² Cf. Thomson 1988, 87.

⁸³ Originally 17 lunettes are presumed to have existed, of which 12 are currently in the Museo di Firenze com'era in Florence.

great hall on the upper floor of the Villa Medici at Artimino. These paintings can be interpreted within the tradition of the portraiture of villas and the representation of family landholdings in villa buildings in sixteenth-century Italy.⁸⁴ The views showing Il Trebbio, Cafaggiolo, Ambrogiana (1587), and La Petraia (ca. 1594) are of particular interest for their depiction of pergolas and green architecture.

The Villa Medici at Il Trebbio (1427-36), in the Mugello region north of Florence, was renovated by Michelozzo for Cosimo the Elder. It was intended as an agricultural base, but elements of a pleasure villa were starting to be introduced. Uten's view (1598/99), made approximately 170 years after Michelozzo's restructuring of the whole estate, shows the view of the villa as seen from the south (fig. 3.48). We see a castellated building with a watchtower, behind which is a meadow surrounded by walls and fences. Beyond the walls on the north side, the land gradually slopes down to the Sieve valley. A green space in front of the building, presumably a front lawn, has two arbors similar to one another, made of evergreens clipped in the form of domes. To the right of the main building is a cottage, for the use of the overseer, and adjoining to the right is a vegetable garden, divided into eight square planting beds, flanked on either side by a vine pergola.⁸⁵ Further to the right are several cottages for the sharecroppers, on the border of a sloping ground planted with trees.

The two pergolas depicted in Utens' view of Il Trebbio were those that existed from the fifteenth century; they are mentioned in a notary document of 1456 published by Fabiani Giannetto.⁸⁶ The one on the side of the building stands to this day, while traces

⁸⁴ Cf. Coffin 1989.

⁸⁵ Pozzana notes that the "two vineyards" mentioned in the land registers probably referred to the two vine pergolas. Cf. Pozzana 1996, 148-150. The vineyards are mentioned in the portata al Catasto (land register) of 1427, 1446, and 1451. Cf. Fabiani Giannetto 2008, 10-19.

⁸⁶ Cf. Fabiani Giannetto 2008, 206-207, n.43. Archivio di Stato di Firenze, *Scrittoio delle Regie Possessioni* 4112, "Campione dei beni patrimoniali della famiglia Medici, 1456" fol. 6r: Uno chasamento a trebbio per nostra abitazione ridotto in forteza chon chorte, loggia interna, volte, sale e altri [e]difici, chon una torre in beccatelli sopra la porta, chon ponte levatoio et po ... to attorno merlato, et altri [e]difici tutti ridotti in forteza, et chon due pratelli, l'uno dinanzi murato intorno, l'altro di verso la Scarperia, chon istalle et uno orto allato a detto chasamento di verso Spugnole murato intorno chon pergole et alberi fruttiferi. (A fortified building at trebbio used for our residence with courtyard, inner loggia, cellars, rooms and other buildings, and with two small meadows, one of which is in front [of the building] and it is walled, the other is oriented toward Scarperia, with stables and a kitchen garden to the side of the said building oriented toward Spugnole. It is walled and has pergolas and fruit trees.)

of the other can be observed on the opposite side. The surviving pergola is supported by 24 brick columns, with capitals made of sand stone, and was constructed on a podium of masonry. The type of the pergola supported by columns is already attested in antiquity; it has fallen into desuetude in present day Tuscany, but can still be seen in Campania, particularly in the islands of Ischia and Capri.⁸⁷ To my knowledge, the pergola at Il Trebbio is the earliest manifestation in the Renaissance of the type of the pergola with brick and masonry supports and a flat roof of timber beams. Michelozzo may have designed the pergola after ancient models, as a structure with a dual function of support for climbing plants for agricultural productivity and of a shady walkway for the enjoyment of the garden.⁸⁸

The extant vine pergola, and the vegetable patches and the other pergola, were situated on two different levels, on artificial terraces created on the gentle southwest slope. On the upper terrace was constructed the vine pergola still in existence, while on the lower terrace were the vegetable patches and the other vine pergola. Stairs lead down from the upper terrace to the lower terrace. As Pozzana points out, we can see that this is a typical example of a terrace garden, an effective way of arranging space on sloping ground. The terrace garden was already practiced in Tuscany from the fourteenth century, becoming more frequent in the fifteenth century,⁸⁹ and reiterated in major Italian gardens of other regions in later periods. The vine pergola would have offered an agreeable shade especially inviting for summer walks, and an ideal setting for philosophical discussions reminiscent of the Greek Peripatetic thinkers, but it was a closed introversive space, excluding all outside views.

The Villa Medici at Cafaggiolo (1451), near Il Trebbio, was also renovated by Michelozzo for Cosimo the Elder. Vasari testifies that it was a fortified farm complex, with the amenities of a country residence.⁹⁰ The earliest visual documentation is Utens' lunette, depicting the villa and its surroundings as seen from the northeast front (fig.

⁸⁷ Pozzana 1996, 151.

⁸⁸ Fabiani Giannetto also acknowledges the dual function of the pergolas at Il Trebbio. Cf. Fabiani Giannetto 2008, 23.

⁸⁹ Pozzana 1996, 150.

⁹⁰ Vasari, *Everyman's Library*, 1970, 320.

3.49). To the left are wooded hills and a running brook, and to the right are cultivated farmlands. In the front there are also fields and a stream with water flowing in abundance, presumably the Sieve. Inside the walled villa complex, we see the main building, a castellated structure with crenellated ramparts dominated by a watchtower and keep, and beyond, an enclosed space surrounded by walls and fences. In the garden, on either side of the main axis are three square planting beds bordered by low hedges, where vegetables or herbs would have been planted. At the far end of the central axis is a fountain, flanked by vine pergolas. Water is flowing out of a niche in the wall into a basin below. To the left of the planting beds are vegetable patches surrounded by fences and a *ragnaia* (an artificial bosquet for catching wild fowl with nets). In the front lawn is a green arbor with evergreens clipped in the forms of parasols. The pergolas at Cafaggiolo are placed at the end of the vegetable garden; but they create a separate space within the garden, enlivened by the presence of a fountain of ornamental design. We may observe that the garden at Cafaggiolo shows a transitional phase of the utilitarian vegetable garden transforming itself into a pleasure garden, a landscape for agricultural production changing into one intended to be viewed and enjoyed.

The Medici villas of Ambrogiana (1587), located to the southwest of the city of Florence, and of La Petraia (ca. 1594), on the northern outskirts of the city, were both created by Bernardo Buontalenti for Ferdinando I de' Medici.⁹¹ They date from more than a century after the agricultural villas of Il Trebbio and Cafaggiolo, and were designed to be ornamental gardens for recreation. Utens' lunettes of Ambrogiana (fig. 3.50) and La Petraia (fig. 3.51) show the villa buildings now devoid of castellated elements. Ambrogiana is a rectangular structure surrounding a central courtyard, equipped with four corner towers, and La Petraia a rectangular block with one central tower, but the towers appear to be belvederes rather than medieval watchtowers. The gardens are composed of square compartments showing ornamental patterns, with plantings of flowers and herbs, with some trees for accentuation. At Ambrogiana, the square forms of the compartments are emphasized by the tonnelle-type pergolas that

⁹¹ Cf. Lazzaro 1990, 70-72; 84-87.

surround them on three sides. At La Petraia, the tonnelle-type pergolas are arranged in the four compartments in segments of a circle, which together form two concentric rings around the central round space. The role of the pergola was to delineate the geometric forms used in the design, and at the same time, to provide shady walkways for the enjoyment of the garden. The pergolas in the Medici villas show the transition of the utilitarian pergola to a multivalent design element.

Dutch and Flemish garden prints

From the latter half of the sixteenth century, pergolas became a favorite motif among Dutch and Flemish printmakers, who produced numerous representations of gardens showing pergolas and pavilions entirely covered with thick vegetation. The Dutch and Flemish garden prints were, for the most part, imaginary views of gardens; although they may have served as sources of inspiration for the design of real gardens, they do not appear to represent any particular site. They are more akin to the tradition of the *capricci* and fantastic landscapes, and the experimentation of artistic forms and design ideas on paper.

Hans Vredeman de Vries' (1527-1606) work on garden art, the *Hortorum viridariorumque elegantes multiplicis formae* (1583), contains a variety of garden designs where compartments of geometric planting design, tunnel pergolas, and pavilions covered with vegetation are typical design elements.⁹² Vredeman de Vries was an architect, painter, and designer of ornament and gardens, and was active not only in the Netherlands but also at the court of Rudolf II in Prague. The garden views in the *Hortorum viridariorumque* are framed by architecture, and are referred to as Doric, Ionic, Corinthian and Composite styles, according to the design concept of the classical orders they sought to embody. Tunnel pergolas provide walkways for strolling and the pavilions serve as decorative features as well as visual foci (fig. 3.52). The illustrations were etched by the book's publisher Philippe Galle (1537-1612). Galle had worked in Hieronymus Cock's workshop in Antwerp, and after the latter's death, had started his own printing

⁹² Clayton 1990, 44-47; Hellerstedt 1986, 76-77.

business.⁹³ Vredeman de Vries' garden prints were influential throughout northern Europe, and are considered to have inspired the designs of major Dutch gardens.⁹⁴

While Vredeman de Vries' garden prints focus on the ornamental aspect of garden design, rarely including figures, other garden views with pergolas are more or less populated by human beings, suggesting the way in which the space was to be experienced. The Flemish artist Hans Bol's *La Primavera* (1580)⁹⁵ and the Dutch artist David Vinckboons' (1576-ca. 1632) *Venetian Party in a Château Garden* (ca. 1602)⁹⁶ are two typical examples. In Johannes Sadeler's print after Hans Bol,⁹⁷ we see a castle building with a stepped gable and a round tower surrounded by a moat, and the garden space with two tree houses (fig. 3.53). One is a circular room with windows and a saucer dome midway up the trunk of a tall tree. It is not shown how one could access the tree house, as it is too high up to be reached by tree-climbing. The other is a more substantial structure also constructed around a natural tree, which serves as the central supporting pole. The lower storey is an open space with a round table at the center, and the podium for the supporting stilts of the upper storey serving as benches. Nobles are shown socializing in the space. The upper storey is a domed room made of wooden ribs and covered with vegetation, and is reached by a stairway, where a woman is shown going up. It has windows and a couple is looking out of one of them. The tree trunk comes out of the domed roof and develops a foliage above. These structures show an interesting merging of architecture and nature, and embodies the ambiguity between the architectural and the organic, and the indoors and the outdoors. Other nobles are depicted strolling in the compartments, and others are playing a kind of ball game.

⁹³ Hieronymus Cock's printing workshop, the *Quatre Vents*, in Antwerp, established a successful division of labor among graphic artists who provided the original designs, the engravers who made the reproductive plates of them, and the craftsmen who performed the printing operations. The engraving techniques that would become the standard in northern Europe and Italy were developed in Cock's workshop. Cf. Clayton 1990, 44; Landau and Parshall 1994.

⁹⁴ Cf. Woudstra 2001, 40. Het Buitenhof in The Hague created for Prince Maurits, William Bentick's garden at Zorgvliet, and the Queen's Garden at Het Loo all feature pergolas covered with thick vegetation.

⁹⁵ Uffizi.

⁹⁶ Washington D.C., National Gallery of Art 1986.76.1. 42.5 × 70.5 cm.

⁹⁷ Blanton Museum of Art 2002.1641.

Vinckboons' work is a large print depicting an impressive château building in the background with a large garden, featuring a variety of pergolas (fig. 3.54). In the large garden in front of the château, a party of nobles is taking place. The foreground of the pictorial space is accentuated by three clusters of tall trees, on the left, at the center, and on the right, each of which become a gathering place for people. In the left foreground, under a large tree whose foliage is highlighted in white, is a pergola supported by masonry columns covered with climbing vegetation. In the middle ground, to the left, is a tree house built around a living tree. The lower storey has eight natural trees as supports. A spiraling stair leads up to the second storey, whose roof and walls are made entirely of vegetation. Connecting the pergola with masonry columns to the tree house is an impressive L-shaped *tonnelle*-type pergola-walkway pierced with arched openings. A large number of people are shown within, looking out onto the pond from the arched windows. The pergola-walkway has a total of four pavilions with double-pointed roofs entirely covered with vegetation located at crucial points in the itinerary, such as corners and the starting point of a garden path. In one of the pavilions, there are people who are dining. Among the gondolas on the pond, two are equipped with charming little pergolas covered with foliage. It is as though the pergola-arbor in the garden had been transferred as a canopy in a pleasure boat. This type of pergola on a boat finds a precedent in Jacopo de' Barbari's Map of Venice, where a boat depicted near the Arsenal was shown equipped with such a pergola-canopy. Vinckboons' print can be considered as a kind of catalogue of pergolas, showing the playful variety their forms could take. It may no longer be a realistic representation of existing pergolas, but rather an experiment on paper of design potential and a fantastic play of the imagination.

Our examination of the pergola in literary texts, painting and the graphic arts of the period 800-1700 has shown that the pergola was more than just a simple agricultural structure with a utilitarian function. Because of its form, structure, and space, it became a typical component and a visual focus of the pleasure garden, a rich literary motif, a

framing device for landscapes, a semi-interior in the outdoors, and finally a *capriccio* motif in the graphic arts. It was a structure in which one can enjoy the outdoors, savor the season, experience the fresh air and view nature, while being protected from the unpleasant aspects of it. It was also a carefully monitored space that was accessible only to a select few, restricted to those belonging to the upper tiers of society, for whom nature could represent pleasure and enjoyment. When loggias, porticoes and garden pavilions of villas and palaces were decorated as illusionistic pergolas, these rich connotations of the pergola were retained. But most important for them was the ambiguity of the pergola resulting from their mediating role between the indoors and outdoors, and between built structure and plantings.

THE ILLUSIONISTIC PERGOLA IN ROME I: 1517-1520

The illusionistic pergola was an Italian Renaissance invention, and moreover, a cultural phenomenon that started in Rome in the early decades of the cinquecento. In Rome of the 1510s, loggias and porticoes in private residences began to be decorated with fictive pergolas. These pergolas featured realistic depictions of plants, birds and small animals, which made them a reflection of the cultures of natural history and collecting. In addition to their aesthetic value, the illusionistic pergola also had a social and cultural dimension: the decorated space often became a venue for entertainment, recreation and display.

Because of their ambiguous location between the indoors and outdoors, loggias and porticoes can be considered semi-interiors. These mediating spaces provided at the same time the amenities of the indoors and the enjoyment of the outdoors. They lent themselves most readily to a *trompe-l'œil* decoration of nature, and nature was brought inside in the form of architectural decoration. The illusionistic pergola was not just a stylistic novelty, but more fundamentally it was a new way of experiencing the outdoors. The opening up of the building towards the exterior by means of loggias and porticoes, which enabled the taking in of the view of the garden and the surrounding landscape, was already a new form of appreciation of nature that can be seen from Pope Pius II Piccolomini's palace and garden (1459-62) in Pienza, designed by Bernardo Rossellino. Previously, one needed to move to the garden or to the countryside for the enjoyment of nature, as was the case for the group of men and women in Boccaccio's *Decameron*. By opening up the city palace to the outdoors by means of loggias and porticoes, and adorning those semi-interior spaces with *trompe-l'œil* images of nature, one could gain the sensation and enjoy the view of nature.

The illusionistic pergolas can be interpreted as a development of the trend to decorate interiors with scenes of gardens and nature. From the fourteenth century, frescoes depicting scenes from nature began to be adopted as the decoration of interiors. The frescoes in the Room of the Deer (1343) in the papal palace at Avignon, in the Palazzo Davanzati (ca. 1348), and in the Casa dei Castellini da Castiglione (ca. 1395) show scenes with trees and flowers, which reveal a renewed sense of nature.¹

This chapter will be focused on the illusionistic pergolas created in Rome during the first period of their appearance, 1517-1520. Three major examples date from this period: first, the Loggia of Cupid and Psyche at La Farnesina (1517); second, the Loggetta of Cardinal Bibbiena (1517-1519); and third, the First Loggia of Leo X (1519). All three projects are decorations of loggias, and are dominated almost entirely by the figure of one artist, Giovanni da Udine. The chapter will provide a general background - a lexicographical and etymological review, a discussion of the view, an important design concept relevant to loggias and porticoes, and the architectural typology of the loggia in Rome – in addition to the close examination of the major examples of the illusionistic pergola from the first period.

Lexicographical review

As the illusionistic pergolas were often decorations of loggias, not only during the first period but also during the second and third periods, it is appropriate to begin our discussion with the definition of the term ‘loggia,’ and a brief lexicographical and etymological review.

The word ‘loggia’ seems to have been used almost exclusively in reference to architecture in Italy, as is so specified in French dictionaries.² Yet it is commonly considered to be derived from the Latin word ‘laubia,’ a Latinized form of the Germanic word ‘Laubja,’³ meaning bower, arbor or pergola; this in turn comes from the German

¹ Cf. Fagiolo/Giusti 1996, 20-23.

² Pierre Richelet, *Nouveau Dictionnaire François*, 1710: Loge: Donjon, ou Belvédère en Italie, élevé au-dessus de la maison. Emile Littré, *Dictionnaire de la langue française*, 1878: Loge: Galerie, portique en avant-corps pratiqués à l’un des étages d’un edifice; il ne se dit qu’en parlant des édifices d’Italie.

³ M. Cortelazzo and P. Zolli, *Dizionario etimologico della lingua italiana*, 1999; J. F. Niermeyer and C. Van

‘Laub’ meaning foliage. Variants of ‘laubia’ are many, some probably reflecting local dialects (laupia, lobia, lovia, logia, logea, loga, loja, lotgia, loza, lobium, logium, lovium). It can be extrapolated that the space created by the shade of the foliage or bower, in the manner of a natural baldacchino, came to be used as a dignified setting for certain social activities, and later developed into a more properly defined architectonic space.

The etymology of the word ‘loggia’ reveals an interesting intersection between the feature it defines and the pergola. In the modern Italian dictionary, the primary meaning of the Italian word ‘loggia’ is defined as “building or part of a building open to the exterior by means of colonnades or arcades.”⁴ The *Vocabolario degli Accademici della Crusca* (1729-1738) defines it as “an open structure supported by columns or pillars.”⁵ It is interesting to note that among the equivalent words in Latin, ‘pergula’ is listed.

Civic loggias in northern Italy are considered to have developed from the ‘laubia.’ The word is recorded in the judicial documents from the ninth to the twelfth centuries.⁶ Civic loggias, such as the Loggia dei Lanzi in Florence or the Loggetta of Sansovino in the Piazza San Marco in Venice, were independent structures built by the state from the ninth to the fourteenth centuries in northern Italy and Tuscany. Examples of this architectural typology are not found in Rome or in Lazio. The loggias of interest to this study formed part of private residences, built in Rome in the fifteenth and sixteenth centuries. But the early instances of the ‘laubia,’ the presumed ancestor of the ‘loggia,’ may be of some relevance. Although the word is of Germanic origin, real instances of the ‘laubia’ have almost always been found within Italy. The word ‘laubia’ is used in the *placita*, or proceedings of the court hearings dating from the Carolingian and Ottonian periods (A.D.774-1100). These documents often included the location and the description

De Kieft, *Mediae Latinitatis Lexikon Minus*, 2002; C. Dufresne Du Cange, *Glossarium mediae et infimae Latinitatis*, 1954.

⁴ Edificio o parte di un edificio aperti verso l’esterno, almeno da una parte, mediante colonnati o arcate che possono anche essere munite di vetrate. (Salvatore Battaglia, *Grande dizionario della lingua italiana*, 1986).

⁵ Edificio aperto, che si regge in su pilastri, o colonne. Lat. Pergula, ambulacrum, peristylum, porticus, xystus. Gr. Περιστύλιον, ζυστός.

⁶ Sexton 1998, 22-28.

of the ‘laubiae’ where such court hearings took place. The Emperor or his representative and the imperial judge attended these court hearings. The descriptions in these documents show that a number of ‘laubiae’ were not buildings in the proper sense, but rustic or makeshift structures such as arbors or pergolas; some were even referred to as “laubia frascata” (arborescent laubia) as opposed to “laubia edificata” (built laubia).⁷ In fact, the rustic origins of the loggia can also be observed lexicographically in its interchangeability with the word ‘pergola.’ In early botanical treatises, both meant structures in a garden or rustic setting covered with climbing plants.⁸ In Salvatore Battaglia’s Italian dictionary, ‘pergola’ is listed as the sixth meaning of ‘loggia.’

Probably because ‘laubia’ was a medieval Latin word with Germanic origins, Alberti does not use it in his treatise *De re aedificatoria* (1485), preferring instead classical Latin words such as ‘porticus,’ ‘ambulatio,’ or ‘gestatio.’ ‘Ambulatio’ and ‘gestatio’ were originally words used in the context of the ancient Roman villa and garden. In the Italian edition of Alberti’s treatise (1546), these words are not translated literally word for word; the translator seems to have found only two words, ‘portico’ and ‘loggia,’ with equivalent meaning.⁹ Authors writing in Italian, the vulgar language, had no scruples about using the word ‘loggia,’ which was commonly used by the fourteenth century with the primary meaning in Salvatore Battaglia’s Italian dictionary.¹⁰

Views and visibility

⁷ Sexton 1998, 27-28.

⁸ Mattioli 1548,273: i fagioli ... ricuoprono, avolgendosi e salendo in alto, pergole, loggie, capanne e fenestre; Durante 1585, 201: E il gelsomino una pianta molto a proposito per convestire nei giardini le spalliere le loggie e le pergole e le capanne, cosi esser molto habile a cio fare, come per la vaghezza, & molto raro odore dei suoi fiori.

⁹ Alberti Latin 1485 V.1: insunt tamen partes aliquae / alioquin commode quas usus et consuetude ita uiuendi efficit / ut putentur penitus necessariae uti est porticus ambulatio / gestatio et eiusmodi. (Alberti Italian 1546, 90, V.1: Sono cotali case per necessita fabricate, ui sono tutta uia alcuna parti commode, lequali l’uso e costume di uiuere le ha fatte e giudicare necessarie, come il portico, la loggia e simili. Alberti Latin V.18: Habebunt quidem praeter lassitatem sinus / etiam porticum / ambulatione / gestationem / atque hortorum delitias et eiusmodi. Alberti Italian 114, V. 18: Habbia oltre l’atrio ampio, anche il portico, la loggia, l’orto, e simili delitie.

¹⁰ Boccaccio, *Decamerone*, Intro. 61: In sul colmo della quale [montagnetta] era un palagio con bello e gran cortile nel mezzo, e con loggie e con sale e con camere.

Here a discussion of the view and viewing is appropriate, as the notion of the view was an important design concept in the creation of loggias and porticoes, and in the villa culture in general of sixteenth and seventeenth-century Italy. Because the view was to become an important component of the spaces decorated with the illusionistic pergola, it is necessary to include a brief survey of the concept of the view, and how it related to or influenced the design of villas and palaces.

The concept of the view had its origins in classical antiquity. Grimal mentions tower structures with a view in his study on Roman gardens.¹¹ In the House of Augustus on the Palatine, there was a secluded place in the upper storey called *Syracusae et Technyphion*.¹² Augustus retreated to his *Syracusae* when he had work to pursue in private or without interruption. In the *Horti Maecenatiani* on the Esquiline, there was a lofty tower from which Nero is supposed to have watched the great fire of 64 A.D.¹³ At the Laurentian villa of Pliny the Younger, there were two towers. From one of these towers, he had a fine view of the ocean as well as the villas scattered here and there, and from the other tower, he was able to see the entrance to his own villa, the vegetable garden and the orchard.¹⁴ It can be inferred that the tower in the garden was a place for enjoying the views of the natural surroundings, as well as commanding the entire estate, thereby keeping perfect control of everything going on inside the villa. Pliny also describes his Etruscan villa as being situated in the ‘grand amphitheater of nature,’ commanding superb views of the surrounding countryside and the Appennines.¹⁵

The significance of the tower in this sense may also be applied to the tower-like buildings in Hadrian’s villa, the *Roccabruna* and the *Tempe pavilion* (or the *East Belvedere* and the *West Belvedere* respectively).¹⁶ These buildings are in themselves a component of the villa’s landscape. Besides their utilitarian or practical use as a

¹¹ Grimal 1984, 261-264.

¹² Suetonius, *Aug.* 72.2; Richardson 1992, 374. According to Richardson, *Syracusae* probably refers to the isolation of the island of *Ortygia*, and *technyphion* meant ‘little workshop.’ I owe the reference to Rabun Taylor.

¹³ Horace, *Carm.* 3.29.10; Suetonius, *Nero* 38.2; Richardson 1992, 200. I owe the reference to Rabun Taylor.

¹⁴ Pliny the Younger, *Letters* II. xvii. 12-13.

¹⁵ Pliny the Younger, *Letters* V.vi.

¹⁶ For the *Roccabruna* and the *Tempe pavilion*, cf. MacDonald and Pinto 1995, 58-61.

watchtower, they were most likely used as belvederes for taking in the view, for the enjoyment of the Emperor and his entourage. It was a place where the Emperor, by commanding an overall view of the whole villa estate and the activities and events taking place therein, could acquire a sense of control over his subjects and the land over which he ruled. The elevated vantage point not only offered a commanding view over the physical landscape, but also provided a symbolically elevated position, which gave the viewer a sense of self-confidence and of control over his affairs.

The concept of the view in the design of Renaissance villas was theorized by Leon Battista Alberti (1404-1472) in his *De re aedificatoria* (1485). Alberti considers not only views of natural landscapes but also the visibility of the villa itself as an important factor in the site choice for a villa:

I would advise that the villa of the nobility be built, not in a particularly fertile spot in the countryside, but prominent in other aspects, that is advantageous in terms of breeze, sunshine and views, served by a level road linking the villa building and the farm, with avenues appropriate for receiving guests, the location being such that the villa itself could be viewed as well as commanding wonderful views of the city, the fortress, the sea or a vast plain, also of famed hills and mountaintops, splendid gardens, and offering abundant opportunities of fishing and hunting.¹⁷

Many Renaissance villas were built following Alberti's theory. Commanding the view as well as itself being viewed was an important design concept, and patrons and designers were fully aware of its connotations. Cosimo de' Medici is reported to have said that Cafaggiolo had a better view than Fiesole, because at Cafaggiolo, everything one could see belonged to the Medici, while at Fiesole this was not so.¹⁸ Here the view is related to the notion of ownership and possession. The Villa Medici at Fiesole (1451-57) was constructed on a steep slope, where the terracing of the ground proved to be a great

¹⁷ Alberti, *De re aedificatoria*, Libro V, Capitolo XVII. Orlandi/Portoghesi 1966, 414-415.

¹⁸ Galetti 1994, 68. A passage from Poliziano's letter cited in Ackerman 1990, 290 n.24: Cosimo predetto solera dire che la casa loro di Cafaggiuolo in Mugello vederà meglio quella di Fiesole, perche cio che quella vederà era loro, il che di Fiesole non arrevia.

challenge. Nonetheless, the site was chosen for the sake of the view, because it offered views over Florence, the city governed by the Medici, and the surrounding countryside. The villa was used for the gathering of humanists and the promotion of humanistic studies. Physical elevation was associated with the elevation of the spirit resulting from those studies. Ackerman interprets the form and function of the Medici villa at Fiesole symbolically in terms of views and landscape.¹⁹ The Villa Medici at Poggio a Caiano (1480) was expressly designed and built to be viewed and admired from afar. It enjoys a sweeping view of the surrounding countryside as well as a remarkable visibility of its own.²⁰

Enea Silvio Piccolomini (1405-1464), who became Pope Pius II (1458-1464), in his *Commentaries*, makes frequent reference to the views of the surrounding countryside in his description of his native town Corsignano. Pius II commissioned the architect Bernardo Rossellino (ca. 1407-1464) to redesign the small town of Corsignano, and to transform it into a Renaissance city named Pienza, with a cathedral, a piazza and a papal residence with garden (1459-1462). Pius II describes the three-tiered loggia on the south side of his palace and the surrounding landscape one could see from it:

On the fourth side, looking towards the south and the graceful figure of Mount Amiata, three porticoes were constructed, the second over the first and the third over the second, supported by stone columns. The first loggia, made with high arches and noble galleries, opened onto the lovely garden; the second loggia, supported by columns, decorated with colored pavements and paintings, offered an enjoyable place to be in winter; likewise was the third loggia, with a less ornate coffered ceiling.²¹

¹⁹ Ackerman 1990, 78.

²⁰ Ackerman 1990, 80.

²¹ Pius II *Commentaries*, 1984, vol. 2, 547: Ad quartum latus, cui meridies et Amiata mons aspectu gratissimus obiicitur, tris porticus erexerunt, quarum secunda prime et tertia secunde superincumberent, columnis innixe lapideis. Prima sub testudine alta et nobili deambulationem iuxta ortum prebuit amenissimam; altera sub contignatione coloribus et picturis ornatissima mansionem hyberno tempore iocundissimam prebuit pluteis ... elevatis; similis conditio tertie, quamuis lacunari minoris artificii.

Here the interaction with nature and the landscape is consciously brought into focus. The view acquires a symbolic meaning, as it relates to the spiritual dominion of the world as much as to the elevating effects of the landscape.²² Pius II also mentions the ‘ortus pensile,’ usually translated as the hanging garden, referring to a garden built on a terrace.²³ He does not give further detail on how it was organized. Trees were probably planted along the paths, and the vine may have been trained on a trellis. The hanging garden at Pienza would have been designed to take in the views of the countryside, as were the three-tiered loggias of the palazzo.

View and visibility continued to be an important concept in villa design in the sixteenth and seventeenth centuries. At the Villa Aldobrandini at Frascati (1601-05; 1613-14) designed by Giacomo della Porta and Carlo Maderno for Cardinal Pietro Aldobrandini, nephew of Pope Clement VIII Aldobrandini (pontificate, 1598-1603), the symbolism associated with the concept of the view is given full expression. The palace is embedded in the north slope of the hill, overlooking the town of Frascati and the Roman Campagna. Views and vistas were its most significant features, of which the patrons were fully aware. Agucchi, the majordomo of Cardinal Pietro Aldobrandini, describes in full length the natural beauties and the landscape surrounding the villa. He stresses the unique quality of the setting of the villa and its superb view extending to the Tyrrhenian coast, the Appenines, and the mountains of Viterbo, a panorama comparable to no other place in the world. The passage emphasizes the connection of the villa and the surrounding landscape in which it is embedded, in such a way that architecture and nature complement one another:

From every window of the house, and particularly from those with balconies, one is confronted with the full view of the Appenines to the northeast, in front to the west the city of Rome and the Roman Campagna, between west and south the sea; castles, lands, cities, everything in this vast, grand countryside seems to make space for this house and to serve as

²² The sense of viewing the landscape from an elevated vantage point and the cognitive and elevating effects of it may go back to Petrarca’s ascent of Mount Ventoux.

²³ Pius II *Commentaries*, 1984, vol. 2, 550: *Ortum pensilem faceret vitibus et arboribus aptum cautione adiecta.*

an ornament for it.²⁴

But the landscape is not only a source of pleasure and enjoyment, it is also regarded as a metaphor of cognition and control. A distant view of the city of Rome is a stepping back from the life of work, the *negotium*, in the Papal capital, and regarding it in an objective way. Commanding it from a vantage point would be equivalent to symbolically controlling it:

One can see that the ancient imperial city of Rome, queen of nations, conqueror of the world, and head of the true Religion, dominates the Roman Campagna. This is what makes the view from Frascati and its villas unique. From here one can clearly distinguish the details. Just as the head of the militant Church dominates here in Frascati, so does the material Church in the most noble edifice of St. Peter's rises up and dominates Rome as the prime church in the world...displaying her grand, high cupola for miles around...²⁵

Viewing a landscape from a distance enables the beholder to have a clearer understanding of it as well as exerting a firm control over it. Views and viewing are not just aesthetically pleasing, but they can also be associated with symbolic and even ideological meanings.

Quattrocento Roman houses

Now we must turn to fifteenth-century Roman houses, which were usually equipped with a loggia often with a view and decorated with motifs of nature. The quattrocento Roman house had the following characteristic features: asymmetry, upper storey with cross windows, stuccoed walls often decorated with *sgraffito*, and a tower on one side often with a loggia.²⁶ Numerous variations of this architectural typology survive, the Palazzo Venezia being its most monumental manifestation.²⁷

²⁴ D'Onofrio 1963, 87-89.

²⁵ D'Onofrio 1963, 87-89.

²⁶ Tomei 1977, 87; Heydenreich 1996, 69.

²⁷ Major examples of quattrocento Roman palazzi with loggias are the following: Albergo dell'Orso, Casa

Italian architectural historians writing in the mid-twentieth century use the term *lovium*, without further explanation, to refer to these loggias in quattrocento Roman houses. This may suggest that, of the many variants of the medieval Latin *laubia*, *lovium* would have been the one that was used in Rome.²⁸ Fiorini and Tomei both describe the *lovium* as an important space in the Roman aristocratic residence: the substitute of the salon or the dining room, where one could enjoy the sunshine and fresh air for most of the year in the mild climate of Rome. The loggia was usually located in the upper floors of the building, in some cases at the top of the tower, as in the Casa di via del Governo Vecchio and the Palazzo Capranica. The location of the loggia may suggest the relatively private character of the space.²⁹ But it is more likely that the space was used not only for the relaxation of the family, but also for entertaining close family friends. It is certain that, among the other spaces in the house, the loggia was a privileged space with a view; it conforms to Alberti's description of the salon or dining room of the prince, which also had a belvedere function.³⁰ The *lovium* was the hallmark of the aristocracy and an index of sophistication in the quattrocento. A passage from Marco Antonio Altieri's *Li Nuptiali* expresses a nostalgia for the *lovium* connected with the concept of nobleness; he laments that there are no more "vestiges of the loggia for receiving noblemen."³¹

Among these quattrocento Roman residences with loggias, two are worthy of further mention: the House of the Cardinal Bessarion and the Casa dei Cavalieri di Rodi adjacent to the Markets of Trajan. The first is a small two-storey building with a loggia on the upper storey (fig. 4.1). It is generally classified as a villa, for its location outside

di via del Governo Vecchio, Casa Bonadies, Casa del Burcardo, Casa dei Fiorentini, Casa dei Mattei in Piscinula, Casa degli Anguillara, Casa del cardinale Bessarione, Casa dei Cavalieri di Rodi, Palazzo Capranica, Palazzo Martinello. Cf. Fiorini 1951, 63-65; Heydenreich 1996, 67-69; Tomei 1977, 87-98; 249-265.

²⁸ Fiorini 1951, 64; Tomei 1977, 89.

²⁹ Lilius 1981, 81.

³⁰ Alberti 1994, 120, V.2: The rooms used by the prince for receiving guests and for dining should be given the noblest setting. This may be achieved with an elevated position and a view over sea, hills, or broad landscape.

³¹ Altieri, *Li Nuptiali*, 15: tutti de facultà, di numero, de antiquità gloriose et magnifice famiglie, sterpate in tutto hora le vedemo, ovvero più de mezze annicilate; et poi discurrendose el resto della misera città, quanti segi fondati per la recreatione de' gentilhomini, al presente non che cittadini, ma con grandissima fatica sence riconosce vestigio de logia in receptorli. Cf. The reference is made in Tomei 1977, 94, but the entire passage is not cited.

the city, and for its modest scale and simple plan.³² Tomei describes it as a ‘villetta,’ a typical rural residence. The piano nobile was occupied by the loggia and the main hall, with a few small rooms; the ground floor housed the service quarters. The loggia was the centerpiece of the whole building: it was articulated by four arches which opened onto the garden, and had a cross window on the short side on the via Appia. The wall decoration was dominated by the color green, apparently to create an atmosphere of freshness evocative of the foliage outside. From the state of preservation it is not possible to distinguish further details. A small room adjacent to the loggia had wall decorations depicting green foliage and pomegranates. A room on the ground floor was decorated with a fresco depicting a large tree with exuberant foliage.³³

The Casa dei Cavalieri di Rodi is more important in terms of scale and surviving decoration (fig. 4.2).³⁴ It stands out among the other examples of the quattrocento Roman house with loggia, for its ideology, expressed in its scale, location, orientation, and decoration. The house was built in the twelfth century, utilizing ancient remains for its foundation, and partly rests on the left hemicycle of the Forum of Augustus. The creation of the loggia dates from 1470, under the patronage of cardinal Marco Barbo, nephew of Pope Paul II (Pietro Balbo, pontificate 1464-1471).³⁵

The loggia of the house enjoyed both views and visibility. Five large arches on the long side and three more on the short side opened onto a vast panorama of the landscape of ancient and modern Rome, while the structure itself, built on ancient foundations, gave an impression of towering over the ruins. The surviving fresco decoration is a valuable example of nature and landscape depiction in the semi-interior from the quattrocento. On the rear wall and the adjoining short wall is depicted a garden landscape framed by painted pilasters. Above a high parapet, a park with a variety of trees – cypress, pine, laurel, palm, apple, orange, and pomegranate – extends into the

³² Tomei 1977, 92-95; Lilius 1981, 49.

³³ Tomei 1977, 92-94.

³⁴ On the Casa dei cavalieri di Rodi, cf. Danesi 1989; Piras and Subioli 1990.

³⁵ The completion date has been determined based on the following inscription incised above one of the doors of the loggia: IUSSU PAULI II PONTIFICIS MAXIMI EX PROVENTIBUS PRIORATUS, M. BARBUS VINCENTINUS PRAESUL TT. S. MARCI PRAESUBITER CAR. AEDES VETUSTATE COLLAPSAS AUGUSTORE ORNATU RESTITUIT.

distance.³⁶ The depiction does not include any figures. The painted parapet echoes the real parapet on the open sides of the loggia. During the season when sunlight comes in as far as the rear wall, the arches of the open sides of the loggia cast a shadow on the fresco, creating an interesting play between the painted pilasters and the superposed shadow of the arches both of which frame the painted landscape in interesting ways.

The painter of the fresco has not been determined, but a stylistic connection to Florentine landscape depiction has been suggested, in particular to the style of Benozzo Gozzoli.³⁷ In regard to the landscape framed by architectural elements, a parallel can be found in the fresco fragment from the Casa dei Castellini da Castiglione in Florence (end of the 14th C.), where a painted garden with trees and birds is depicted as though viewed through a Gothic arcade (fig. 4.3).³⁸ While the depiction of the trees in the Casa dei Castellini da Castiglione fresco is still more or less stylized and static, in the Casa dei Cavalieri di Rodi fresco, the variety of the trees in regard to their species and form, their spatial arrangement, and a sense of perspective have resulted in a more dynamic fictive landscape. This may also have been due to the nature of the space to which these decorations belonged: the garden fresco in the former probably decorated an interior room, while the painted landscape in the latter decorated an airy loggia with a view. The idea of adorning a semi-interior space such as a loggia with elements from nature would have been derived most naturally from its connection to the exterior and the view. The real view of the dynamic landscape of Trajan's Markets, Trajan's Column and beyond would have been the inspiration for the dynamic expansion of the physical space of the loggia by means of a *trompe-l'œil* landscape.

The orientation of the loggia of the Casa dei Cavalieri di Rodi poses a puzzle. It was not oriented due south, where the prestigious vestiges of antiquity lay – the Imperial Fora, the Roman Forum and the Palatine Hill. Instead, it was oriented east, which presupposed that the landscape to be viewed from the loggia was what lay beyond

³⁶ Börsch-Supan 1967, 242-243, fig. 154; Ricci 1930, 181.

³⁷ A number of scholars have suggested the artist to which the decoration could be connected. Ricci 1930, 181: Benozzo Gozzoli or Alessio Baldovinetti; Tomei 1977, 97: Fra Angelico or Benozzo Gozzoli; Börsch-Supan 1967, 243: Benozzo Gozzoli or Pinturicchio.

³⁸ Börsch-Supan 1967, 225, fig. 142; fresco fragment currently in the Museo di S. Marco, Firenze.

Trajan's Markets and Trajan's Column: none other than the Palazzo Venezia, the Barbo family residence in Rome. A monumental expression of Roman quattrocento palace architecture, the Palazzo Venezia was completed by 1471, and thus almost contemporaneously. The Basilica of San Marco adjacent to it was built with a loggia on the façade (1460-1465), which is often compared to the Benediction Loggia at St. Peter's.³⁹ Why the loggia of the Casa dei Cavalieri di Rodi looked across the vestiges of antiquity to the loggia at San Marco is not really clear at this point, but given the consciousness towards views and visibility, it may have been more than just a coincidence.⁴⁰

Views and visibility remained an important design concept in cinquecento loggias in Rome and its suburbs. The Villa Baldassare Turini on the Gianicolo (now Villa Lante al Gianicolo) (1519-1525), has a loggia that enjoys a superb view of Rome (fig. 4.4). The vaulted ceiling of the loggia is decorated in classicizing stucco with vegetal patterns.⁴¹ The decoration was considered the work of Giovanni da Udine,⁴² but recent scholarship attributes it to an anonymous follower of Perino del Vaga.⁴³ The Palazzo Massimo alle Colonne (1534), designed by Baldassare Peruzzi, was an urban palace in the midst of the city, where views would have been difficult to obtain. However, the loggia on the piano nobile facing the courtyard had landscape paintings on the rear wall.⁴⁴ Letarouilly's illustration shows how the pillars of the loggia served as a framing device for the painted landscapes; to the viewer entering the courtyard from the vestibule these would have appeared framed by the pillars. The Palazzo di Firenze (1516-1530) had a two-tiered loggia on the garden side, built under the patronage of Julius III Del Monte.⁴⁵ And the Palazzo Farnese (1515-1546), designed by Antonio da Sangallo the younger,

³⁹ Heydenreich 1996, 59; Tomei 1977, 83-86; 109-112.

⁴⁰ Louis Waldman has kindly suggested that in the fifteenth century, the ancient Fora were still used as cattle pasture, thus the remains of antiquity were not yet clearly visible, whereas the San Marco area was a locus of important construction.

⁴¹ On the stucco decoration of the loggia of the Villa Lante al Gianicolo, cf. Carunchio and Örmä 2005, 134-150.

⁴² Montini and Averini 1957.

⁴³ cf. Lilius 1981, Testo, 356-357.

⁴⁴ Letarouilly 1868, pl. 289.

⁴⁵ For the Palazzo Firenze, cf. Aurigemma 2007.

Michelangelo, and Vignola, had a three-tiered loggia on the garden façade (fig. 4.5). The one on the piano nobile may not have been a loggia in the strict sense; but the Carracci Gallery on the same storey, when seen from the Trastevere side, would have been accentuated by the columns and arches of the first-floor and third-floor loggias. The three-tiered loggia composition would have made the garden façade equally monumental and impressive as the main façade on the piazza.

Giovanni da Udine

Here we must include a brief note on the life and critical history of Giovanni da Udine, the artist who was involved in all of the projects relevant to the illusionistic pergola during the first phase of its creation in Rome. Vasari is the most important source for the reconstruction of his career.⁴⁶ Giovanni da Udine (1487-1561) was born in Udine in Friuli in a family of embroiderers, dyers and decorators of textiles.⁴⁷ As a boy he showed excellent talent in drawing; he accompanied his father on hunting expeditions, and in his spare time, sketched animals that were commonly encountered in the daily life of northern Italy, such as dogs, hares, goats and birds. He was apprenticed to the painter Giovanni Martini in Udine, and to Giorgione in Venice. While he was in Venice, Giovanni heard of the activities of Raphael and Michelangelo, and wishing so much to work with them, he obtained a letter of recommendation and went to Rome where Raphael saw his talent and took him into his workshop. Vasari notes that Giovanni excelled in the depiction of nature, animals, drapery, instruments, vases, landscapes, houses and verdure.⁴⁸ The decision to become a specialist in natural history painting, to speak in modern terms, was the painter's own, made fairly early in his career. At least he already appears to have seen himself clearly as a painter of natural history around the time he started to work for Raphael.

Two collaborative works by Raphael and Giovanni da Udine reveal Giovanni's talent in the depiction of marine fauna and musical instruments, which would be

⁴⁶ Vasari 1966, V, 446-456.

⁴⁷ Bartolini 1987, 3.

⁴⁸ Vasari 1966, V, 447: per dirlo in una parola, tutte le cose naturali, d'animali, di drappi, d'instrumenti, vasi, paesi, casamenti e verdure, intantoche niun de' giovani di quella scuola il superava.

classified later as objects of natural history or still-life painting.⁴⁹ One is *S. Cecilia* (1515, fig. 4.6)⁵⁰ and the other is *The Miraculous Draught of Fish* (ca. 1515, fig. 4.7).⁵¹ By comparing the preparatory drawings and the paintings, Dacos indicates that the finished product exhibited a significant change in the depiction of the “props” so to speak. Giovanni Francesco Penni was the author of the preparatory drawings; in the workshop he assumed the role of preparing the drawings from the sketches given to him by Raphael. The musical instruments in the painting of *S. Cecilia* are more numerous and varied than in the preparatory drawing. And while there are no fish or birds at all in the preparatory drawing for *The Miraculous Draught of Fish*, in the finished painting the fishing net and the boat are brimming with fish, and three storks are depicted on the shore hoping to get their part of the catch. The accurate depiction of marine fauna and musical instruments in these paintings is noteworthy. It would have been precisely this remarkable talent of Giovanni’s, nurtured in the culture of the north, that led to his success in the workshop of Raphael.

The Papal commissions were projects on an unprecedented scale, and Raphael received more commissions than he could have handled by himself, especially after he was nominated architect of St. Peter’s.⁵² As in ancient Rome, where painters had fields of speciality in the workshops that produced quality paintings – the figure-painter (*pictor imaginarius*), the background and ornament painter (*pictor parietarius*) and the plasterer or trainee painter,⁵³ similar divisions of labor characterized Raphael’s workshop. Raphael was the supervising figure-painter, with several other assistant figure-painters under him. Giovanni Francesco Penni often did the preparatory drawings based on sketches provided by the master, and Giulio Romano painted robust forceful figures. Other assistants – Perino del Vaga, Tommaso Vincidor, Pellegrino da Modena, Polidoro da Caravaggio, Raffaellino del Colle, Luca Penni, Vincenzo Tamagni, Bartolomeo di David, Guillaume de Marcillat, Alonso Berruguete, Pedro Machuca – were all more or less figure-painters;

⁴⁹ Dacos/Furlan 1987, 15-24.

⁵⁰ Bologna, Pinacoteca Nazionale.

⁵¹ London, Victoria and Albert Museum.

⁵² Raphael was nominated architect of St. Peter’s on August 1, 1514. Cf. Golzio 1971, 33-34.

⁵³ Ling 1991, 215.

no painter specialized in the depictions of nature. Raphael saw Giovanni's extraordinary talent in the drawing of animals, birds and plants, and seemed to have grasped from the very onset his almost indispensable importance for the workshop. Raphael assigned particular tasks to Giovanni, such as the animals in the Biblical scenes on the vault or the grotesque ornaments or festoons of fruit on the walls and pilasters in the Loggia of Raphael at the Vatican. Thus Giovanni appears to have acquired a unique role in the workshop that distinguished him from the other painters, and enabled him to work more as a collaborator of Raphael than as his disciple.⁵⁴ A preparatory drawing made by Giovanni for Pilaster VII in the Loggia of Raphael is particularly suggestive of this division of labor.⁵⁵ In the drawing is depicted a tree with various birds including an owl. On the finished pilaster, a bird-catcher is depicted at the foot of the tree, spying on the birds. But in the preparatory drawing, the figure is not fully sketched out (fig. 4.8).⁵⁶ It could have been a statement on the part of Giovanni that his speciality was in the depiction of nature, and that the figures were the work of others.

Vasari mentions that Giovanni sketched the animals in the papal menagerie.⁵⁷ There was also an aviary in the Belvedere, where he would have sketched the birds.⁵⁸ Vasari notes that Giovanni kept a book of bird drawings that he made, which gave delight and amusement to Raphael.⁵⁹ And he learned the art of depicting fruit, flowers and foliage from a Flemish painter, identified as Jan Ruysch, who was active in the Vatican at the time.⁶⁰

Giovanni also pursued the study of the antique. As Vasari notes, he was especially interested in the grotesques in ancient Roman painting. He conducted on-site investigation of the Domus Aurea, thought to be the Baths of Titus at the time, and left

⁵⁴ Dacos/Furlan 1987, 21.

⁵⁵ Dresden, Staatliche Kunstsammlungen, Kupferstich-Kabinett.

⁵⁶ Dacos/Furlan 1987, 68.

⁵⁷ Vasari 1966, V, 450: e Giovanni sopra le cornici di quell'opera ritrasse di naturale molti papagalli di diversi colori, i quali allora aveva Sua Santità, e così anco babuini, gattamamoni, zibetti et altri bizzarre animali.

⁵⁸ Vasari mentions an aviary of Julius II in the Belvedere, near the corridor in which Peruzzi painted the figures of the months in chiaroscuro. Cf. Vasari 1966, IV, 317.

⁵⁹ Vasari 1966, V, 447: Ma soprattutto si diletto sommamente di fare uccelli di tutte sorti, di maniera che in poco tempo ne condusse un libro tanto vario e bello, che egli era lo spasso e il trastullo di Raffaello.

⁶⁰ Dacos/Furlan 1987, 31; Dacos 2008, 35.

his signature “ZUAN DA UDENE FIRLANO” on the cryptoportico wall.⁶¹ Vasari writes that Giovanni and Raphael, visiting the “grottoes,” were stupefied with the freshness, the beauty and the quality of the ancient Roman paintings. But when it came to applying his knowledge of ancient Roman painting to the decoration of the Loggia of Raphael, it was not as an imitation or recreation of the antique but as the creation of his own version of the grotesques. Among Giovanni’s ornamental designs, there are no grotesques supported by candelabra; he preferred vegetal motifs such as acanthus scrolls or trees.⁶² For Giovanni, the grotesques were more of an occasion to combine antique forms and his favorite animal and bird motifs to create a new design. In addition to ancient Roman painting, Giovanni also studied the technique of ancient Roman stucco. Experimenting with various recipes, he ultimately settled on mixed powdered white travertine with powdered white marble, which in Vasari’s estimation constituted the rediscovery of the ancient recipe.⁶³ Giovanni applied the technique in the stucco decorations of the Loggia of Raphael and the Villa Madama on Monte Mario.⁶⁴ He was also involved in the decoration of the Palazzo della Cancelleria. He worked in collaboration with Baldassare Peruzzi on the classicizing decoration of the Stufetta of Cardinal Riario, which was adorned with a painted pergola.

Despite his crucial importance in the art of natural history, few studies have focused on Giovanni da Udine, preferring instead to treat him simply as one of the many painters in Raphael’s workshop. The monograph of 1987 by Nicole Dacos and Caterina Furlan remains the only work dedicated to the artist. In the preface to the book Dacos explains this lacuna in art historical criticism as partly due to the impact the premature death of Raphael would have had on the careers of the artists of his circle.⁶⁵ It is true that Raphael’s death in 1520 and the sack of Rome in 1527 hindered the continuation of work

⁶¹ Dacos/Furlan 1987, 35. Vasari 1966, V, 448: Non molto dopo, cavandosi da San Pietro in Vincola fra le ruine et anticaglie del palazzo di Tito per trovar figure, furono ritrovate alcune stanze sotterra, ricoperte tutte e piene di grotteschine, di figure piccole e di storie, con alcune ornamenti di stucchi bassi. Per andando Giovanni con Raffaello, che fu menato a vederle, restarono l’uno e l’altro stupefatti della freschezza, bellezza e bonta di quell’opere.

⁶² cf. Dacos 1969; Dacos/Furlan 1987, 68-75.

⁶³ Vasari 1966, V, 449. For the stuccoes, see also Elet 2007.

⁶⁴ Dacos/Furlan 1987, 75-96; 111-114; Dacos 2008, 48-124.

⁶⁵ Dacos Furlan 1987, 9-10.

in Rome for many artists. Many of them eventually left Rome, including Giulio Romano, who went to Mantua to work for the Gonzaga and Baldassare Peruzzi who returned to Siena. However, Giovanni da Udine's case cannot be explained by the sack alone. His neglect in art historical scholarship appears to be due more to a critical bias based on the presupposed hierarchy of subjects in art.⁶⁶ Mythological painting was given the highest value, followed by history painting. Next came portraiture, and then genre painting. Landscape painting occupied a place low in the hierarchy; it started to become fashionable in Italy from the second half of the cinquecento, but was not considered an independent genre until the rise of Dutch landscape painting in the seventeenth century. Similarly, nature painting, or the depiction of animals and flowers, although practiced by artists such as Dürer from the early sixteenth century, was considered more of a training exercise in preparation of a more serious work than an end in itself, and did not constitute a genre in its own right until the seventeenth century. This bias may have long existed among the patrons who commissioned the works of art as well as among art historians who studied them. While there are numerous works from the seventeenth and eighteenth centuries dedicated to the documentation of the Loggia of Raphael at the Vatican – by Pietro Santi Bartoli, Giovanni Volpato, and Agostino Valentini among them – to my knowledge, there are no works from this period that include illustrations of the First Loggia decorated by Giovanni da Udine.⁶⁷

La Farnesina

Giovanni's first work relevant to the painted pergola was the Loggia of Cupid and Psyche at La Farnesina, a villa in the Trastevere commissioned by the Sienese banker Agostino Chigi from Baldassare Peruzzi in 1505. It was located on the presumed site of the gardens of the emperor Geta, outside of the city. The construction of the palazzo started in 1506, and the building was completed between 1510 and 1511.⁶⁸ The villa now bears the name of its subsequent owner, the Farnese; in 1579 Cardinal Alessandro

⁶⁶ Cf. Emison 1997.

⁶⁷ A number of guidebooks include textual descriptions, those by Agostino Taja (1750) and Giovanni Pietro Chattard (1762) among them.

⁶⁸ Frommel 1961.

Farnese acquired the villa, located just across the Tiber from the Palazzo Farnese in Campo Marzio. In 1735 it passed into Bourbon possession through the marriage of Elisabetta Farnese to the king of Spain, Philip V. In 1927 it became the property of the Italian State, and is currently the seat of the Accademia Nazionale dei Lincei.

Architecturally, La Farnesina can be characterized as “a loggia flanked by towers,” a villa typology that probably had its origins in antiquity and spread from the Veneto in the quattrocento.⁶⁹ Our focus of interest is the ground-level loggia on the north side, the Loggia of Cupid and Psyche. Opening out onto the garden by means of five arches, it was clearly meant as a mediating space between the palazzo and the garden. It was decorated in 1517 in preparation for Agostino Chigi’s marriage to Francesca Ordeaschi.⁷⁰ As an appropriate setting for the marriage of the patron, Raphael designed the entire ceiling as an illusionistic pergola, with fruit swags framing scenes from the story of Cupid and Psyche, based on the narrative in Apuleius’s *Golden Ass* (fig. 4.9). He provided drawings for the figured scenes, which were executed by his assistants, Giulio Romano, Giovan Francesco Penni, and Raffaellino del Colle. Giovanni da Udine played a crucial role in the project, more as a collaborator than a disciple of Raphael: he was sole painter in charge of the festoons that compose the pergola, richly adorned with plants of various species. He would have been also responsible for the birds – the doves of Venus, the eagle of Jupiter, the peacock of Juno and another that hovers over Psyche as she is borne to Olympus, and the swallows and bats that accompany the putti.⁷¹

According to Frommel, the decoration of the loggia with a fictive pergola on the vault was intended to create the impression of a symbiosis between architecture and garden, where there were real pergolas covered by climbing plants (fig. 4.10).⁷² However, stylistically speaking, the Farnesina pergola does not depict any elements from real pergolas, such as the latticework framework or the typical plants trained on it - vine,

⁶⁹ cf. Ackerman 1991.

⁷⁰ Poggi/Barocchi/Ristori 1967, vol. II, 138, letter of Leonardo Sellaio to Michelangelo, Firenze Archivio Buonarroti: A di primo di gennaio 1518. ... Bastiano à presso e finito, e riesce di modo che quanti intendenti ci sono lo metono di grandissima lungha sopra a Rafaello. È schoperta la volta d’Agostino Ghisi, chosa vituperosa a un gran maestro, peg[i]o che l’ultima stanza di Palazo asai.

⁷¹ cf. Dacos/Furlan 1987, 29.

⁷² cf. Frommel 1961, 45.

roses, and jasmine. Instead, it is a framework of festoons that follow the architectural lines of the vault, resulting in a bower-like form. The festoons are explicitly evocative of antique culture. Festoons and swags symbolized festive activities in antiquity, and are ubiquitous in ancient Roman Art; well-known among examples include the Ara Pacis and the door frame of the Building of the Eumachia in Pompeii. They were common ornamental motifs in mosaic and sarcophagi. The use of the festoon to emphasize the ribs of the vault may also be seen in the late antique mosaic of the Lamb of God in S. Vitale in Ravenna (547 A.D.).⁷³ Mantegna uses the swags to delineate the architectural form of the niche-recess in the *Madonna della Vittoria* (1496).

The dense foliage of the festoons is studded with a variety of vegetables, fruit, and flowers executed in vivid color. The bands framing the fourteen thermal windows below are festoons of single plant types, such as oak, laurel, olive, ivy, and roses. The botanical species that appear in the festoons that frame the two central scenes, the Council of the Gods and the Marriage of Cupid and Psyche, and the surrounding spandrels in which are depicted the major episodes of the story, have been identified and studied by Giulia Caneva.⁷⁴ Caneva has identified circa 165 botanical species, grouped into cereals, vegetables, nuts, fruit, flowers, and fungi (figs. 4.11-13). Her phytogeographical analysis has shown that the majority of the depicted species came from the old world, while five species had their origins in the Americas.⁷⁵ Considering the fact that plant species from the new world had only started to be introduced into Europe since the 1490s, it is remarkable that they had become diffused in a relatively short period, and that they were studied and depicted in such a precise manner. This may be have resulted also from the painter's personal interest in *naturalia*. Caneva remarks that the identification of all the depicted botanical species with only a few exceptions has been possible because of the preciseness of depiction and the extraordinary knowledge of the artist.⁷⁶ Here too, Mantegna can be considered a prototype: his swags in the *Madonna della Vittoria* were

⁷³ I owe the reference to Rabun Taylor.

⁷⁴ Caneva 1992.

⁷⁵ *Zea mays* maize; *Cucurbita pepo* zucchini; *Cucurbita maxima* pumpkin; *Cucurbita moschata*; *Phaseolus vulgaris* green beans. Cf. Caneva 1992, 81-84.

⁷⁶ Caneva 1992, 51.

studded with fruit of bright colors including oranges and lemons. However, in terms of the variety of the species depicted, Giovanni's Farnesina swags far exceed the species depicted in the vegetal frame in Mantegna's painting.

In the iconography of Western painting, flowers and fruit had been commonly invested with a symbolic meaning. The viewers would have been expected to understand the common language of the symbolism of plants and the message implied by the decoration as a whole. Beginning with Vasari, attempts to see a sexual connotation in some of the vegetables in the Farnesina loggia have been made.⁷⁷ It is appropriate to interpret the rich vegetal decoration as an expression of fertility and prosperity that would be hoped for the Chigi family as a result of the marriage. In that sense, the decoration of the Loggia of Cupid and Psyche resonates with the Augustan iconography manifested in the Ara Pacis or the garden fresco of the Villa of Livia. However, from the variety of the species and the scientific accuracy with which they are depicted, they can also be seen as a botanical catalogue. The originality of Giovanni da Udine lay in the direct observation of nature where vegetables, fruit and flowers were regarded as botanical species of scientific interest, as well as carriers of ideological and symbolic meanings.⁷⁸ The depiction of plant species in the Loggia of Cupid and Psyche anticipates the works of Giuseppe Arcimboldo (1526-1593), who, half a century later, also depicted vegetables, fruit and flowers in a scientific manner, but assembled ingeniously to form portraits. Arcimboldo's works made use of the symbolic meanings of fruit and vegetables, and were invested anew with ideological meaning: they were an expression of homage to his patron and the celebration of the reign of the Habsburg dynasty.⁷⁹ Like Arcimboldo, Giovanni accorded attention to plant symbolism, but also emphasized the observation of reality and the scientific understanding of the natural world in the representation of plants. The pergola composed of festoons remains the framing device for the figured scenes, and consequently had only a secondary role in its relation to the entire

⁷⁷ cf. Vasari 1966, V, 452; Morel 1985; Dacos/Furlan 1987, 26.

⁷⁸ Dacos emphasizes the scientific dimension of Giovanni's depiction as follows: *l'operazione compiuta da Giovanni ... consiste nell'aver liberato fiori e frutti dal loro contenuto religioso, in qualche modo nell'aver laicizzati*. Cf. Dacos/Furlan 1987, 29.

⁷⁹ Cf. DaCosta Kaufmann 2009.

composition. However, the systematic depiction in painting of a large number of botanical species appears to be the first of its kind in the Renaissance. It antedated the illustrated herbals based on the direct, scientific observation of plants, Otto Brunfels' *Herbarum Vivae Eicones* (1530) and Leonhardt Fuchs' *De Historia Stirpium* (1542) among them. Giovanni da Udine's pergola in the Loggia of Cupid and Psyche can be considered an encyclopedia of botany in the Renaissance executed in vivid colors on a substantial scale. Already impressive for the sheer variety of the species depicted, it could have been understood as the expression of abundance and prosperity. But it could also have served as another kind of intellectual ornament, in which viewers would amuse themselves recognizing the species familiar to them, or those that had been newly introduced from the Americas. More vivid and evocative of reality than the woodcuts in the illustrated herbals, the plants depicted on the vault of the Loggia of Cupid and Psyche could have been looked at as one would look at color illustrations in a modern encyclopedia of botany or horticulture. It provided the viewers a gratifying intellectual experience as much as an aesthetic one.

Loggetta of Cardinal Bibbiena

Giovanni's second work relevant to the illusionistic pergola was the Loggetta of Cardinal Bibbiena. If the Loggia of Cupid and Psyche at La Farnesina can be considered a painted catalogue of botanical specimens, the Loggetta of Cardinal Bibbiena contains a painted menagerie, albeit on a somewhat reduced scale. Cardinal Bibbiena, Bernardo Dovizi (1470-1520), was a humanist and writer as well as papal nuncio to France. The Loggetta was to be part of the cardinal's apartments in the Vatican Palace, composed of chambers, a loggia and a bath. It was located back-to-back in regard to the outmost stretch of the third floor of the Vatican Loggias, with three arches facing the Cortile del Maresciallo (fig. 4.14).⁸⁰ The term loggetta here is used for convenience to distinguish the Loggetta of Cardinal Bibbiena from the Loggia of Raphael, as the Loggetta of Cardinal Bibbiena was also referred to as the Loggetta of Raphael. However, in the

⁸⁰ Redig de Campos 1967, 109-111; fig. 48.

documents, it is always referred to by the term ‘loggia,’ although in its dimensions it differed greatly from the Loggias.⁸¹

The Loggetta was a corridor 3.12 by 15.75 meters, with a barrel-vaulted ceiling and three balustraded arches (2 by 4.34 meters) alternating with four smaller arches to evoke on the façade the rhythms and proportions of triumphal arches. The interior was decorated by the painters in Raphael’s workshop from 1517 to 1519 in a style directly inspired by the antique. As Redig de Campos notes, one of the “due altre loggie” mentioned in Marcantonio Michiel’s letter of May 19, 1519⁸² should be the First Loggia of Leo X, while the other should refer to the Loggetta of cardinal Bibbiena, as the Third Loggia was decorated only in 1560.⁸³ Cardinal Bibbiena most likely did not have any decorative program in mind, except perhaps for a decoration in the antique style. Raphael was occupied with other projects; after devising a general framework of cornices and niches, he put Giovanni da Udine in charge, and left the details to the improvisation of the painters.⁸⁴ The artists who were involved in the execution – Giovanni himself, Giulio Romano, Giovan Francesco Penni, Perino del Vaga, Pellegrino da Modena, Alonso Berruguete and Pedro Machuca – were given freedom of design. Dacos notes that the walls had no trace of preparatory layers of stucco, thus the motifs would have been directly painted in a spontaneous manner, as one would do a drawing, without the aid of cartoons.⁸⁵ The decoration of the Loggetta was the product of a playful improvisation on the part of the individual artists.⁸⁶

⁸¹ Golzio 1971, 48, letter of Bembo from Rome to Bibbiena in Florence, June 20, 1516: Al Card. Di S. Maria in Portico a Firenze. Bastami darui contezza ... che la loggia, la stufetta, le camere, i paramenti del cuoio di V. S. sono forniti, et ogni cosa l’aspetta ... A XXX. Di Giugno M. D. XVI. Di Roma.

Golzio 1971, 57, letter of Bembo to Bibbiena, July 19, 1517: Al Card. Di S. Maria in Portico. In Francia. Di nuouo la loggia di V. S. si ua edificando et torna bellissima. Et le camere di N. S. che Raffaello ha dipinte si per la pittura singolare et eccellente, et si anchor perche quasi sempre stanno ben fornite da Cardinali, sono bellissime ... A XIX. Di Luglio M. D. XVII. Di Roma.

⁸² Golzio 1971, 98, letter of Marcantonio Michiel, May 4, 1519 (copia di una letera di ser Marco Antonio Michiel di ser Vetor data 4 magio 1519 scritta a Venecia a Antonio di Marsilio suo amicissimo.): ... raphael di Urbino ha dipinto impalazo 4 camere dil pontefice [le Stanze], et una loggia longissima [la Seconda], et va drieto dipingendo due altre loggie che saranno cose bellissime oltre che ha la cura de la fabrica de San Pietro, che va lenta per il mancar dil danaro ... in roma el di 4 di magio 1519.”

⁸³ Vasari 1966, V, 455.

⁸⁴ Dacos/ Furlan 1987, 44.

⁸⁵ Dacos/Furlan 1987, 55.

⁸⁶ Dacos/Furlan 1987, 60.

Against a white background were painted various motifs inspired by the decoration of the Domus Aurea: grotesques, aedicula, slender festoons and scrolls (fig. 4.15). The artists in the team expressed their interpretation of the grotesque and Fourth Style painting in spontaneous ways, giving free vent to invention and playfulness. Attributed to Giovanni is the stylized pergola that runs the entire length of the barrel-vaulted ceiling. Along the ceiling he painted a pergola framework composed of wave patterns on the sides, divided into two rows of square compartments by vegetal motifs (fig. 4.16). The vegetal motifs are more or less stylized, but are evocative of vine, ivy and jasmine. The color tonality is dominated by green, yellow and brown. In each square compartment, Giovanni painted an animal. Some are imaginary animals that appear in the cryptoportico of the Domus Aurea, but others he would have studied from nature, including domestic animals such as a dog, a cat, and birds. A lion and elephant would have been part of the papal menagerie. The model of the elephant would have been Hanno, a gift from king Emmanuel of Portugal to Pope Leo X in 1514, and which became the pope's favorite.⁸⁷ Hanno lived only for two years after coming to Rome, but became the inspiration for three representations of an elephant in the Loggia of Raphael as well as of the Elephant fountain in the Villa Madama commissioned by Cardinal Giulio de' Medici, later Pope Clement VII, and attributed to Giovanni.⁸⁸ There were also a giraffe, a rhinoceros and a camel. Although still recognizable, the giraffe has a horn between its ears like a unicorn and lacks the characteristic dappled patterns, the rhinoceros looks like a bristly boar apart from its hoofs, and the camel rears like a horse. It does not seem likely that Giovanni had an opportunity to observe these animals directly. But he would surely have known the rhinoceros woodcut (1515) by Dürer, and possibly of the giraffe in the possession of the Medici which had been a gift from the sultan of Egypt.

For the ideation of the stylized pergola with animals, the ceiling decoration of the cryptoportico 92 in the Domus Aurea on the Oppio (A.D. 64-68) has been suggested as

⁸⁷ Dacos 2008, 116.

⁸⁸ Dacos/Furlan 1987, 149-150; Bedini 1998, 164-168.

the source.⁸⁹ The cryptoportico 92 is a long corridor which runs east-west on the north side of the Octagon complex. The ceiling was decorated in the so-called wallpaper pattern,⁹⁰ consisting of square grids formed by tendrils on a white ground, and the square compartments inhabited by small birds, animals and mythical figures. Giovanni preferred to fill in the square compartments of the Loggetta ceiling not just with imaginary animals like those on his ancient prototype, but also with animals from real life. Thus Giovanni's pergola populated with animals appears less stylized and more animated than the one on the ceiling of cryptoportico 92 in the Domus Aurea. Giovanni painted a similar pergola with animals and grotesques in the Palazzo Baldassini in Rome.⁹¹

Another section of the Loggetta decoration attributed to Giovanni da Udine, and which may reveal his interest in the pergola as a motif, is the composition including a small panel picture of Apollo and Marsyas. It is the centerpiece of a composition for the bay on the rear wall corresponding to the left of the three main arches of the Loggetta. In the composition, an aedicule framed by thin stalks of foliage is filled with grotesque ornaments. The small panel picture, located at about one third of the height, is connected to the stalks on either side by means of arched pergolas (fig. 4.17). These are depicted as a wooden frame supporting a vine, perhaps ivy. Perched on top of each pergola is an owl. Since the Farnesina loggia could be best said to evoke a pergola without representing it, thus this can be called the first representation of a pergola in Renaissance art.

First Loggia of Leo X

While Giovanni da Udine's role in the decoration of the Farnesina Loggia and the Loggetta of Cardinal Bibbiena was defined by his relationship to Raphael and others in his workshop, the vault decoration of the First Loggia of Leo X in the Vatican Palace was a unique instance for which he was given sole responsibility. Probably because Raphael was overburdened with commissions, especially in the final years of his life (he died in

⁸⁹ Dacos 1969, 28-33.

⁹⁰ cf. Ling 1991, 92-93.

⁹¹ Cf. Montini and Averini 1957. The Palazzo Baldassini, Via delle Coppelle 35, Roma, currently houses the Istituto Luigi Sturzo. Giovanni's pergola decorates the ceiling of a ground-floor room referred to as the Sala di Giovanni da Udine.

1520), it would have been convenient for Giovanni to be in charge of projects that did not involve figured scenes. This gave Giovanni the liberty to experiment at leisure with his favorite motifs, and devise an original and playful design.

The Vatican Loggias comprise the three wings of loggias surrounding the Cortile di San Damaso. Each wing had four storeys: three floors and the ground floor in the European sense. The first wing, the subject of our focus, is on the west side; it was designed by Bramante and Raphael and built during the first two decades of the cinquecento.⁹² It was articulated in thirteen bays. Raphael, following the antique canon described by Vitruvius, designed the façade of the loggias with the three classical orders: Doric for the first floor, Ionic for the second, and Corinthian for the third. A drawing by Marten van Heemskerck (c. 1535-36)⁹³ gives us an idea of the appearance of the Loggias in the 1530s, when only the first wing existed. The second (north side of the Cortile) and third (east side of the Cortile) wings were built under Gregory XIII and Sixtus V respectively, the former articulated in eleven bays, the latter in eight bays.⁹⁴ The three classical orders of the first wing were continued on to the facades of the second and third wings.

The loggias of the first wing are approximately 65 meters long and four meters wide. Our focus here is the First Loggia of Leo X, namely the first floor loggia of the first wing. Of the total of thirteen bays, Giovanni painted the vaults of eight in the guise of fictive pergolas (figs. 4.18-19). The idea of decorating such a large-scale space as a series of illusionistic pergolas had no precedent in Renaissance Rome. The decoration was admired by Vasari who described it as follows: “Then Giovanni did the decoration of the loggia below, the compartments with stuccoes and paintings in a different way from the walls and vaults of the other loggias; nevertheless, these were beautifully done, for the elegant invention of fictive pergolas in latticework, divided into compartments, covered

⁹² Redig de Campos 1967, 100-102; 108-109.

⁹³ Vienna, Österreichische Nationalbibliothek.

⁹⁴ Redig de Campos 1967, 170-171.

with vine heavy with grapes, clematis, jasmine and roses, and inhabited by all kinds of animals and birds.”⁹⁵

The First Loggia and the Second Loggia, the latter better known as the Loggia of Raphael, are frequently regarded in parallel. Architecturally, they were identical, except for the presence of niches in the wall of the Second Loggia and for the form of the vaults: sail vaults for the First Loggia and truncated cloister vaults (*volte a specchio*) for the Second Loggia. Their decoration followed related schemes, although the Second Loggia was begun sometime earlier. In the documents, the two are frequently mentioned together and often compared to one another. The following passage from the diary of Marcantonio Michiel is suggestive in many ways:

December 27, 1519. Rome. In these days, the first-floor loggia of the palace was furnished with decorations, namely one of the three loggias built one above the other and facing Rome to the southwest. It was painted with foliage, grotesques and other similar fantasies, in vernacular style, with few expenses, and in vivid colors. Because the space was open to the public, although located on the first floor, one could go there on horseback. But in the loggia above, closed to the public and for the private recreation of the Pope, decorated shortly before, there were paintings of great value and elegance. Raphael of Urbino provided the drawings for them, and in addition the Pope put many statues there that he had kept in his cabinet and those collected by Pope Julius II. They were placed in the niches made alternately with the windows opposite the columns or pilasters.⁹⁶

⁹⁵ Vasari 1966, V, 450: Seguitando poi Giovanni di fare sotto queste logge il primo ordine da basso, fece con altro e diverso modo gli spartimenti de' stucchi e delle pitture nelle facciate e volte dell'altre logge; ma nondimeno anco quelle furon bellissime per la vaga invenzione de' pergolati finti di canne in varii spartimenti, e tutti pieni di viti cariche d'uve, di vitalbe, di gelsomini, di rosai e di diverse sorti animali e uccelli.

⁹⁶ Golzio 1971, 103-104, *Diarii of Marcantonio Michiel: Adi 27 dicembre 1519. Roma. ...* In questi giorni istessi fu fornita la loggia sotto del Palazzo de le tre poste una sopra l'altra, rivolte verso Roma a greco, et era dipinta a fogliami, grottesche et altre simili fantasie assai vulgarmente, et con poca spesa, benche vistosamente. Il che si fece perche l'era commune, et ove tutti andavano etiam cavalli, benche sii nel primo solaro. Ma in la sop.a posta immediate per esser tenuta chiusa et al piacere solum del Papa che fu fornita poco avanti, vi erano pitture di gran precio et di gran gratia, el disegno delle quali viene da Raffaello d'Urbino et oltra di questo il Papa vi pose molte statue, chel teniva secrete nella salva roba sua parte et parte gia comprate per papa Iulio, forsi a questo effetto, et erano poste in nicchii incavati tra finestre alternamente del parete oppposito alle colonne over pilastri.

This passage contains a number of important implications. The First Loggia was accessible even on horseback, while the Loggia of Raphael was a closed space reserved as the Pope's private space and restricted to members of his entourage. There was a difference of function and accessibility between the two loggias. Michiel mentions that access to the First Loggia was not restricted, but that would not have meant it was accessible to anybody; it would have implied visitors of rank or culture, namely aristocrats, clergy, and intellectuals. But the Loggia of Raphael was a restricted space, containing a private museum of antique sculpture. Access to this space would have implied a privilege bestowed only on those closest to the Pope. The difference of accessibility and function further implied the hierarchy of spaces. Thus the First Loggia was decorated in vernacular style with vivid colors, executed by an assistant of the workshop, while the Second Loggia was lavishly decorated by Raphael, the master artist, and paved with majolica tiles from the workshop of Luca della Robbia. This hierarchy of spaces explained the difference in the quality of the decorations, which consequently resulted in the negative evaluation of the First Loggia.

The decoration of the lower loggia was in progress in 1519, as we know from a letter of Michiel (May 4, 1519),⁹⁷ and was completed by December of the same year, as recorded in his diary (December 27, 1519), as cited above. This was the year before Raphael's death (on April 6, 1520), and Giovanni was entrusted with the responsibility as sole artist in charge.⁹⁸ The evaluation of the decoration of the First Loggia has been largely negative, both on the part of contemporaries and art historians alike, especially when it is compared with the Loggia of Raphael. Dacos notes the poor quality of the decoration as a whole, resulting from the absence of Biblical scenes and the repetition and the drastic simplification of the decorative system.⁹⁹ However, Dacos also admits that the design of the vaults as illusionistic pergolas was a novel idea which was not likely to

⁹⁷ Golzio 1971, 98: Copia di una lettera di Roma di ser Marco Antonio Michiel di ser Vetor data 4 magio 1519 scritta a Venecia a Antonio di Marsilio suo amicissimo. ... raphael di Urbino ha dipinto impalazo 4 camere dil pontefice, et una loggia longissima, et va drieto dipingendo due altre loggie che saranno cose bellissime oltre che ha la cura de la fabrica de San Pietro, che va lenta per il mancar dil danaro ... in roma el di 4 di magio 1519.

⁹⁸ Dacos/Furlan 1987, 101.

⁹⁹ Dacos/Furlan 1987, 101.

have been Raphael's, that this aspect of the art of Giovanni da Udine has never been studied or even treated in a general way. In stark contrast to the Loggia of Raphael, which has been well documented,¹⁰⁰ no study or general publication yet exists for the First Loggia of Leo X. Indeed the originality of the decoration of the First Loggia lies precisely in Giovanni's solution to decorating the vaults.

Here we must look more closely at the decorative system of the vaults of the First Loggia. The Loggia was repainted in the second half of the nineteenth century by Alessandro Mantovani; the colors that appear too vivid for the cinquecento are the result of this repainting.¹⁰¹ The decorative scheme of the vaults of the First Loggia was intended to be symmetrical: vault VII being the central, vaults VI and VIII, V and IX, IV and X, III and XI, II and XII, I and XIII corresponding with one another in design (fig. 4.19). Apart from a few photographs showing the details of one or two of the vaults and one general view,¹⁰² there are no published color photographs of the entire view or details of each of the vaults. My request to the Musei Vaticani for a new photographic campaign for the full documentation of the First Loggias was approved in March 2011, and is on the agenda of the Photographic Archives of the Musei Vaticani. As of May 2012, the decorative scheme of the First Loggia of Leo X is based mainly on my personal observation on the occasion of my visits to the Vatican Loggias (October 11, 2010; June 15, 2011) and on the selection of shots by the Vatican photographer during the preliminary on-site inspection in June 2011 (figs. 4.20-22). For a systematic documentation, we must await the results of the photographic campaign.

Of the total of thirteen bays, the vaults of eight bays were decorated as illusionistic pergolas, while the remaining five were decorated as coffered cupolas. Vault VII, the central vault, bore the stemma of Leo X. Vaults VI and VIII, V and IX, III and XI, and II and XII were decorated as pergolas. Each pair of pergolas had a distinctive

¹⁰⁰ Dacos has published two monographs on the Loggia of Raphael, with numerous color photographs, Dacos 2008 and Dacos 1986.

¹⁰¹ Dacos/Furlan 1987, 106.

¹⁰² One general view of the interior of the loggia is found in Artstor Digital Library (Artstor no.103-41822000622181, fig. 4.18). Some details of the vault decorations have been published in Dacos/Furlan 1987 but without specification of their precise location within the loggia.

form of trelliswork, thus there were four different types of trellises in terms of their form. The remaining vaults that were not painted as pergolas exhibited a variety in the form of the coffers. Vault I had diamond coffers; vault IV had coffers of intersecting circles. Vault VII, the central vault, was designed like the dome of the Pantheon, with square coffers defined within concentric circles. Vault X had hexagon coffers, and vault XIII had diamond coffers like vault I. The four coffered vaults emphasized variety, and do not necessarily conform to the principle of symmetry.

As for the depicted plants covering the trellises, we can distinguish vine, jasmine, clematis and roses, as noted by Vasari. Vaults III and XI, of the coppice pole type, are covered with vine (*Vitis vinifera*) laden with grapes (fig. 4.23). This would have reflected the form and materials of the utilitarian pergolas used for training vine. Vaults II and XII, of the lath type, are covered with jasmine (*Jasminium officinale*) (fig. 4.24) and melangoli (*Citrus aurantium*) (fig. 4.25). These reflect the plants that were used on pleasure pergolas. The melangolo or bitter orange was introduced into Europe by the Arabs in the eleventh century.¹⁰³ The collecting of citrus species became popular among the aristocracy from the latter half of the fifteenth century. Cinquecento treatises of agriculture, villas and gardens mention citrus plants trained on pergolas.¹⁰⁴ Vaults V and IX, of the lath type, are adorned with red and white roses (*Rosa x alba*). The rose had a symbolic meaning deeply rooted in Christian iconography, but the depiction here may also have derived from botanical and horticultural interests, and would simply have represented the rose's popularity in pleasure gardens. In Vault V, the star-like white flower may be identified as the *Peganum harmala*, and the trumpet-form flower, as the *Convolvulus arvensis* of the morning glory family.¹⁰⁵

¹⁰³ Caneva 1992, 125.

¹⁰⁴ Agostino Gallo, a Bresciano and author of *Le venti giornate dell'agricoltura, et de' piaceri della villa*, mentions the garden of the counts Martinengo with pergolas of lemons. cf. Gallo 1580, 124: Io vi potrei dir' ancora de gli altri diuersi horti belli poiche ve ne sono d'altre forme pur assai, fra i quali non posso tacer quello cosi singolare de' Magnifici Conti martinenghi di Barco per li pergolati di limoni, per vie salegiate, & per li murelli forniti di pitari, & d'altri bei vasi pieni di varie gentilezze, che rendono gran satisfattione a tutti per gli odori, che gettano; senza ch'e accompagnato da piu riuoli correnti, dalla limpida peschiera, & dalla bellissima Fontana: la quale per esser fabricata con mirabilis arte, forte che non ne ha vn'altra simile tutt'Italia.

¹⁰⁵ Cf. Caneva 1992, 158-160.

As for the animals and birds that inhabit these painted trellises, our understanding is still fragmentary. We see rabbits, cats, squirrels, and mice, namely small animals Giovanni would have been familiar with in daily life. A monkey is included, but no large animals from the menagerie, such as lions, elephants, giraffes or rhinoceroses. The light structure of the pergola would have been the decisive factor for the selection of the animals to be depicted. For the birds, domestic species commonly seen in everyday life, such as swallows, owls and falcons are depicted, along with a parrot with exotic plumage.

In addition to Giovanni's natural penchant for the depiction of animals, the "peopled scrolls" of antiquity may have been a source of inspiration for the "peopled trellises" as it were, of the First Loggia. It has been suggested that Giovanni had been familiar with ancient Roman reliefs with acanthus scrolls inhabited by small animals, and that he was inspired by them in the ideation of the pilaster designs.¹⁰⁶ Dacos indicates that the arrangement of the scrolls on Pilaster IX of the Loggia of Raphael was strikingly similar to the acanthus scrolls on one ancient Roman scroll relief that it could have been copied from it. The ancient relief in question was a fragment in the Della Valle collection, and subsequently one of the pieces inserted on the façade of the Villa Medici (currently in the Uffizi) (fig. 4.26). However, Dacos also notes that the animals had been changed in the process (fig. 4.27). On the ancient Roman relief, the scrolls are inhabited by an eagle, a peacock, small birds, a lizard, and a bee; among the scrolls painted on Pilaster IX of the Loggia of Raphael we see a squirrel, a mouse, a weasel, a snake, and a snail.

The ancient Roman acanthus scrolls were inhabited by small animals and birds familiar to sculptors of Rome and the south. It is possible that Giovanni borrowed the idea and peopled his fictive pergolas with small animals familiar to him in the north, or exotic species probably in the Pope's collection. He was apparently interested in the antique, but also in the depiction of creatures from everyday life that animated the quotidian with their presence. The depiction of them exhibits a spirit of playfulness combined with an ingenious talent in the art of natural history, to create "peopled

¹⁰⁶ Dacos 2008, 40-46; Dacos/Furlan 1987, 68.

trellises,” like the “peopled scrolls” of Roman antiquity,¹⁰⁷ bringing familiar animals and birds from everyday life into the composition.

The architectural tradition of private loggias in quattrocento Rome and their decoration would also have provided an inspiration for the decoration of the First Loggia of Leo X. In the quattrocento, the loggia was a space open to the exterior that often had a belvedere (a roof-top pavilion with a view) function, and motifs evocative of nature and the landscape were naturally considered appropriate for its decoration. The loggia decoration of the Casa dei Cavalieri di Rodi was a typical example. In a similar spirit, the First Loggia of Leo X overlooked a garden. The Cortile di San Damaso, currently a paved courtyard, was a planted garden at the time. Before the nineteenth century, when glass panes were fitted into the arched openings to protect the architecture and decoration from the elements, the First Loggia was open to the exterior, as we saw in the drawing (ca. 1535) by Marten van Heemskerck. Michiel’s passage suggested that access was not restricted and people could enter the loggia on horseback. The stairs that we see today are one of the nineteenth-century renovations to the Loggias under Pius IX (pontificate, 1846-1878), who also introduced the glass windowpanes for the protection of the Logge. Before that time, a *cordonata* (horse ramps) led up to the First Loggia from the Cortile di San Damaso.¹⁰⁸ Because of this close relationship with the outdoors, elements evocative of the garden and nature would have been appropriate for its decoration. That the First Loggia was accessible on horseback was already something that implied the connection to the dynamic outdoors rather than the sedentary indoors. The entire space of the decorated loggia may have been designed with the rhythmical progression of a horse’s walk in mind, which would also have enabled close inspection of the details of the painted pergolas on the vaults.

Ancient Roman villas with garden rooms decorated with painted bowers would have been known through the letters of Pliny the Younger. Pliny describes a garden room in his Tuscan villa, where the wall was painted with motifs of boughs and birds perched

¹⁰⁷ Cf. Toynbee and Ward-Perkins 1950.

¹⁰⁸ I owe this information to Dott.ssa Adele Breda of the Musei Vaticani.

among the branches.¹⁰⁹ However, for a painter like Giovanni da Udine, who worked from life, the inspiration would more likely have been visual. A now lost chapel of Innocent VIII in the Belvedere is a possible source of direct inspiration. The chapel, whose vault was decorated as an illusionistic pergola by Mantegna in 1488, was demolished in 1776. It is known only from descriptions in early guidebooks, those by Agostino Taja (1750) and Giovanni Pietro Chattard (1762). The following is Taja's description:

The small cupola of this chapel is decorated with some fictive compartments containing figures of round shape, which are intertwined with each other in the manner of latticework, interrupted by fifteen putti holding festoons.¹¹⁰

Vasari does not refer to the fictive pergola, but describes the depiction as being the scene of the baptism of Christ by St. John the Baptist, and stylistically more "miniature than painting," most likely to emphasize the careful execution of the details.¹¹¹ It is clear from Taja's description that the decoration of the chapel vault in the Vatican was of the fruit swag type, the hallmark of Mantegna's style. Giovanni would have been familiar with the northern Italian tradition of the Madonna of the pergola. He would surely have known the works of Cima da Conegliano, who painted such a Madonna under a vine pergola,¹¹² as well as the pictorial repertory and works of Mantegna including the chapel vault in the Vatican decorated as a pergola. Whether it was made of a vine trellis or swags loaded with fruit, the function of these pergolas would have been to create a dignified setting for an important person or event.

¹⁰⁹ Pliny the Younger, *Letters*, V.vi, Loeb edition 384-385: Est et alium cubiculum a proxima platano viride et umbrosum, marmore excultum podio tenus, nec cedit gratiae marmoris ramos insidentesque ramis aves imitata pictura.

¹¹⁰ Taja 1750, 403: La picciola cupoletta di essa Cappelletta e ornate di alcuni finti spartimenti di figura tonda tra se intrecciati insieme a modo di una ingraticolata, interrotta da quindici putti, che sostengono alcuni festoni.

¹¹¹ Vasari 1966, III, 552-553: Andato dunque a Roma con molto esser favorito e raccomandato dal marchese, che per maggiormente onorarlo lo fece cavaliere, fu ricevuto amorevolmente da quel Pontefice e datagli subito a fare una picciola cappella che è in detto luogo; la quale con diligenza e con amore lavorò così minutamente che e la volta e le mura paiono più tosto cosa miniata che dipintura, e le maggiori figure che vi sieno sono sopra l'altare, le quali egli fece in fresco come l'altre, e sono S. Giovanni che battezza Cristo, et intorno sono popoli che spogliandosi fanno segno di volersi battezzare.

¹¹² *Sacra conversazione* (1483), Church of S. Bartolomeo, Vicenza.

If the illusionistic pergola of the chapel of Innocent VIII by Mantegna had been a source of inspiration for the First Loggia of Leo X, it would have been so because first, it was a design evocative of the garden that would provide a relaxing setting, and second, because it applied the pergola decoration to a single vault in a three-dimensional architectural space. The space of the First Loggia, as of the Loggia of Raphael above, was not perceived as a continuous whole, but rather as a series of thirteen semi-independent spatial units articulated by transverse arches and pilasters. When Bramante designed the loggias, the Tabularium (78 B.C.)¹¹³ at the northwest end of the Forum Romanum had inspired him with the idea of this subdivision of the interior into vaulted units (fig. 4.28).¹¹⁴

Consequently, Giovanni da Udine may have seen the loggia not as a unified space, but rather as an enfilade of rooms each of which could display variability in design. The idea of the illusionistic pergola for the decoration of a vault was conveniently suited to the loggia; it would fit into each individual unit and could be repeated with variation. While a degree of symmetry would be required for the unity of the whole, in order to prevent monotony a variety in the design of the pergolas was necessary. Works that mention the First Loggia describe the general system of the pairing of the bays, explaining that each of the corresponding bays was designed as a repetition of the other.¹¹⁵ However, we have already seen that the four coffered vaults I, IV, X and XIII exhibited a variety in the shape of the coffers. At first glance, the eight vaults with illusionistic pergolas appear to be symmetrical pairs, at least in terms of the trellis forms. But closer examination reveals that the animals depicted in each of the vaults were different. Vaults VI and VIII do not contain any animals at all, and are just densely covered with vine.

The decoration of vaults in catacomb paintings and early Christian churches, baptisteries, and tombs that exhibited concentric, converging, axial, diagonal or radial patterns may also have been a source of inspiration. If the loggia was perceived as a

¹¹³ Richardson 1992, 376-377.

¹¹⁴ Dacos 2008, 20.

¹¹⁵ Dacos/Furlan 1987, 101-102.

succession of vaulted units, the decorative patterns of ancient Roman ceiling painting that had survived in catacomb painting may have provided design ideas. We have noted that their mention in early guidebooks for pilgrims indicated that a fair number of catacombs around Rome were known in the Renaissance, the cemeteries of Callixtus, Domitilla, Priscilla, Praetextatus, S. Sebastiano, and SS. Pietro e Marcellino among them.¹¹⁶ It is likely that not only travelers and pilgrims but also artists visited them, and made sketches of the decoration. As Giovanni da Udine was interested in the Domus Aurea, there is no reason to suppose that he would not have had a similar interest in the catacombs.

In fact, the possible influence of catacomb paintings on Renaissance vault decoration has already been suggested in the case of the Stufetta of Cardinal Riario in the Palazzo della Cancelleria. The vault of the stufetta was painted as an illusionistic pergola in 1520 (fig. 4.29). The decoration is attributed to Giovanni da Udine who worked under the supervision of Baldassare Peruzzi.¹¹⁷ The concentric pattern of the latticework of the illusionistic pergola was formed by intersecting parallel and radial lines, interwoven with climbing plants that grew out of the four pendentives. Birds inhabited the foliage, and a garland of fruit with grape, apples, oranges, lemons and roses adorned the oculus, through which was visible the sky.¹¹⁸

If there had been an influence of catacomb paintings on the illusionistic pergolas of the First Loggia of Leo X, one feature appears to be of relevance: the form of the trellises, especially those of the vaults II, V, IX and XII, which have openings on the four sides in the form of hexagons or squares, through which is seen a glimpse of the blue sky. For the formal classification of the depicted trellises, a good model is the ancient Roman ceiling decoration types proposed by Hetty Joyce, although the period of focus of her work is the second and third centuries A.D.¹¹⁹ Our vault decoration types would be different from Joyce's types, but can be based on her concepts of classification. The

¹¹⁶ Murray 1972; Oryshkevich 2003.

¹¹⁷ Edwards 1982, 72-73; Dacos/Furlan 1987, 101.

¹¹⁸ Schiavo 1964, 195; Museo Nazionale di Castel Sant'Angelo 1984, 21-33. The idea of the plants growing from the pendentives at the four corners may have come from ancient Roman vine mosaics which depicted vine growing out of the four corners. The vintage scene in mosaic in the annular vault of S. Costanza is a typical example.

¹¹⁹ Joyce 1981, 69-93.

concepts of concentric, converging, axial, diagonal, and radial are useful to classify the types of latticework patterns of the depicted pergolas. Our four types for the trellises would be as follows: first, concentric type (vaults II and XI); second, concentric and radial type (vaults III and XI); third, converging and diagonal type (vaults V and IX); fourth, axial and diagonal type (vaults VI and VIII).

The painted trellises would also have been modeled on real trellises and treillage pavilions in contemporary gardens. In terms of the material of the depicted trellises, two different types are observed: first, coppice poles bound by withies (vaults III and XI; VI and VIII); second, laths bound by withies (vaults II and XII; V and IX).¹²⁰ Both types would have been modeled on their counterparts in reality: the coppice pole type and the lath type, which were utilitarian structures commonly seen in the agricultural landscape of the time. However, the lath type in the First Loggia of Leo X also includes features of the carpentry type, the treillage structure that was intended for the pleasure garden, in its hexagonal and rectangular openings. The window-like openings on the four sides, in the form of elongated hexagons or of lunettes, make us wonder whether these openings were also copied from reality. In the surviving drawings of such pavilions, although somewhat later in date, the latticework is shown as a simple grid of horizontal and vertical timber. The sketchbook of Giovanni Colonna da Tivoli (1554)¹²¹ contains drawings for the design for a pergola with a hemispherical dome, which housed fountains and aviaries (fig. 5.9). The crossing pavilion of the pergola is shown as a dense interwoven fabric of this kind. Pleasure pergolas of the cruciform type, covered with climbing plants, are recorded in maps showing gardens of the latter half of the sixteenth and the early seventeenth century.¹²² The vegetation that covers these structures does show openings around the dome of the crossing pavilion and along the sides of the four arms, but it is difficult to distinguish whether such openings were also made in the carpentry framework, which was by nature a transparent and translucent structure. The illustration of the treillage pavilion at Montargis in Du Cerceau's *Les plus excellents Bastiments de*

¹²⁰ For the types of pergolas, see chapter 5, pp. 138-139.

¹²¹ Vat. Lat. 7721, 15r, 15v and 16r.

¹²² Cruciform pergolas existed in the Villa d'Este at Tivoli, the Quirinal Gardens, the Villa Medici, and the Horti Farnesiani in Rome.

France (1576-1579) shows the basic carpentry structure as vertical and horizontal timber, covered with ivy (fig. 3.46). The Montargis treillage pavilion has large arched openings, but we see that these are architecturally feasible, and some of them function as doorways. Treillage structures became an essential component of seventeenth-century French gardens, and it was in France that the first treatise on the topic was published in 1774.¹²³ Roubo's treatise includes many illustrations of the patterns of treillage, but none of them depict forms with a large number of small openings. It is difficult to imagine that even with the high level of the craftsmanship of treillage in any age, such pavilions with so many small openings would be structurally feasible. It would have given rise to problems of durability and function. And if real treillage pavilions were made of latticework as thin as the argyle patterns that fill in the interstices between the sturdier beams in the depicted trellises of vaults II and XII, they would be too delicate to be exposed to the elements and would not serve their primary function as outdoor structures. Thus it is reasonable to suppose that, although the illusionistic pergolas were originally modeled on real pergolas, once they were adopted as artistic motifs they started to develop a life of their own. Painted pergolas no longer had to be structurally durable or feasible; aesthetic values became all-important. Window-like openings among the dense foliage that show a glimpse of the sky and to serve as a perch for birds would have seemed an attractive and interesting idea.¹²⁴

We may recall that a typical composition in the vault decoration of catacombs would be a central circle at the crown of the vault containing the Good Shepherd, and semicircles or squares on the four sides containing scenes or episodes such as those of Jonah. This axial arrangement can develop several variations: a central circle further surrounded by concentric circles (fig. 2.35);¹²⁵ a central hexagon or an octagon (fig.

¹²³ Roubo, M. 1774. *L'Art du Menuisier Ebéniste*. Par M. Roubo fils, Maître Menuisier. III^e Section de la III^e Partie de L'Art du Menuisier. M.DCC.LXXIV.

¹²⁴ Rabun Taylor suggests, as precedent for this tendency, the fourth-style paintings of the Domus Aurea. The theatrical manner of many of the Domus Aurea frescoes, which still retained the slender architectural elements of the third style, shows the sky through slender architecture. Giovanni da Udine may have had these features of the fourth-style paintings in mind as he worked on his pergolas.

¹²⁵ Wilpert 1903, pl. 51b.

2.36);¹²⁶ in addition to the scenes on the four sides, four other scenes can be arranged diagonally (fig. 2.37);¹²⁷ the compartments containing scenes from a story can also be a radial compartment departing from the central circle.¹²⁸ Relevant to the composition of the painted pergolas appears to be a type of catacomb decoration with a central figure surrounded by smaller circles and squares on the sides and diagonals (fig. 2.38). A print made in the sixteenth century depicting an antique structure proves the awareness of Renaissance artists of such design compositions (fig. 4.30).¹²⁹

The composition of catacomb vault decoration appears to have been conveniently suited to the design of the illusionistic pergolas in the Loggia of Leo X. All the vaults of the Loggia were to have a circle at the crown bearing the coat of arms of the ruling Pope; the pergolas were no exception. These papal coats of arms are the determining factor of the date of the decoration. As the composition of catacomb vaults had a circle at the crown, the arrangement could be readily adapted to the vaults of the loggia. The idea of having square or hexagonal openings on the four sides of the trellis may also have come from the composition in the catacomb vaults. These were always symmetrically arranged, and symmetry was one of the core design principles of the loggia.

In the First Loggia of Leo X, for the first time the illusionistic pergola became the centerpiece of the decoration. The painted pergola was no longer an auxiliary framing device for the more important figured scenes, as it was in the loggia of La Farnesina. The fictive pergola was not a decorative motif included in a larger composition of grotesques in the antique style, as it was in the Loggetta of Cardinal Bibbiena. It had a *raison d'être* in its own right, and was given full liberty of expression at the hand of a painter who

¹²⁶ Wilpert 1903, pls. 55, 131, 151.

¹²⁷ Wilpert 1903, pls. 61, 72, 217.

¹²⁸ Wilpert 1903, pl. 196.

¹²⁹ An etching by Jacques Androuet Du Cerceau included in his *Fragments d'architectures antiques d'après Thiry*, Orléans (1550) shows an antique structure with vaulted arches. The intrados of the arches show compositions that show a striking similarity to catacomb paintings. Cf. Guillaume 2010, 119, fig. 146.

excelled in the depiction of animals and plants. As there were “peopled scrolls” in antiquity, so were there “peopled trellises” in the Renaissance. The illusionistic pergola was not a prescribed idea suggested by the patron or the master of the workshop, but born of the design experiment of an artist who, having started out in the Venetian cultural sphere, turned out to be a master himself in the depiction of nature. Giovanni should be credited for the ingenious idea of designing the Loggia as a series of illusionistic pergolas, a most appropriate design for a tunnel-like semi-interior that is evocative of nature. The “peopled trellises” in the First Loggia of Leo X demonstrate how the artist could be the carrier of ideas and forms of the culture in which he had been trained, and combining them with those of the culture in which he worked, could produce a novel and interesting design. It was a conscious reference to the antique, but at the same time, also to the rustic and the vernacular elements from everyday life. The creation of the “peopled trellises” by Giovanni da Udine marked the start of the tradition of the illusionistic pergola in Rome and its environs. Because of its impressive and unprecedented scale, as well as for the ingenuity and novelty of its decoration, the First Loggia of Leo X became the prototype for the large number of illusionistic pergolas to follow.

Giovanni da Udine played a crucial role in the creation of the illusionistic pergola, but in art historical scholarship he has tended to be treated as an artist of an auxiliary role, as only one of Raphael’s many assistants. One purpose of this chapter is to redress this critical neglect, and give him due credit for his ingenious creation of a novel form of semi-interior decoration, and, in a more general way, for his contribution to the art of natural history.

REAL PERGOLAS IN ROME AND ITS ENVIRONS

The pergola had been a common garden structure from the Middle Ages, and became a popular design element in pleasure gardens by the early decades of the sixteenth century. In the medieval period, the monks and nuns had their cloister gardens, but the secular population also had their urban horticultural retreats. These secular gardens, like the cloister gardens, presumably had a quadripartite plan, with cross paths shaded by pergolas. Thus the real pergola, even in its complex cruciform version, was not anything new that emerged in the sixteenth century. The innovative aspect of the real pergolas in Renaissance Rome lay in their systematic use in connection with other architectural or landscaped spaces, its interaction with high architecture, and its reference to the antique. The pergolas in Renaissance Rome were designed in reference to interior spaces and gardens, and were conceived as part of a unified circulation system. Their design was often inspired by stone architecture, from which they borrowed forms and structural principles. The domes of the crossing pavilion and the barrel-vaulted tunnels of the arms of the cruciform pergolas clearly show such influences. And they were also used as a reference to the ancient Roman porticus or the cryptoporticus, and to the ancient Roman habit of strolling in such architectural spaces largely open to the landscape.

Coffin has a section on pergolas in his *Gardens and Gardening in Papal Rome* (1991), in which he documents and describes the major pergolas known to have existed at the time. These included the impressive cruciform pergola in the garden of Paul III in the Vatican Gardens, the pergola in the Villa Carafa on the Quirinal rented by the Farnese and subsequently by Cardinal d'Este, and the design of a pergola for the Ghinucci garden on the Quirinal.¹ Coffin has assembled a substantial amount of evidence pertaining to real

¹ Coffin 1991, 126-128; 178-181.

pergolas dating from the tenth to the seventeenth century, of immense value as documentation. But a broader look at the pergola as architecture and its spatial relationship to the garden would be a fruitful avenue to pursue. Building on Coffin's work, I will attempt to interpret the real pergolas in relation to the villa and palace buildings to which they are apparently connected, focusing on the relationship between the illusionistic pergolas that were created in the semi-interior spaces of the villa or palace building, and the real pergolas that were created in the garden or in the exterior.

During the first period of the creation of illusionistic pergolas, we do not necessarily find contemporaneous examples of real pergolas in the gardens of the palaces where the painted pergolas were created. A pergola most likely existed in the garden of Clement VII in the Vatican Gardens, but as an independent structure without a coordinated relation with a painted pergola in the interior. In the first period, the real pergola most likely served as a model for their fictive counterparts. For Giovanni da Udine, involved in all projects of the painted pergolas from this period, real pergolas were an inspiration for depicting the trelliswork. It is during the second period of the proliferation of the illusionistic pergolas that a heightened interest in pergolas, both real and fictive, becomes apparent in and around Rome, and that the real pergola played an essential role in the design of the interior and exterior spaces of the villa. The contemporaneous interest in real and fictive pergolas, as well as the systematic use of both pergola types within the same estate, is the defining characteristic of the second period. Major villas dating from the second period, whether a suburban villa like the Villa Giulia (1551-1555), or a country residence in the hill towns beyond the Roman Campagna like the Villa d'Este at Tivoli (1550-1570) and the Villa Farnese at Caprarola (1557-1580), feature both real pergolas and painted pergolas in their compounds. The present chapter will focus on the real pergolas of the second period, which require a separate treatment from their fictive counterparts.

Pergolas and the art of *treillage*

A significant phenomenon from this period is the increasing interest in the real pergola as an ornamental structure in the pleasure garden. The ornamental pergolas of the Renaissance developed from the utilitarian pergolas in medieval gardens. These were primarily for supporting vine or gourd or other climbing plants to promote their growth, but the sensuous experience of the outdoors they offered was simultaneously acknowledged. From the early Renaissance, their potential as ornamental structures in pleasure gardens began to attract attention. Pergolas from the fifteenth and early sixteenth century were usually simple tunnel-like structures. They were made of light materials such as coppice poles or laths, and their primary function was to support the plants. The species of plants most appropriate for the poles used in the construction of the pergola were chestnut, oak, willow and juniper. The pergolas also became spaces for human activity, and started to be used as walkways or promenades.² In Rome from the mid-sixteenth century, cruciform pergolas made of carpentry and covered entirely with vegetation became a fashion in the pleasure garden. In contemporary archival sources, these tunnel-like structures were referred to as *cerchiata* (*cerchi* referring to the wooden rings that were used to fasten the pergola at regular intervals) or *cocchio* (“carriage”).³

There were four types of pergolas in medieval and Renaissance gardens, classified according to their materials and the resulting form: first, the coppice pole type, the pergola made of coppice poles bound by withies, with a roof made of cross poles, either arched or flat in form;⁴ second, the lath type, the pergola made of laths bound by withies with an arched roof;⁵ third, the masonry or brick column type, the pergola supported by

² Scamozzi 1615, 328.

³ Campitelli 1995, 179; Coffin 1991, 178-179.

⁴ Pergolas of this type were used for utilitarian purposes, the support of plants for promoting the growth of their fruit. It is depicted in the month of June in the *Très Riches Heures du Duc de Berry*; the fresco of the Month of March in the Palazzo Schifanoia at Ferrara; the illustration for the Third Day of Boccaccio's *Decamerone* in the manuscript edition in the Bibliothèque de l'Arsenal (Paris); the illustration for the fifteenth-century French edition of Pietro de' Crescenzi's *Liber ruralium commodorum*; Jacopo de' Barbari's Map of Venice, in the gardens located in the quarter of the Giudecca; and *Spring* by Pieter Brueghel the Younger.

⁵ Lucas Cranach the Younger's *Madonna of the Vine Arbor* (ca.1500) shows a pergola of this type. The vertical laths are bound by withies at the crown of the arch and with the transverse laths forming a basketwork pattern.

brick or masonry columns and covered by a flat roof of cross beams or poles;⁶ and fourth, the carpentry type, the pergola made of jointed timber or carpentry.⁷ There was a great deal of overlap between the lath type and the carpentry type, as the latter was often also made of laths. However, the decisive difference between them consisted in the use of nails to fix the laths or timber framework in shape in the carpentry type, whereas the laths were bound together by withies in the lath type. While the coppice pole type, the lath type, and the masonry or brick column type could be used for both utilitarian and recreational purposes, the carpentry type was used exclusively for pleasure pergolas.

The art of carpentry relevant to the construction of the carpentry type, designated by the term *treillage* or trelliswork, is a fascinating but somewhat obscure art that played a significant role in the garden design of the early modern age. Many pergolas in Renaissance pleasure gardens were *treillage* structures that required highly skilled craftsmanship. The authors of these elaborate garden furnishings were, in most cases, carpenters whose names have not been recorded except in payment documents.⁸ Treillage structures were ephemeral and fragile in comparison to the more durable and robust stone structures, and required constant maintenance and care; if neglected, they were easily and speedily affected by the elements. It is not surprising that they have scarcely left any

⁶ This type is found at the Villa Medici at Il Trebbio, depicted in the view by Giusto Utens (1598). Cf. Fabbiani Giannetto 2008, 17. A precedent in antiquity for this type is the pergola in garden of the House of Stags at Herculaneum.

⁷ This type includes the pergola gallery at Montargis depicted in Du Cerceau's *Les plus excellents bastiments de France*, or the Ghinucci pergola in Giovanni Colonna da Tivoli's sketchbook, as we see later in this chapter.

⁸ An exception is Girolamo da Carpi, architect included in Vasari's *Lives of the Artists*, who was responsible for the carpentry pavilions in Cardinal Ippolito d'Este's Quirinal garden. Vasari's evaluation is as follows (Vasari 1966, vol. V, 418): E perché si dilettò Girolamo e diede anco opera all'architettura, oltre molti disegni di fabbriche che fece per servizio di molti privati, servi in questo particolarmente Ippolito cardinale di Ferrara, il quale avendo comperato in Roma a Monte Cavallo il giardino che fu già del cardinale di Napoli, con molte vigne di particolari all'intorno, condusse Girolamo a Roma, acciò lo servisse non solo nelle fabbriche, ma negl'acconcimi di legname veramente regii del detto giardino; nel che si portò tanto bene, che ne restò ognuno stupefatto. E nel vero non so chi altri si fusse potuto portare meglio di lui in fare di legnami [che poi sono stati coperti di bellissime verzure]. (As Girolamo also delighted in architecture, he designed many buildings for private individuals, and served Cardinal Ippolito of Ferrara in this respect, who had bought the garden of the cardinal of Naples at Montecavallo in Rome, surrounded by numerous vineyards. Girolamo was taken by the cardinal to Rome, and served him not only in the buildings but also in the truly regal woodwork of the garden, to the amazement of all. Indeed, I do not know of anyone who could surpass him in wood, his work afterwards covered with beautiful verdure.) (translation from Everyman's edition, 312).

physical remains, so that contemporary drawings, illustrated books and maps, and literary and archival documents are almost always the only evidence that attest to their existence.

Recognition of craftsmen as artists, which implied an improvement in their social status, often depended on the theorization of the craft. In Renaissance Italy, the social recognition of the painter and the architect stemmed from various factors: primarily, the writing of treatises on painting and architecture, but also the recognition that their skills pertained to a respectable and intellectual profession. The writing of the kind of treatise that made a statement about the profession in the Renaissance may also have depended on whether there were such precedents in antiquity. Leon Battista Alberti's *De re aedificatoria* (1452), a conscious reference to Vitruvius' treatise, is generally considered a theoretical work aimed at an aristocratic audience than a practitioner's handbook. Its purpose was to establish the architect as an educated artist in contemporary society, and to give intellectual frameworks to the profession. However, the work also contains surprisingly practical details, such as guidelines on the construction of buildings for the keeping of birds and animals in country estates.⁹ Alberti's treatise was not only about high architecture, but also about vernacular elements in architecture, and reveals the author's scope and depth of knowledge on both theory and practice.

The boundary between art and craft was somewhat less distinct in the fifteenth and sixteenth centuries than in later times. Renaissance architects specialized not only in high design but also in utilitarian arts. Their fortifications, cisterns, bridges, canals and sluices, which today would be included in the realm of engineering, were considered an essential part of their work. Baldassare Peruzzi (1481-1536), famous for his design of the Villa Farnesina (1505-1517) in Rome and his drawings of ancient Roman architecture, worked on the fortifications of the city as architect of the Sienese Republic. He also advised on the fortifications for the small towns in the Sienese territory, was employed as military advisor to the imperial generals in the siege of Florence, and worked on the reconstruction of a dam near Grosseto that had collapsed. Vignola (1507-1573), whose name is connected to the greatest works of architecture in sixteenth-century Rome,

⁹ Alberti V.16 (85v-87). cf. Alberti 1988, 143-144. Thanks are due to Mirka Beneš for this reference.

provided designs for the construction of a canal and sluices in Bologna where he worked before coming to Rome. In a similar position between the utilitarian and the aesthetic were the hydraulic engineers, the *fontanieri*, who designed fountains and oversaw their installation and operation in the gardens. The names of some are known to us: Curzio Maccarone, who designed the fountains at the Villa d'Este at Tivoli and the Villa Farnese at Caprarola,¹⁰ and Tommaso Ghinucci who worked at the Villa Lante at Bagnaia.¹¹ The first hydraulic treatise to be published was Salomon de Caus's *Les raisons des forces mouvantes* (1615). The etchings illustrate the machines and fountains designed by the author for the Hortus Palatinus at Heidelberg. But the treatise did not make a statement on the establishment of the profession.

That treillage has hitherto received little attention among art historians may have been due to the following reasons: first, the late publication of a treatise on treillage, which happened in mid eighteenth-century France; second, the traditional recognition of carpenters more as craftsmen than artists; third, the fragile and ephemeral quality of the carpentry structures and their poor survival rate; and fourth, the relative lack of scholarly attention to garden furnishings. It was in France that the first treatise on carpentry and treillage was written, André Jacob Roubo's *L'art du menuisier* (1769-1775).¹² Relevant to the making of pergolas and garden pavilions is part four of this work, entitled *L'art du treillageur ou menuiserie des jardins* (1775). The *treillageur* or trellismaker can be defined as a specialist of treillage structures for gardens. The treatise established for the first time the profession of the carpenter, and moreover, acknowledged the separate identity of the trellismaker from that of the carpenter.

Yet long before the treatise was written, the art of *treillage* had reached a level where the creation of structures of high artistic quality and impressive scale had become possible. This was especially true in early to mid-sixteenth-century Italy and France, and

¹⁰ Coffin 1960, 202-213; Coffin 1991, 53-54; 84-85.

¹¹ Coffin 1991, 51-52; Frommel 2005, 85-91.

¹² Earlier garden treatises included sections on garden furnishing, for example, Antoine-Joseph Dézallier d'Argenville's *La théorie et la pratique du jardinage* (1709), Paris, Part I, Chapter VIII, "Of porticoes, bowers and cabinets of arbor-work." However, these treatises, while proposing a variety of trelliswork designs, did not make a statement on the separate identity of the carpenters specializing in *treillage* design and craft.

there were probably currents of exchange between them in both directions. In these countries, carpenters and designers who remained anonymous in the history of art created elaborate, ephemeral masterworks which are worthy of being called high art, and were appreciated as such by their patrons. The wavering distinction between art and craft may have had lesser resonance in this age.

Giardino segreto of Paul III

The popes not only provided political and social stability in the papal capital, but also set the model for artistic and cultural patronage. From the turn of the sixteenth century, gardens created in the Vatican compounds became a model for landscape design. Clement VII Medici (pontificate, 1523-1534) created a garden with compartment beds in the Vatican Gardens.¹³ As we have briefly mentioned earlier, the garden of Clement VII probably had a pergola. From December 1541 to August 1542, when maintenance work in the garden of Clement VII was in progress under his successor Paul III Farnese, there is mention of payment for wooden columns and wires, most likely to replace the worn out ones, and also of fixing the shutters of a structure supporting myrtle and roses.¹⁴ A structure for supporting plants equipped with shutters would imply a pergola walkway in carpentry with windows at regular intervals. The carpenter Hieronymo was responsible for the maintenance of the pergola structure.¹⁵ However, the pergola in the garden of

¹³ Clement VII's garden is depicted in Mario Cartaro's view of the Belvedere (1574).

¹⁴ ASR, Camerale I, Tesoreria Segreta 1290, Fol. 39: (a di 25 Novembre 1541) e piu scudi nove baiocchi sessanta pagati al p.to Lucerta per pagar' cento colone di legno, et 42 filagnole p refar parti delli Telari delli spallier' di mortella et di rose dell giardino vecchio di Belveder' 9.60.

Fol. 40: (a di 17 Dicembre 1541) e piu scudi decedotto baiocchi venti pagati a Lucerta p pagar' colonne 142 di legno et 151 filagnola comprate per refar' parte delle gelosii' alle spallier' di mortella et di rose nel horto vecchio di Belveder' 18.20.

Fol. 40: (a di 23 Dicembre 1541) e piu scudi otto baiocchi 27 ½ pagati a Lucerta p pagar colonne 77 di legno et filagnole 50 comprati p refar parte alle Gelosii' alle spalliere di mortella et rose nel horto vecchio di Belvede' 8.27 ½.

Fol. 46: (a di 24 Genaro 1542) e piu scudi sedici pagati a Lucerta p pagar' 152 filagnole et 72 colonne di legno comprati p refar' parte alle spalliere' di rose et mortelle del horto vecchio di Belveder' 16.

¹⁵ ASR, Camerale I, Tesoreria Segreta 1290, Fol. 49: E piu deue' dar' a di 18 Marzo 1542 scudi venti pagati a m.o Hierony.o falegname' et comp.o a buon conto delle Gelosie che fanno alle spalliere' di rose del horto vecchio di Belveder' 20.

Fol. 50: a di 4 Aprile e piu scudi quindici pagati al p.to Lucerta p darli a m.ro Hieronymo falegname' a buon conto delle spallier' che fa di novo nel horto vecchio di Belveder' 15 e piu scudi otto al p.to Lucerta p

Clement VII appears to have been an independent structure, without any coordinated relation with other garden structures or the interior decoration of the palace.

The systematic use of pergolas as a constant element in garden design in Rome starts with the pergola in the giardino segreto of Paul III in the Vatican Gardens. The giardino segreto was a term for enclosed private gardens in Italy, usually of a formal design, located close to the residence building. Constructed in the late 1530s and early 1540s, the giardino segreto of Paul III falls between the first and second periods of the creation of the illusionistic pergola.¹⁶ In the papal accounts, the garden of Paul III is referred to as the new garden (“giardino novo”), as opposed to the old (existing) garden (“giardino vecchio”) of Clement VII. Both are recorded in Mario Cartaro’s view of the Vatican, where the garden of Clement VII is designated by the letter K and the giardino segreto of Paul III by L (fig. 5.1). Jacopo Meleghino (1480-1549), architect and supervisor of the Belvedere and Antiquities under Paul III, was responsible for the creation of this new garden. The Paul III’s pergola in the giardino segreto is the earliest fully documented example of a pleasure pergola in Roman gardens.

Construction of the giardino segreto of Paul III was well under way in July 1537.¹⁷ After the leveling of the terrain, citrus trees and other fruit trees were planted. The citrus trees, including the much sought-after melangoli (bitter orange), were procured in Naples.¹⁸ In November 1537, 1500 trees were transported by ship from Naples to Rome.¹⁹ Meleghino oversaw the transportation of these trees from the Ripa (port of Rome

comprar’ 800 para di cerchi p far parte delle gelosie del p.to horto di Belveder’ 8. Payments to Hieronymo carpenter for the fixing of the pergola continue until August 14, 1542.

¹⁶ From January 22 to July 15, 1536, there are payments to Christoforo da Ogia, mason, for the leveling of the terrain for the construction of the “giardino novo.” Cf. Dorez 1932, t.2, 20-61.

¹⁷ First mention of work after the leveling appears on July 15, 1537, when Meleghino is paid for ropes that were used in the digging of ditches in the new garden.

¹⁸ On September 22, 1537, Ioanni Aloysi, gardener, for making a trip to Naples for the purchase of citrus trees. Cf. Dorez 1932, t.2, 148 (Fol. 75a): et piu a di 22 detto (1537) scudi 10 pagati a don Loysi, giardiniere di Belvedere, per le spese di andare a Napoli per melangoli et altri arbori di agrumi da piantare nel giardino novo di Belvedere.

¹⁹ On November 15, 1537, Giovanni da Castelamare, boatman, is paid for transporting the trees from Naples. Dorez 1932, t.2, 161 (Fol. 81b): et piu scudi 26 baiocchi 50 pagati a Giovanni da Castelamare, barcarolo, per sua mercede di havere condotto 1500 piante de arbori, de agrumi dal Regno per piantarle nel giardino novo di Belvedere.

on the Tiber) to the Belvedere.²⁰ Giovanni Ladro, vineyard keeper, provided fruit trees of diverse species.²¹ Work in the garden included plantings was continued from November 1537 through March 1538. During this period, Meleghino was paid for supervising the overall work in the garden, and Romolo Lucerta, gardener, was paid for making espaliers for the citrus trees.²² Besides the melangoli, pomegranates and laurels were also trained on espaliers.²³

In 1538, a vaulted underground passageway was dug, connecting the new garden of Paul III to that of the existing one of Clement VII. The vault of this underground passageway was painted.²⁴ Besides serving a practical function of connecting the two gardens, this underground passage would also have been a reference to the ancient Roman cryptoporticus. The walking through of the underground passageway would have been intended to resonate with the walking through of the pergolas above ground in the two gardens connected by it. Here we see a delightful alternation of walking above and under ground, through passageways made of timber and covered with vegetation on the one hand, and one that was dug through the earth on the other. The creation of these spaces intended for walking would have been a conscious evocation of the ancient Roman habit of walking and strolling in the garden. Connecting different structures or spaces by means of passages and creating a network between multiple architectural and landscaped spaces appears to be a prominent characteristic of the construction activities of Paul III. He is also known to have constructed a walkway connecting his villa of

²⁰ Dorez 1932, t.2, 162 (Fol. 82a): 16 novembre, 1537, et piu scudi 3 baiocchi 90 pagati al predetto Meleghino per tanti che ha spesi delli soi in far portare da Ripa in Belvedere tutti li agrumi venuti da Napoli.

²¹ Dorez 1932, t.2, 162 (Fol. 82a): (November 16, 1537) et piu scudi 4 pagati al predetto Meleghino per pagarli a Giovanni Ladro, vignarolo, per diece arbori de diversi frutti che ha robbati per piantarli nel giardino novo di Belvedere.

²² Ibid, 162-196.

²³ Ibid, 249 (Fol. 125b): 12 ottobre 1538, et piu scudi 10 pagati a don Antonio, giardiniere, per darli a Luca suo nepote per haverlo adiutato a refare alcune spalliere di melangoli, melegranate et de lauri in Belvedere.

²⁴ Ibid, 185 (Fol. 93b): adi primo Febraro 1538, et piu scudi 10 baiocchi 35 pagati al Meleghino per pagare opere 79 poste a cavare la terra sotto la volta che va dal giardino novo di Belvedere nel vecchio.

Ibid, 246 (Fol. 124a): 5 ottobre 1538, et piu adi 7 scudi 10 pagati a mastro Giacomo, pittore, a bon conto della pittura che'l fa nella volta della via che passa da l'un giardino nell'altro di Belvedere.

Aracoeli on the Campidoglio, also designed by Meleghino, and his residence of the Palazzo of San Marco (subsequently called the Palazzo Venezia).²⁵

The maker of the cruciform pergola at the center of the giardino segreto of Paul III was Hieronymo (Girolamo), referred to as “Il Bologna” in the accounts.²⁶ This Hieronymo (Girolamo) appears to be a different personage from the Ferrarese architect Girolamo da Carpi, also a specialist of treillage structures and described as a skilled carpenter by Vasari: “I do not know of any other architect who is so skilled as Girolamo in the art of carpentry [the structures being covered afterwards with beautiful greenery].”²⁷ This is a rare instance in which the creator of a carpentry pergola is acknowledged as an artist by contemporary society. Girolamo da Carpi was brought to Rome in 1549 by the cardinal of Ferrara, Ippolito d’Este, to work on the pergolas, trellises, and pavilions in the villa Carafa on the Quirinal.²⁸ The cardinal of Ferrara subsequently rented the villa Carafa to the Farnese. The carpenter Hieronymo from Bologna, as indicated by his nomenclature “Il Bologna,” is also documented for work at the villa Carafa on the Quirinal, while this garden was rented by the Farnese. In April 1549, Meleghino was paid for the construction of a pergola in the Quirinal garden, and in October 1549, just before the death of Paul III, Hieronymo “Il Bologna” was paid for the remainder of the amount for the construction of the pergola.²⁹ The regional origins of these artists and craftsmen skilled in the creation of pergolas appear to be rather meaningful: Jacopo Meleghino and Girolamo da Carpi were both from Ferrara, and Hieronymo “Il Bologna” was from Bologna. In these cities in central Italy, there may have been a tradition of the art of treillage.

²⁵ Cf. De Michelis 2010; Coffin 1979.

²⁶ Ibid, 282 (Fol.12a): 13 marzo 1544, et piu scudi 21 pagati al Bologna, falegname in Borgo, per pagare 210 travicelli di castagno per far parte delle spalliere de melangoli de l’orto novo di Belvedere.

Ibid, 296 (Fol. 19a): 3 giugno 1544, et piu scudi 15 pagati al Bologna, falegname, per lo prezzo de 1500 para de cerchi comprati per far pare delle spalliere de melangoli nel orto novo di Belvedere.

Ibid, 304 (Fol. 23a):17 luglio 1544, et piu adi 19 scudi 20 pagati al Bologna falegname a bon conto delle spalliere che’l fa nel giardino novo di Belvedere.

²⁷ Vasari 1966, vol. V, 418, Girolamo da Carpi: “E nel vero non so chi altri si fusse portato meglio di lui in fare di legnami [che poi sono stati coperti di bellissime verzure].”

²⁸ Coffin 1991, 53.

²⁹ Coffin 1991, 180-181.

The pergola of Paul III appears in the view of the Belvedere by Mario Cartaro (1574), where the giardino segreto is shown as a walled garden with a quadripartite plan.³⁰ It also appears in the maps of Rome by Mario Cartaro (1576) (fig. 5.2) and Etienne Dupérac (1577) (fig. 5.3). The cruciform pergola was composed of a domed crossing pavilion and four barrel-vaulted arms, all covered with vegetation. It served as a shady walkway in the compartmented garden. Dupérac's representation emphasizes the trelliswork patterns of the dome of the crossing pavilion and the four arms. Cartaro's representation in the view of the Belvedere shows the thick vegetation that covers the entire structure, and the window-like openings regularly placed along the sides of the four barrel-vaulted arms. The openings pierced on the sides of these pergolas enabled the strollers to gain a view of the garden during their promenade.³¹ Even a simplified and miniaturized representation as that in a map already suggests the complexity and the elaborate design of the pergola. It seems obvious that an imitation of high architecture in stone was at work. The pergolas may have been conceived as arcaded loggias or galleries constructed of wood. The carpenters drew artistic motifs and structural principles from high architecture, and combined them with light, diaphanous, and translucent materials and surfaces.

As for the trees and shrubs planted on or along the pergolas, there appears to have been a variety. First, the most common species trained on pergolas were vine, roses and jasmine.³² Second, in addition to these popular species, there were also evergreens. Estienne and Liebault, writing in 1570, mention box, juniper, rosemary, cypress, cedar, and savin.³³ And third, citrus trees were also trained on pergolas, as mentioned in a number of cinquecento agricultural treatises.³⁴ The collecting of citrus species became a

³⁰ Coffin 1991, 13, fig. 6.

³¹ cf. Campitelli 2009, 67.

³² Durante 1585, 201: jasmine; Matthioli 1548, book II, chap.101: haricot; Colonna 1499: roses. Pliny the Elder writes of vine, gourd and cucumber grown on pergolas. Cf. Pliny the Elder, *Natural History*, XIV.3.11; XIX.24.69.

³³ Estienne and Liebault 1616, 235.

³⁴ Agostino Gallo, *Vinti giorni di agricoltura*, 1580, 124: "li pergolati di limoni." Estienne and Liebault mention vine, gourd, cucumber, but does not refer to citrus trees. Girolamo Fiorenzuola mentions that the ancients used box and laurel, as they were stable and resistant to the cold; but more recommended would be citrus species, which were also resistant to the cold as well as agreeable to the eye and for their fragrance;

fashion among the aristocracy from the late fifteenth century, and specially prized and sought after was the melangolo. If these citrus trees were trained on pergolas, it would have been necessary for the pergola structure to be sturdy enough to support the relatively heavy weight of the trees bearing fruit. Coppice pole pergolas may have been appropriate for lighter plants such as jasmine, roses or even vine, but lemons, oranges, and melangoli would have required more solid carpentry structures. As melangoli, pomegranates and laurels were planted in the giardino segreto of Paul III, one or more of these species may have been grown on the cruciform pergola. Therefore, besides providing a shady walkway, the pergola would also have fulfilled the practical function of serving as supports or espaliers for the citrus trees. More than a medieval orchard with rows of trees, plantings along a carpentry pergola would enhance the visual enjoyment of the citrus trees as well as the kinesthetic experience of walking through.

During the period when the giardino segreto of Paul III was created, the Farnese were renting the villa of Oliviero Carafa, cardinal of Naples, on the Quirinal.³⁵ The villa Carafa was subsequently rented by the cardinal of Ferrara, and eventually passed into papal hands. The presence of a real pergola in this Quirinal garden is documented in a fresco in the Palazzina Gambarà at the Villa Lante at Bagnaia.³⁶ It had a cruciform design with a domed pavilion at the crossing. A pergola was also being planned for the Paolo Ghinucci garden near the villa Carafa on the Quirinal, which we will examine more in detail below.³⁷ By the mid-sixteenth century, it appears that the pergola, especially of a complex cruciform design, had become a fashion in Roman gardens.

also recommended were ivy, pomegranate, myrtle, jasmine, honeysuckle and haricot, which were good for the summer but not resistant to the winter weather. Cf. Fiorenzuola in Tagliolini 1981, 304: Usarono gli Antichi assai il Bossolo et il Lauro per fare spalliere di verzure e siepi per intorno ai giardini, come cosa stabile e durabile. ... Et se fussino così durabili quelle degli Arancj, Limonj, et Cedri et altri pomi così fatti, sono molto più belle assai et più dilettevoli all'occhio, et massime l'anno quando si adornano di fiori et pomi doro di più sorte acerbi et maturi. Ancora si usa l'ellera, il Melagrano, la Mortella grossa et minuta, il gelsomino, lentaggine, lenticchio, madre selva e simil cose, benché tra queste se ne sia taluna che non regga all'invernata, ma per la state tutte sono belle et dilettevoli, ma non così durabili. Arditio notes that the Palazzo Farnese at Capodimonte had pergolas of citrus trees in the garden. Cf. Orbaan 1920, 396.

³⁵ The Farnese were renting the villa Carafa in 1536, and in 1545. Orazio Farnese renewed tenancy for another five years. cf. Coffin 1979, 178-181, 189.

³⁶ On the pergola in the vigna Carafa, cf. Coffin 1991, 180-181.

³⁷ Coffin 1991, 178-181, 190-191. Lanciani mentions the vigna Ghinucci on the Quirinal as the site where the remains of the temple of Quirinus were uncovered. Cf. Lanciani III 1907, 190.

The pergola of cruciform design was most likely of Italian origin. It was probably inspired by a traditional form in high architecture, the church plan of the Latin cross or the Greek cross.³⁸ The Latin cross had been in use in Italy since the fourth century A.D. A contemporary evocative example would have been St. Peter's, for which was adopted a Latin-cross plan, after proposals of a Greek-cross plan. The cruciform design coincided conveniently with the intersecting pathways in a quadripartite garden. A rectangular plot divided into four compartments by intersecting paths was the basic plan for the secular pleasure garden, and this also had an ecclesiastical origin: the cloister garden of the Middle Ages. An earlier example of a project with a cruciform pergola is found in a drawing by Baldassare Peruzzi (ca. 1527) (fig. 5.4).³⁹ Peruzzi's drawing shows a cruciform pergola complex within an irregular quadrangular plot, bordered by public streets on two sides. This pergola was made of latticework vaulting supported on masonry columns. The crossing pavilion accommodated fountains at the diagonals, and the covered walkways extended along the enclosure of the rectangular garden.

A striking characteristic of these Italian pergolas, especially in comparison to the French examples which we will review below, is that the pergola was designed to be a visual focus of the garden. Placed at the center of the garden, it was intended to attract the eye, and was furnished with details appropriate and worthy of an ornamental structure. The pergola in Peruzzi's drawing, in the early decades of the cinquecento, already contained the essential components of the pergola as an ornamental structure in Italian gardens: the cruciform design with central crossing pavilion accommodating fountains. An additional element, the aviary, would be incorporated sometime later.

The pergola in the giardino segreto of Paul III embodies a tension between the architectonic and the organic, and the ambiguity between indoors and outdoors. Based on a continual medieval tradition, it would also have been a conscious evocation of the antique, in that the pergola was conceived as a recreation of the ancient Roman

³⁸ Richard Cleary also suggests the possibility of influence of the centralized schemes of Leonardo, for example, from the fifteenth century.

³⁹ Uffizi, 580A. Cf. Coffin 1991, 127, fig. 108.

cryptoporticus above ground.⁴⁰ Architects such as Scamozzi emphasized the importance of these organic walkways for strolling, referring to the ancient Romans' habit of strolling in the porticoes and cryptoporticoes.⁴¹ While combining the elegant artistic motifs of high architecture, a light, diaphanous, translucent structure made of organic materials would have offered the sensation of being immersed in nature. It was an inversion of the Vatican Loggia, where the tectonic surface of the architectural interior was painted with motifs of nature to create the illusion of being in the outdoors. The pergola in the giardino segreto of Paul III created an indoor space in the midst of the garden by means of organic materials. Both types of semi-interior spaces – the tectonic surface with a painted pergola creating an illusionistic exterior in the indoors and the organic structure creating an interior in the midst of the outdoors – would become a regular feature of villa design in the second half of the sixteenth century.

Approach to the Villa Giulia

When illusionistic pergolas started to reappear in Rome and its environs from 1550, their creation was paired with that of the real pergola. Contemporaneous interest in both real and painted pergolas is a significant characteristic of the second period. The real pergolas were intended to be spaces for kinesthetic movement, especially for walking, and the intellectual activity that was associated with walking. While trelliswork fences and espaliers for plants may have been a craft that was also developed in France, the idea of the pergola as a space for walking through would most likely have originated in Italy. The idea goes back to ancient Roman villa culture and the peripatetic tradition of classical antiquity, in which walking was perceived as an activity inextricably linked with intellectual discourse. The pergola had inherited the classic aristocratic idea of movement, especially of leisurely movement, and it was a most suitable location for accommodating such a movement.⁴² Scamozzi acknowledged the preference of the

⁴⁰ Thanks are due to Mirka Beneš for suggesting this idea.

⁴¹ Scamozzi 1615, 328. I owe the reference to Mirka Beneš.

⁴² I am grateful to Rabun Taylor for calling my attention to the idea. For walking in ancient Roman culture, see O'Sullivan 2011.

ancients for such spaces, and emphasized that walking in loggias and galleries was also good for the health.⁴³

The Villa Giulia (1550-1555), a suburban residence for Pope Julius III Del Monte (pontificate, 1550-1555) located north of Rome outside the Porta del Popolo, is noteworthy for its use of the pergola as a key element in the design. The villa was designed by Giorgio Vasari (1512- 74), Bartolomeo Ammanati (1511-1592), and Vignola (1507-1573). It had two courtyard spaces : one with a semicircular portico decorated with an illusionistic pergola, and the other with a semicircular sunken nymphaeum adorned with sculptures and also with a real pergola. The illusionistic pergola on the ceiling of the semicircular portico will be dealt with at length in chapter 6. Here we will focus on the real pergola which was constructed as a corridor of approach to the villa. As the Pope intended to visit his villa by boat, a long pergola was constructed to link the landing point on the Tiber to the via Flaminia, where a monumental fountain, the Fontana Pubblica, marked the entry to the villa. Ammanati's letter (May 2, 1555) to Marco Benavides describes the pergola as "barrel-vaulted or arched, extending to the river, covered with vegetation, and 80 rods [178 meters] long."⁴⁴ Payment documents in the Papal archives mention a Battista da Frosinone, carpenter, who received monthly payments from September 1551 to May 1552 for work on the pergola.⁴⁵ The form of this pergola may not have been particularly elaborate. It appears to have been a tunnel-like pergola with a barrel-vaulted ceiling, commonly found in contemporary pleasure gardens. Its form is recorded in many cinquecento maps (figs. 5.5 and 5.6).⁴⁶ However, its impressive scale resulting from its extraordinary length, extending all the way from the Tiber River to the villa's entrance on the via Flaminia, is sufficient to distinguish it from a simple utilitarian

⁴³ Scamozzi 1615, 328. I use the reference to Mirka Beneš.

⁴⁴ Pesaro, Biblioteca Oliveriana, ms.374, vol.II, fol.91-96; cited in Falk 1971, 171-173. "Vi è una pergola in volta, o vero archo, che v'ha insino al fiume, coperta di verdura, longa ottanta canne, nel fine vi è il porto fatto comodamente per smontar di barcha, quando papa Giulio veniva a spasso a così bella villa."

1 rod (canna architettonica) = 2.234 meters.

⁴⁵ ASR, Camerale I serie 18: Fabbriche 1517, 58r, 61v, 65r; Fabbriche 1519, 11r, 15r, 19r, 24v.

⁴⁶ The pergola of the Villa Giulia is recorded in the maps of Rome by Ugo Pinard (1555), Fabio Licinio (1557), Giovanni Antonio Dosio (1561) (fig. 5.5), Giovanni Francesco Camocio (1569), and Mario Cartaro (1575) (fig. 5.6), all of which show a barrel-vaulted tunnel pergola linking the Tiber river to the villa's entrance on the via Flaminia. Cf. Frutaz 1962, vol. II.

pergola. The payment documents suggest that Battista worked on its construction for nine months.

The idea of creating a large-scale pergola as an approach to the villa is suggestive of the sensibility towards nature in the sixteenth century. The villa, a residence in a suburban or rural context, was perceived as a retreat from the city, where one would be liberated from the constraints and inconveniences of city life and be able to enjoy the recreation and relaxation amidst nature. The idea of the villa as a retreat was inherited from antiquity.⁴⁷ The pergola of the Villa Giulia was conceived, physically and symbolically, as a transitional path between the city and the countryside. To serve the practical purpose of a shady promenade linking the two worlds, an organic structure made of timber and vegetation was created. The playfulness of a rustic structure as the alternative for an architectonic colonnade or a building-lined avenue was perfectly in accord with the villa experience. If it were just for fulfilling the need for shade, a canopy may have sufficed, not unlike one depicted in the fresco in the Villa Farnese at Caprarola, under which François I is shown receiving Charles V accompanied by Alessandro Farnese (fig. 5.7). Apparently, it was not just the shade, but the shade provided by greenery that was important. Walking in green spaces would also have been considered beneficial for the health, for the eyes and the body, as Scamozzi maintained in his treatise.

Here the space-making quality of the pergola is brought to the fore. The pergola was no longer a garden accessory of secondary importance, but a substitute for the architectural space of a tectonic arcade. Paul III's pergola presupposed a circulation system between the giardino segreto and the preexisting garden of Clement VII. Julius III's pergola was no longer a modest, rustic structure, but something rivaling an urban planning project in both scale and concept. It was a large-scale design element in the overall site planning of the villa, the scope of which included not only the villa compounds proper with its buildings, courtyards, gardens, vineyards, fields and woods, but also elements from the larger landscape including the surrounding fields and

⁴⁷ Pliny the Younger's letters mention the *negotium* (affairs) and *otium* (leisure), linked to the city and the countryside respectively. The villa was the place for *otium par excellence*. Cf. Pliny, *Letters*, V.vi.36.

vineyards and the Tiber River. Only the financial resources of a Pope would have made feasible a project of this scale and complexity of design. Although the maps show, in a simplified manner, a tunnel-like structure articulated by arched elements at regular intervals, the actual structure would have been more complex. As pergolas in gardens were often punctured with window-like openings along the sides for the strollers to gain a view of the outside, the pergola of the Villa Giulia, especially considering its length, may also have been equipped with such windows. But even if lacking in windows, the diaphanous and translucent carpentry structure and the vegetation that covered it would have offered plenty of glimpses of outside views. The “pied beauty” of the light and shadows would have added a delightful visual distraction to the promenade. Nature and the outdoors were meant to be experienced, not in a sedentary manner, but by moving through space, as a sequence of visual, aural, olfactory and haptic sensations gained through the movement. The movement is associated with the ceremonial approach towards a display architecture which in turn was intended to provide a sequence of spatial surprises.

The vista was another important notion behind the creation of the Villa Giulia pergola. Maps representing the pergola show a barrel-vaulted tunnel structure in the midst of a rustic ambience of vineyards and fields. The villa’s vicinity appears to have been an open area with no prominent buildings or structures other than the Fontana Pubblica and the church of Sant’Andrea in via Flaminia. It was still more or less so at the beginning of the twentieth century, judging from a photograph taken around 1910.⁴⁸ From the landing point on the Tiber, the monumental architecture of the villa and its entry, the Fontana Pubblica on the via Flaminia, should have been visible to the visitor, whose gaze would have been inevitably drawn towards these visual foci. The pergola further emphasized the goal which lay at the other end. Given the tunnel-like form of the pergola, the movement was linear, directed towards the destination. Apart from providing a shady path to the villa’s entrance, the pergola was used as an artificial device to direct the visitor efficiently towards the goal. In this respect it represented a purposeful and

⁴⁸ Falk 1971, 110, fig. 5.

ceremonial directionality quite distinct from the less linear, peripatetic paths of ordinary gardens.

The pergola stimulated a set of complex and diverse spatial sensations. The path to the villa represented a transition from the city to the villa, from the urban to the rural, and for this particular purpose, a rustic structure evocative of the villa's surroundings was an ingenious idea. The pergola walkway provided, not only protection from the sun, but also the sensation of nature, in the form of immersion in the villa atmosphere immediately after the boat ride, as a prelude to the authentic villa experience that awaited the visitors at the other end.⁴⁹ This organic pergola also served as a prelude to the painted pergola in the semicircular colonnade of the villa. The experience of walking through a real feature to reach the villa was followed by an experience of walking through its fictive equivalent. The former was a transitional path from the city to the countryside; the latter was an ambiguous space that was both indoors and outdoors at the same time. The semicircular portico was a space for strolling, conversing and enjoying the painted decorations. It encouraged the movement of walking up and down the space, pausing to focus on a painted detail, and then resuming the movement. Here we may see an echo of the classical notion of walking and its association with intellectual activity, namely the peripatetic tradition, and the idea that physical movement stimulates thinking.

We may observe that the pergola was used as a key design element at the Villa Giulia. Strollers were invited to a goal-oriented kinesthetic experience of walking through a structure made of timber and vegetation, with a heightened sensation of being immersed in nature. The large-scale carpentry pergola served as the ceremonial corridor of approach from the landing point on the Tiber to the villa, where one encountered a fictive painted pergola in the semicircular portico. The real and fictive pergolas resonated with a third one above the loggia on the other side of the sunken nymphaeum, with aviaries on either side and a planted garden beyond. Maximizing the sensation of nature, the pergola as a leitmotiv played a key role in enhancing the villa experience at the Villa Giulia.

⁴⁹ Thanks are due to Mirka Beneš for suggesting this notion.

Ghinucci Garden on the Quirinal

The sketchbook of Giovanni Colonna da Tivoli (1554) in the Vatican Library contains design drawings for a pergola for the Ghinucci garden on the Quirinal Hill in Rome.⁵⁰ Giovanni Colonna da Tivoli is unknown otherwise. The Ghinucci were an elite ecclesiastical family who owned an estate on the Quirinal.⁵¹ The Ghinucci garden was located across the street from the villa of Oliviero Carafa, cardinal of Naples, where another real pergola is known to have existed.⁵² The drawings reveal interesting ideas on the relationship between architecture and garden structures. Here, Giovanni Colonna is the designer of the pergola.

Folio 15r, bearing the note “the garden of M. Paulu Gianucci (Paolo Ghinucci),”⁵³ shows the plan of a quadripartite garden with a cruciform pergola (fig. 5.8). The pergola is composed of a crossing pavilion and four arms, with parapets with niches at regular intervals. The crossing pavilion has an octagonal plan about 6 meters (20 piedi) wide, and each of the four arms is about 9 meters long (30 piedi) and 3 meters wide (10½ piedi).⁵⁴ The parapets were to be convenient for leaning on with arms crossed, about 1.2 meters (4¼ piedi) high.⁵⁵ This anticipates that the strollers would pause to appreciate the view of the compartments. In the four compartments stand ornamental treillage structures in the form of obelisks (of which only two are shown).⁵⁶ The niches of the crossing pavilion were to accommodate fountains and aviaries.⁵⁷

⁵⁰ Biblioteca Apostolica Vaticana, Ms. Vat.Lat. 7721, fols. 15r, 15v and 16r. Published in Micheli 1982, 39-41; 64-65. Folios 15r and 15v are published in Coffin 1991, 178-179, figs. 147 and 148; Frommel 2005, 84, figs. 8 and 9.

⁵¹ Cf. Coffin 1991, 127. Andrea Fulvio's *Antiquitates Urbis* (1527) mentions that Girolamo Ghinucci, auditor of the Camera and elected cardinal in 1535, owned a *vigna* on the Quirinal. From Giovanni Colonna da Tivoli's sketchbook with the date of 1554, we know that the garden was in the possession of Paolo Ghinucci, who still owned the property in 1562. By 1565, Tommaso Ghinucci, architect and hydraulic engineer, had acquired it, and gave the land to the cardinal of Ferrara as an expansion of his villa across the street.

⁵² Coffin 1991, 180-181.

⁵³ “GIARDINO.DE.M.PAULU.GIANUCCI.”

⁵⁴ Lengths are converted into metric units, based on the measurement system in use in the Papal States (1 piede=0.298m). cf. Guidi 1839.

⁵⁵ “questi parapetti so(no) da pog(g)iare alle braccia.”

⁵⁶ One of the obelisks is accompanied by the note, “obelisco di cerchj.” “Cerchio (sing.)/cerchi (pl.)” was originally used to mean the wooden hoops placed at regular intervals to hold the carpentry pergola together. By this time it had become the term for *treillage* structures in general. A derivative, “cerchiata,” was also

Folio 15v, bearing the note “of M. Paulu Giannucci (Paolo Ghinucci) on Monte Cavallo,”⁵⁸ shows the crossing pavilion⁵⁹ and the obelisk⁶⁰ in elevation, the details of the diamond latticework of the dome and the niche of the crossing pavilion,⁶¹ the parapet, and an armature formed by multiple beams (fig. 5.9).⁶² The four arms were to be entirely covered with ivy.⁶³ Folio 16r shows further details in section of the construction of the barrel-vaulted arms, the fastening of three chestnut beams by means of pegs at nine points to form the curve of the vault (fig. 5.10). If these structures were built at all, they have not left any material trace, but the drawings are suggestive of the level of technique achieved in the carpentry craft in this period. The minute measurements and details of construction reveal a practical concern. These drawings would have been working drawings for the carpenters, who were to assemble the pergola on-site.

The desire for a sensuous experience of nature and light in the outdoors would have been the primary motivation for the creation of such organic structures. The pergola with its shade-giving quality was an appropriate solution for a promenade in the hot summer climate of Rome. The pergola also offered the sensation of being indoors and outdoors at the same time, its structure pregnant with the tension between the architectonic and the organic, and the ambiguity of the pseudo-architectural. But the rigor of architecture dominated its form. The arch, the dome, the niches, the octagonal plan, and the obelisk ornaments would have been inspired by their counterparts in stone. The form of the dome with a drum, a lantern and a cross, and the sixteen ribs that compose the dome would most likely have been borrowed from real domes, for example, St. Peter’s in Rome. Obelisks were used as ornaments in architectural design from the early sixteenth

used to mean *treillage* structures. Another contemporary term for the carpentry pergola was “cocchio.” Cf. Campitelli 2009, 68.

⁵⁷ From the upper left corner it reads, clockwise: “fonte; fonte; di sopra gabia; vcclera sopra.”

⁵⁸ “de Me(sser) Paulo Giannucci/ a m(on)te Cavallo.”

⁵⁹ “8 angoli sopra li a(n)ditj / et sopra le fonti et vciellere.”

⁶⁰ “ci passa u(n) travjcellotto / p(er) mez(z)o come colon(n)a / armata di pezzi.”

⁶¹ “filagnoli” is used to mean the diamond trelliswork. “n^o 16” beside the dome most likely indicates the sixteen ribs with which it is to be composed.

⁶² “vere est isto armato.”

⁶³ “viale d(e)l giardino et per tutto sta ed(e)ra.”

century.⁶⁴ The dome at the crossing with a lantern topped by a cross clearly evokes church architecture. The pergola may have been intended as a kind of sanctuary of nature, where the celebration of nature and the individual interaction with it would become possible.⁶⁵

The pergola was perceived as a new kind of architecture, which offered a spatial and aesthetic experience that could not be gained in stone architecture. Borrowing forms and structural principles from high architecture, the pergola met the demand for a garden structure in conformity with its natural surroundings. This enabled the construction of a relatively solid structure yet with a softer texture, allowing for a sensuous experience of nature, while satisfying the desire for sophistication.

The Ghinucci pergola was not just a simple structure with the function of providing a shady promenade and a support for luxurious plants in a pleasure garden; it also accommodated fountains and aviaries. As we have seen, a handwritten note on folio 15v indicates that, above the four corners of the central pavilion, there were to be fountains, and above the fountains, netted cages for birds. Not only the fresh air and the scent of the vegetation, but also the view and the sound of water together with the song of birds orchestrated a sensuous experience of nature. The idea of a carpentry structure housing fountains had already existed in Italy, as we saw in Peruzzi's drawing (fig. 5.4).

The idea of a carpentry pavilion housing a fountain may have been transmitted to France around the turn of the sixteenth century by Pacello da Mercogliano, a Neapolitan gardener recruited by Charles VIII. Antonio de Beatis describes an elaborate pavilion of carved wood in the garden at Gaillon (1503-1510).⁶⁶ This pavilion at the central intersection of paths in the compartment garden not only housed a fountain, as Antonio de Beatis mentions, but also accommodated aviaries in the four netted projections at the

⁶⁴ Cf. Curran 2009 and 2007. Later, in the urban planning of Sixtus V (1585-1590), obelisks were used as markers and visual foci, in St. Peter's Square in 1586 and in the Piazza del Popolo in 1589, both by Domenico Fontana.

⁶⁵ I am grateful to Rabun Taylor for suggesting the idea.

⁶⁶ Antonio de Beatis 1979, 113: In the middle of the garden is a very beautiful fountain with marble urns chased with figures and a *putto* on top; water is thrown very high from a number of sources. It is enclosed in a large pavilion of carved wood, very richly decorated in pure azure and gold. It has eight sides, each terminating in a half-dome, and is very spacious and magnificent.

diagonals (fig. 5.11).⁶⁷ The idea of the birds in a carpentry pavilion housing a fountain may have been born in France, where there was a particularly strong tradition of bird culture. However, the idea of birds in a garden pavilion may also have been of antique inspiration. Perhaps we may think of this structure as a carpentry version of Varro's Aviary, which was well known at the time through Pirro Ligorio's reconstruction (fig. 5.12).⁶⁸ This type of pergola with the combination of treillage, vegetation, fountain, and aviary was to become a popular design element of the villas and gardens in Rome and its environs from the mid-sixteenth century onwards.

Villa d'Este at Tivoli

The garden of the Villa d'Este at Tivoli (1550-1572) was created for Cardinal Ippolito II d'Este of Ferrara (1509-1572) by Pirro Ligorio (1514-1583).⁶⁹ In 1550, Ippolito was appointed governor of Tivoli following his first failure to be elected Pope, and withdrew from affairs and sought refuge at Tivoli, to pursue his other passion, artistic patronage and the collection of antiquities. Second only to Cardinal Alessandro Farnese in terms of income, Ippolito was among the wealthiest cardinals of the age.⁷⁰ His lifelong

⁶⁷ Loisel 1912, I, 285: Au Gaillon, l'archevêque de Rouen, Charles VIII de Bourbon, frère naturel de Henri IV, possédait un grand parc "bien muré et fourny d'orangers, de fontaines à grandes cuves de marbre qui coulaient en divers endroits, et d'un delectable jardin avec fruitiers, grands cyprès, et vollières d'oyseaux." Ces dernières flanquaient les quatre côtés d'un elegant pavillon octogone, surmonté d'une calotte sphéroïdale qui s'élevait au milieu du jardin; elles renfermaient, entre autres: des faisans, des paons, des perdrix, des outardes, des pigeons, et des "poules daindes." (Citations drawn by Loisel from A. Deville, *Comptes de dépenses de la construction du Château de Gaillon*, Paris, 1850.)

⁶⁸ I am grateful to Mirka Beneš for calling my attention to this analogy.

⁶⁹ For the basic facts concerning the construction of the villa see Coffin 1979, 311-340; Coffin 1960, 3-13. Ippolito was the second son of Duke Alfonso I d'Este, third Duke of Ferrara, and Lucrezia Borgia, daughter of Pope Alexander VI. As was common for second sons of prestigious noble families, Ippolito was destined to an ecclesiastic career from a tender age. He was nominated Archbishop of Milan at age ten, and upon completion of his humanistic studies, sent to the French court. Spending time at the court of a powerful monarch – in the sixteenth century, either the French king or the Holy Roman Emperor – was a form of education for aristocratic youngsters. They were expected to learn the formalities and customs of court life and acquire the elegant tastes and manners required of a man of rank. On the part of the monarch, it was also a strategy for maintaining political ties and obtaining homage by keeping a member of the family hostage. Ippolito held offices related to the French court and enjoyed various ecclesiastical privileges resulting from his close ties with France. In one conclave, he was a candidate for Pope from the French faction. When he was papal legate in France from 1560 to 1563, he commissioned Sebastiano Serlio to build him a palace at Fontainebleau. He would have become familiar with the garden design in France, not only of the Château of Fontainebleau but also of other important residences such as Gaillon and Blois.

⁷⁰ On Cardinal Ippolito d'Este and the financial aspect of his life, see Hollingsworth 2008 and 2004.

artistic patronage and archaeological excavations were supported by his extraordinary wealth. Tivoli offered a unique opportunity, as the region was dotted with remains of ancient Roman villas. Pirro Ligorio, architect and the Cardinal's archaeologist, began an excavation at Hadrian's Villa. Ippolito purchased land adjoining the governor's residence, which was part of the former Franciscan convent built on the remains of a Roman villa. After a second disappointment in the conclave of 1555, followed by an exile in Lombardy, Ippolito was reinstated as governor of Tivoli in 1559. He further acquired plots of land and destroyed existing buildings including churches to procure land for the garden. His manner of expropriation, the highhanded seizure of antiquities and the destruction of religious sanctuaries, incurred the disaffection of the local residents.⁷¹ The leveling of the terrain, the installation of the water system, and the layout of a grid of perpendicular paths were carried out from 1563 to 1565.⁷² Pirro Ligorio supervised the work being done on the fountains from 1567 to 1568. Ligorio, with other humanists in Ippolito's circle, also established the iconographical program of the villa to celebrate the residence and glorify the Cardinal's lineage and virtue. Curzio Maccarone, the most prominent *fontaniere* of the time, was responsible for work on the fountains. The Fountain of the Dragons was constructed for the great event of Pope Gregory XIII's visit in September 1572. It had four dragonheads spouting water to honor the Boncompagni Pope, whose coat of arms bore dragons.⁷³ The Fountain of the Dragons was also an evocation of the myth of Hercules and his quest for the golden apples in the Garden of the Hesperides guarded by the many-headed dragon, which the hero eventually overcame by means of his virtue. Hercules was included in the iconographical program of the villa and the garden as a paragon of virtue to be imitated, as the mythological ancestor of the Este family, and also in reference to an illustrious member of the family, Ercole d'Este.

In Rome, Ippolito had rented for life the Palazzo di Monte Giordano and the Villa Carafa on the Quirinal. In the latter, he created a garden containing a pergola, which

⁷¹ Coffin 1979, 337.

⁷² Cf. Dernie 1996.

⁷³ Nicolas Audebert 79, 736-740: Cette fontaine fut faicte pour la venue du Pape Gregoire XIII, qui est a present, d'aultan qu'il a le dragon en ses armes, et entra au palais par la porte du jardou don't sera cy apres parle, de sorte que par l'allee du milieu il arriva premierement droict a cest fontaine qu'il estima beaucoup.

anticipated the one in the villa at Tivoli. Vasari mentions that the pergola in the garden of the Quirinal villa was the work of Girolamo da Carpi (1501-1568), an architect skilled also in the art of carpentry.⁷⁴ The presence of the pergola in the Quirinal garden and the Villa d'Este at Tivoli suggests the patron's strong interest in the pergola. The view of the Quirinal garden is depicted in the fresco in the Salone of the Villa d'Este (fig. 5.13) and in the loggia of the Palazzina Gambarà at the Villa Lante at Bagnaia (fig. 5.14). Both frescoes show a cruciform pergola with a pavilion at the crossing. The Quirinal villa passed into papal hands after Ippolito's death, and subsequently the Borghese remodeled the estate. We do not know whether a fictive pergola existed alongside the real one in the garden at the time of the Este. But we do know that the Tivoli villa had a cruciform pergola in the lower part of the garden, another pergola in the giardino segreto, and an illusionistic pergola in the ground-level corridor of the villa building.⁷⁵

Modern-day visitors to the Villa d'Este at Tivoli (fig. 5.15) enter the garden from its upper end. After going through the villa building, they look down on the garden and have a glimpse of the overall layout before descending the stairs from the double loggia to the terrace level, from which starts the garden. However, the sixteenth-century entrance was located at the garden's northwest end, on the lowest level.⁷⁶ Contemporary visitors, including Pope Gregory XIII, entered from the lower end, climbing up the slope with a view of the villa building as their goal. The approach from below offered a more dramatic view of the villa; Piranesi's etching was created from that viewpoint (fig. 5.16). The central axis linking the entrance at the bottom and the loggia of the villa building was designed as the main vista. Starting the tour of the garden from below, the very first structure one encountered was a large cruciform pergola (ca. 1565).⁷⁷

⁷⁴ See n.8 of this chapter. Cf. Coffin 1991, 53; 83; 181.

⁷⁵ The description of the garden of the Villa d'Este at Tivoli, probably written around 1571, mentions a number of pergolas and pavilions of verdure. Cf. Coffin 1960, 142-150. Coffin also notes the purchase of wood for the repair of the pergola in the Secret Garden. Cf. Coffin 1960, 99, n.13: Jan. 17, 1587, 7.68 scudi "per sedici Arcarezzoli condotti a Tiuoli et seruite alla Pergola del Giard.^o secreto" (Archivio di Stato di Modena, Registri del Card. Luigi d'Este, Pacco 183, Registro de mandati, 1587, f. 41r).

⁷⁶ Audebert's description of the villa is from above to below. Cf. Audebert 1981, 69-87.

⁷⁷ Cf. Coffin 1960, 16. Coffin dates the pergola in 1565, from a payment document of March 28, 1565, to the carpenters Mattheo and Giacomo for constructing the two pergolas.

The cruciform pergola at the Villa d'Este at Tivoli was made of wood and covered with ivy, as we know from Audebert's testimony:

Continuing along this alley, one enters a very high pergola with the width of an alley, and covered with ivy. It intersects with another pergola that extends transversally. At the crossing, there is a very high and large carpentry pavilion.⁷⁸

Audebert notes the pergola as being "high and large," and emphasizes the spaciousness of its interior. This would suggest that the cruciform pergola at Tivoli would have been a large pergola, among other pergolas created at the time. It would have been of a scale that offered ample walking space for a man of average stature, in both width and height. A parallel for a carpentry pergola covered with ivy is the one at the Château of Montargis, illustrated in Du Cerceau's etching, which also emphasized the structure's monumentality and loftiness.

The Villa d'Este pergola set the central axis of the garden. A characteristic Italian cruciform carpentry pergola with a domed pavilion at the crossing, it is recorded in the view of the garden (1573) by Etienne Dupérac (fig. 5.15) and in the fresco by Girolamo Muziano (fig. 5.17) in the Salone in the ground floor of the villa building. From these views, we see that the pergola was located in the compartment garden in the lower part of the estate, at the northwest end. It corresponded with the central alley of a total of nine longitudinal alleys, and intersected with thirteen transverse alleys before reaching the terrace in front of the villa building. From Dupérac's print, we see that this axial path was the most direct approach to the villa building from the entrance at the bottom. Two more paths ran parallel on either side of the axial path, also leading up to the villa building. But visitors following those paths were diverted to side paths when they reached the Alley of the Hundred Fountains. Strollers along the axial path would eventually have had to choose to go either to the right or to the left when they reached the diagonal arrangement

⁷⁸ Nicolas Audebert, 85, 1001-1004: Continuant cest allee, on entre dessoubz une fort haulte treille contenant la largeur de l'allee, et est couverte de lierre, croysee d'une aultre pareille treille qui passe au travers, au milieu desquelles ya une tonnelle fort haulte et large.

of ramps. But the visual axis was continued as a series of fountains. Thus from below, the axial vista was composed of the pergola, a bridge over the fishpond, stairs through a planted area, the Fountain of the Dragons, and a series of three small fountains.

In the formation of the axial vista, the pergola played a crucial role: it served to focus the visitors' attention on the visual and physical goal, the villa building. Its role was similar to that of the Villa Giulia pergola, which, as the villa's ceremonial corridor of approach, linked the landing point on the Tiber to the via Flaminia, focusing on the villa building as its visual goal. In a similar way, the Villa d'Este pergola also established a goal-oriented path. A towering view of the villa building would have impressed the visitors entering the garden at the lower end. Piranesi's etching made in the eighteenth century give us some idea of this impression. The villa building's elevated location would no doubt have enhanced its atmosphere of stateliness and prestige with which the patron wished to awe the visitors. The role of the pergola was to draw the visitor's attention to this imposing view. It established the direction the visitors were to follow in order to reach the object of their gaze. The alternation of vegetation and water made the axial path far from monotonous. The pleasant shade offered by the green tunnel of the pergola would in turn be enhanced by the coolness offered by the water of the fishponds. The trees would have provided the shade for the stairs. Water in perpetual motion together with the sound of its shooting high up in the air offered an agreeable sensation at the Fountain of the Dragon. The diagonal ramps shaded by plantings have a surprise in store for the visitors as they would find themselves in sudden proximity of the building upon reaching the terrace level. From the balcony on the terrace as well as from the loggia on the facade, the axial view extends over the garden and beyond (fig. 5.18). One would then have been able to trace the path they had just followed within the garden and further enjoy a vast prospect of the surrounding countryside.

The fresco by Girolamo Muziano depicting the garden of the Villa d'Este is interesting for its motif of the two trees. The view cannot be considered a realistic representation, as it shows the sloping of the terrain to be far steeper than it actually is. The only conspicuous feature is a tall tree growing in the middle of the garden and

another on the right edge of the view. The crossing pavilion of the pergola, represented between these two trees, appears to be depicted in exaggerated manner; it is the only artificial structure that towers above the otherwise relatively flat plantings. Clearly its presence was emphasized and intended to attract attention. The motif of the two trees is also present in other sections of the fresco decorating the walls of the Salone. On the long wall, sections framed by painted spiral columns, like the view of the Villa d'Este on the short wall, feature landscapes and views of gardens, and on the other short wall, a rusticated fountain representing a view of the Temple of the Sibyl of Tivoli was created. The framing of painted landscapes by columns as though they were viewed through a window may have been an idea inspired by the antique.⁷⁹ One of the sections on the long wall shows a view of the Quirinal garden, as we have mentioned above. Like the view of the Villa d'Este garden, it shows the crossing pavilion of the pergola between two trees. The two trees are a recurring motif in every section of the long wall (fig. 5.19), and even in the mosaic view of Tivoli in the fountain on the short wall, in which two trees, probably pine trees, are depicted beside the tholos temple (fig. 5.20). The role of the motif was to introduce a sense of perspective and also to emphasize a particular structure.

The cruciform pergola in the Villa d'Este garden was more than just an ornamental structure. Its complex structure and sophisticated design made it an alternative architecture. Dupérac's etching shows the pergola constructed along the intersecting pathways that divide the square compartment garden. Its four arms were barrel-vaulted tunnels, constructed of carpentry. It had arched openings at regular intervals on the sides. The crossing pavilion was a two-storied octagonal structure with a domed roof. Each of the four compartments was further divided into four parts by intersecting paths, at the center of which stood a single-storied octagonal pavilion with arched doorways and a domed roof. At the end of the paths on the edge of the compartment garden stood pedimented portals also made of carpentry and covered with vegetation. The pergola and its subsidiary structures borrow forms from stone architecture – the arch, the dome, the pediment, the barrel-vault, and the octagonal plan.

⁷⁹ The Odyssey Landscapes from the Esquiline, although not yet known in the Renaissance, are a typical example of this type of landscape representation.

Structural principles were also borrowed from stone architecture. These structures create a space for human activity, in this case walking through. From parallels such as the pergola in Giovanni Colonna's drawings or Peruzzi's drawing, it is highly likely that this pergola also included water features. The octagonal pavilion at the crossing and the four octagonal pavilions standing independently in the compartments would most likely have accommodated small fountains. The crossing pavilion may even have accommodated small aviaries or netted cages of birds. Ippolito would no doubt have been familiar with French garden pavilions made of carpentry, which often included both features. Given the patron's strong connection to the French court, it is highly likely that certain features he saw in the French gardens served as inspirations for the design of his own gardens at the Quirinal and at Tivoli.⁸⁰ At least for the tennis court which was created at the Villa d'Este, Audebert's description clearly shows that it was a French influence, and that the one at Tivoli and another in Ferrara also in the Este sphere, were the only examples in Italy at that time.⁸¹ Ippolito would have been interested in making a French statement, as a cultural stance to counterbalance his unsuccessful political career. The cruciform pergola at the Villa d'Este may have been an elaboration of the typical Italian cruciform pergola in the inclusion of fountains and especially aviaries, which would have been intended, on the part of the patron, as an explicitly French statement.⁸²

Pergolas in French gardens

Pergolas in French gardens serve as interesting parallels to the Italian examples, and are useful in defining the salient characteristics of the latter. In contrast to the Italian cruciform pergola, which was constructed along the intersecting paths in the compartment garden, pergola walkways in France were usually constructed along the

⁸⁰ Pergolas in the gardens of Blois have been recorded by Antonio de Beatis, chaplain and scribe of cardinal Luigi of Aragon, who traveled with the cardinal to France in 1517. Antonio also describes the garden at Gaillon with an aviary and an impressive fountain pavilion at the center of the main garden. Cf. Antonio de Beatis 1979, 111-114; 134.

⁸¹ Nicolas Audebert mentions a "jeu de paume" at Tivoli at one end of the villa building, which he describes as one of the two he has seen in Italy, the other at Ferrara. Nicolas Audebert 86, 1053-1056: Au bout du palais, du coste qui regarde les champs, il y a un fort beau *Jeux de Paulme* qui est chose remarquable en Italie parce que ce jeu n'y est en usage, et n'y en ay veu aultre que cestuy cy et un aultre qui est a Ferrare.

⁸² Thanks are due to Mirka Beneš for suggesting the idea.

walls of an enclosed garden, in the manner of a peristyle in ancient Roman gardens. At Bury, flat-roofed pergolas formed walkways along three sides of the parterre garden (fig. 5.21). At Beauregard, timber structures fulfill the same function (fig. 5.22). A pair of timber galleries is constructed along opposite sides of a quadripartite parterre garden. The timber galleries at Bury are not linked to any building; but as the château stood just across a path from them, one could easily have reached the garden on foot. The wooden posts imitating pillars support the flat roof of trelliswork. The galleries are closed by trelliswork on the sides, and the corner pavilions at each end of the galleries are covered with hipped roofs made of trelliswork. Although plants are not depicted, the trelliswork of these galleries may have been covered with them.

At Blois, pergolas connected the château building to the main garden and the gallery building overlooking a smaller garden.⁸³ The pergola was intended as a covered promenade allowing for the enjoyment of the garden (fig. 3.42), but also served the same function as the covered walkways linking separate buildings in medieval monasteries. The design appears to have been based on retaining the existing medieval structures, rather than introducing a new axial layout. The parterre gardens have a geometric layout, with the central intersection of paths often marked by a fountain. However, there appears to be little concern for a planned itinerary, based on the notion of an effective display of the gardens. To reach the gallery building, probably a place for enjoying the view of the garden and perhaps also for casual banquets, one would have had to do the entire itinerary of the walkways, as there appears to be no shortcut.

Montargis had a pair of pergola galleries, which flanked the grand approach from the château to the garden (fig. 5.23). Montargis has a radiating layout, with the fortified residential core at the center, surrounded by two concentric half-rings of planted areas divided by radial and circumferential paths: formal parterre gardens adjacent to the château and plantings of trees in the outer periphery. The pergola gallery, located in the inner half-ring of formal gardens, was conceived to be both a walkway and a viewing

⁸³ Antonio de Beatis describes the pergolas at Blois in his travel diary. Antonio de Beatis 1979, 134: The great garden is completely surrounded by galleries, which are wide and long enough to ride horses down at full gallop. They have fine pergolas resting on wooden trellises, but according to the Cardinal [Luigi of Aragon] these would be somewhat low for the full manege and high jumping on powerful chargers.

pavilion. Here the notion of the viewshed and that of the mediating structure are brought into play.

A characteristic development of the pergola in France, not seen in Italy, was the arrangement of multiple long barrel-vaulted tunnel pergolas side by side.⁸⁴ This is observed from the early sixteenth century, for example, in the main parterre garden at Gaillon, where we see two pergolas lining a path leading to the entrance of the garden (fig. 3.43). In the Hermitage at Gaillon (1503-1510), three *treillage* pergolas were arranged side by side on one side of the garden, while on the opposite side, three resting places made of *treillage* covered with a quarter-spherical roof at the center and barrel-vaulted roofs on the sides were constructed (fig. 5.24). The three pergolas and the three resting places are all shown to be entirely covered with vegetation.

In the seventeenth century, this arrangement of the pergola was developed to an extravagant extent. Henri Mauperché's view (1654) of the château of Liancourt (fig. 5.25) shows three sets of pergola galleries, having respectively seven, thirteen, and seven galleries side by side. These pergolas were entirely covered with dense foliage with no windows along the sides. The Gardens at Liancourt were constructed from the 1580s.⁸⁵ This arrangement of the pergolas at Liancourt most likely corresponds to the trend of fantastic pergola designs experimented in the graphic arts starting from Vredeman de Vries's garden prints. Developed to this extent, these sets of multiple pergolas would have offered a spatial experience akin to that of walking through a maze. Instead of proceeding towards a well-defined goal visible in the distance, the strollers would have passed through vegetal tunnels arranged in parallel that may or may not have appeared distinct from one another. They would have been a good and also a challenging place for hide-and-seek. The design concept at work is not that of the classical framing of the view or the presenting of a focal vista. Rather than a rational movement towards a clearly visible goal, these pergolas generated a confusing spatial sensation and a mystifying labyrinthine experience. Perhaps the *ragnaia* – bird-catching thickets that had the appearance of long, low tunnels of vegetation – popular in Italian villas of the early

⁸⁴ cf. Crisp 76-77.

⁸⁵ Woodbridge 1986, 139.

Renaissance onwards, may have been related to this type of structure.⁸⁶ At Liancourt, we also see a pair of pergola galleries that formed a convex line, delineating the opposite sides of a piazza with a fountain. These galleries were pierced on the sides by large arched windows, which offered views of the surroundings.

At Liancourt, the pergola appears to have been a playful element, with no apparent practical function, unless it were a structure for bird-catching. This type of structure would have been feasible only in locations where there were extensive stretches of flat terrain. The vista, a much-exploited garden design concept in Italy, was developed in different ways in France, in conformity with the nature of the topography. Scale and repetition, already observed here, would be further developed in the French formal gardens of the seventeenth century.

As we have examined above, the real pergolas from the second period, in its use, function, and design, can be summarized as the following: first, the systematic use of both real and fictive pergolas within the same estate, and a conscious pairing of both types of pergola as aesthetic and semantic counterpoints; second, the reference to high architecture, in the borrowing of forms and structural principles from it; and third, a conscious reference to the antique, both in terms of the form evoking an ancient Roman porticus or cryptoporticus, and the ancient Roman habit of walking and strolling for health and for intellectual stimulation in such semi-interior spaces.

Pergolas in cinquecento Rome were not just a carpentry structure covered by vegetation. Their ornamental potential as a focal point of the garden attracted attention and was brought to the fore, and they developed into a highly elaborate and complex structure. In addition to their primary and original function, namely support for plants and providing shade, they also started to combine other functions such as housing fountains and aviaries. We know that the idea of the pergola housing a fountain already existed in Italy in the first decades of the cinquecento, from Peruzzi's design sketch for a garden.

⁸⁶ Thanks are due to Mirka Beneš for the idea.

But the idea of a garden pavilion housing a fountain and an aviary may have been a merging of French practices and the evocation of the ancient Roman aviary. The aviary became a popular garden component in Roman gardens from the 1550s onwards. By the turn of the seventeenth century, like the pergola, it had developed into an elegant structure borrowing artistic motifs and structural principles from high architecture, and capable of serving as the visual focus of the garden, as we see in the twin aviary pavilions of the Horti Farnesiani on the Palatine.

The pergolas emphasize further the sensibility towards nature that had been observed in the first period: an eagerness for the opening-up of the architecture towards the exterior and the bringing-in of nature into the interior. They appear to have been a manifestation of a desire to create spaces with varying degrees of the interpenetration of indoors and outdoors. In both cases – the tectonic space decorated with a painted pergola creating an illusionistic outdoors in the interior and the organic structure creating an illusionistic indoors in the exterior – the space-making quality of the pergola was brought to the fore. Both spaces can be characterized by ambiguous boundaries and liminality between indoors and outdoors, offering a sensuous experience of nature, either in the form of real vegetation and birds in the ephemeral space of the garden, or painted plants and birds on the tectonic surface in a more permanent architectural space. In both types of semi-interior spaces – the one formed by the real pergola and the one decorated by the illusionistic pergola – there appears to be a preference for kinesthetic movement, namely the walking through or within a semi-interior space imbued with nature. The connotation of movement linked these spaces to the peripatetic tradition of antiquity. Not only for their form and design, but also in their concept were these pergolas inextricably connected to the classical tradition.

In Italy, we may observe a lively interaction between the design of architecture and garden structures,⁸⁷ and a cross-reference between the two. The Villa Giulia (1550-

⁸⁷ A fascinating example suggestive of an interactive exchange of ideas between stone architecture and green architecture is a section in Raffaello Borghini's *Il Riposo* (1584). Book II contains a detailed description of a *ragnaia* (artificial bird thicket, a planted space for catching birds), which, in the author's use of architectural terms to describe its elaborate form and design, can be clearly seen as a reference to stone architecture. Cf. Borghini 1584, 128-134.

1555) had a large-scale carpentry pergola that served as the ceremonial corridor of approach from the landing point on the Tiber to the villa, where one encountered a fictive painted pergola in the semicircular portico. The Villa d'Este at Tivoli (1550-1572) had an elaborate cruciform pergola in the garden, which formed a pendant with the mosaic and stucco pergola in the ground-level corridor in the building. The Villa Farnese at Caprarola (1557-1581) had a great deal of green architecture in the garden, intended as aesthetic and semantic counterpoints to interior or semi-interior spaces decorated with illusionistic pergolas and bowers. In the latter half of the sixteenth century in Italy, such cross-references were familiar among architects and designers. While the French pergola sought to create a grand spatial effect and to engage the landscape into the garden experience, the Italian pergola emphasized the connection between house and garden and the playfulness of cultural cross-references.

Central and northern Italy: precedents for Rome

During the relative decline of artistic activity in Rome between 1520 and 1550, we see the appearance of a number of illusionistic pergolas in northern Italy. These can be classified into two categories: first, those executed by or under the influence of artists who were previously active in Rome and consequently would have had first-hand knowledge of the Roman examples, such as Andrea Mantegna, Giovanni da Udine, Baldassare Peruzzi and Giorgio di Giovanni; second, those that developed independently of the Roman tradition and which were executed by artists who did not have the experience of working in Rome, such as Correggio, Parmigianino, and Dosso Dossi.

The former strand naturally reflects the designs of the Roman prototypes. The Cappella Mantegna (1530) at Sant'Andrea in Mantua has the vault painted as a pergola. In the Sala degli fogliami (1537) at the Palazzo Grimani at Santa Maria Formosa in Venice, the ceiling is painted with the foliage of various species of trees forming an illusionistic bower (fig. 6.1). Giovanni da Udine is considered to have been involved in its execution. The trees grow out of the spaces in between the lunettes, and the depiction of the exuberant foliage is freestyle and naturalistic. Birds are painted among the foliage and in the lunettes. At the Castello di Belcaro (1535) in Siena, the loggia was decorated by Baldassare Peruzzi and Giorgio di Giovanni (fig. 6.2). On the vault is painted an illusionistic pergola formed by a simple diamond trellis with fruit, while fruit swags delineate the lunettes. It shows a similarity with the Farnesina loggia, where the trellis was absent and the pergola was composed entirely of fruit swags. The simple diamond trellis covered with fruit is carried on to the decoration of the loggia of the Palazzo Chigi

Saracini (fig. 6.3).¹ Giorgio di Giovanni painted a vine trellis following the lines formed by the ribs of the vault.

Other illusionistic pergolas in central and northern Italy also exhibit characteristics defined as the following: 1) the treillage pattern follows the form of the architectural elements, namely the ribs of the vault, rather than being a representation of real trellises – for example the Camera di San Paolo in Parma by Correggio, 1518-1519) (fig. 6.4); 2) the painted oculus at the center of the vault shows a blue sky like the Camera Picta (1465-74) (fig. 6.5) by Mantegna in the Castello di San Giorgio of the Palazzo Ducale in Mantua, for example, Parmigianino's Room of Diana and Actaeon in the Rocca Sanvitale (1523-24) at Fontanellato (fig. 6.6); 3) in the case of the Camera delle cariatidi at the Villa Imperiale at Pesaro by Dosso Dossi (1529-1538), the illusionistic pergola is supported by anthropomorphic trees or caryatids that are transformed into foliage, which in turn frame the panel picture at the center of the ceiling (fig. 6.7). The trellis pattern in the examples from the Parma cultural sphere is that of the diamond trellis; the vegetation is predominantly green and no birds or animals are depicted. Emphasis is on the figures that people the scene rather than the illusionistic pergola which serves as the setting. The anthropomorphic trees in the Camera delle Cariatidi at Villa Imperiale appear to be ivy and jasmine. The caryatids which become part of the pergola framework are strikingly similar to those in the vault decoration of the cupola of Santa Costanza at Rome, recorded in the drawings of Pietro Santi Bartoli.

An important strand of the illusionistic pergola was developed in Florence under the patronage of the Medici. The decoration by Bachiacca of the scrittoio of Cosimo I in the Palazzo Vecchio (1550) in Florence is considered an early example of the depiction of plants and animals in the Medici sphere.² However, other examples abound dating from the same period. The ceiling of the stairs leading from the Sala di Leone X to the Quartiere degli Elementi on the piano nobile is decorated with three small illusionistic pergolas.³ All three are attributed to Marco da Faenza and were painted in the 1550s. The

¹ Bibliotheca Hertziana Fototeca has photos of the loggia vault.

² I owe this information to Robert G. La France. Cf. Allegri 1980, 49.

³ Cf. Allegri 1980, 179-180.

first, a barrel-vaulted section at the foot of the stairs, shows a grid indicating the trelliswork of a pergola, with an oculus at the center (fig. 6.8). A sky with crimson clouds is glimpsed beyond the oculus, where two putti are playing. The plants are delicately rendered – we can see that there are vine, ivy, jasmine and roses. Small birds and animals – a parrot, finches, a rabbit, and a mouse – are depicted, while butterflies flutter among them. From the form of the trellis, the presence of the putti, and the distribution pattern of the animals, the style is comparable to that of the painted pergola at the Villa Giulia, which we will discuss below. The white bands with marsh reeds that flank the section are also similar to those at the Villa Giulia. The depiction of marsh reeds was probably derived from the knowledge of ancient Roman relief sculpture as well as the direct observation of this common plant which grows in marshy areas in Italy. The second pergola is the decoration of a groin vault, in a more stylized form (fig. 6.9), composed of festoons, evocative of those in the Loggia of Cupid and Psyche at La Farnesina. Four concentric circles of greenery are divided into sixteen sections by radial festoons. In the compartments formed by the intersecting festoons are depicted grotesque masks and imaginary winged creatures, along with small birds. The third pergola decorates an irregularly shaped vault adjacent to the groin vault (fig. 6.10). This simple pergola was painted with only one species of plant, the jasmine, and a few fluttering birds. The commonality among these Medici pergolas is their encyclopedic character: the depiction of plants and birds is not just an evocation of nature or an expression of rusticity, but above all a rearranged nature that emphasizes an artificial, scientific clarity and an almost academic interest in the taxonomies of the animal and plant kingdoms. The wheel of garlands, although differing somewhat in content, is an academic exercise as well, singling out the kinds of classical and classicizing motifs that only a connoisseur would fully appreciate.

An important example of a Florentine illusionistic pergola was created in the Grotto of Buontalenti (1574) in the Boboli Gardens. The Grotto was designed, as we see from its name, by Bernardo Buontalenti for Francesco de' Medici. The frescoes of the interior were executed by Bernardino Poccetti. The grotto is a three-chambered structure,

each of which has a different illusionistic pergola. The first chamber is painted as a rustic grotto peopled with animals and creatures associated with a bucolic setting (fig. 6.11). The vault has an oculus at the center, and painted rock and vegetation form the pergola frame. Zoological species including a gazelle, a lynx, leopards, and goats (Cosimo I's sign of the zodiac) are depicted in a precise, scientific manner, along with Pan with a reed pipe and satyrs. This painted menagerie, so to speak, forms a pendant to the sculpted menagerie in the Grotto of the Villa Medici at Castello. The second and third chambers were designed to accommodate sculptures. The second chamber contains the sculpture of *Paris and Helen* (1560) by Vincenzo de' Rossi, with a rose trellis with birds painted on the walls of the exedra behind them (fig. 6.12). The third chamber contains the statue of *Venus Anadyomene* (Venus emerging from the waves) (1570) by Giambologna. On the dome is depicted a vine pergola of diamond latticework showing the pale blue sky through the oculus. A "window" in the latticework echoes the real window across from it. On the walls are also depicted plants whose stems form an undulating curved pattern (fig. 6.13). The pergola in the third chamber is the closest in style to the Roman illusionistic pergola.

The Medici pergolas show a marked interest in the decoration as a visual encyclopedia of zoology, ornithology, and botany, reflecting the collecting interests of the patrons. The Medici, as other aristocratic patrons, considered artistic commissions as occasions to make a cultural statement. Paintings and gardens created for the Medici became the display of their collections. *The Tribute to Caesar* by Andrea del Sarto (fig. 6.14) in the Salone of the Villa Medici at Poggio a Caiano or *The Gathering of Manna* by Bachiacca (fig. 6.15) depicts in scientific manner a variety domestic and exotic of animals,⁴ many of which were from the animal collection of the Medici. The Grotto of Animals at the Villa Medici at Castello is an example of a display of zoological specimens in the form of sculpture (fig. 6.16). The representation of animals in various

⁴ Cf. La France 2010.

artistic forms was not just the illustration of natural history, but the represented forms were also embedded with cultural meanings.⁵

The Medici pergolas show the development of the illusionistic pergola in Florence, which formed an independent strand from the tradition in Rome. Some of them show stylistic similarities with the Roman pergolas. A unique example is a vault decoration, *Women on a Terrace* (1589) by Alessandro Allori (fig. 6.17), in the Loggetta of the Palazzo Pitti, which exhibit the independent Medici tradition, while anticipating the type of the open ceiling with balustrades seen in the environs of Rome in the third period. The decoration is composed as a quadratura, with stone balustrades enclosing the ceiling. At the center of the ceiling, against a blue sky is depicted a clothes line roughly in the form of a square, supported by plants displayed in vases at the four corners. Numerous birds populate the enclosed square delineated by the clothes line, and at the center putti hold the Medici coat arms bearing the five oranges. From the clothes line is hung refined white linen of various kinds, mostly likely washed by the women who stand around the balustrade. The women are engaged in various other activities besides doing the laundry; one wringing her hair, probably in allusion to the Venus Anadyomene, a recurrent figure in Medici iconography; another is washing a dog. Laundry baskets and various animals including a dog, a cat, a monkey and a parrot are depicted on the balustrade.

The most significant difference between the Roman illusionistic pergolas and those created in other regions is the nature of the space they decorated. A common characteristic among all examples in northern Italy from this period is that they are decorations of fully enclosed interiors. A number of illusionistic pergolas in Florence had some connection to the outdoors, such as their location in a garden pavilion or grotto, but the Roman examples exhibit a liminal character in a more pronounced and consistent way. In Rome and its environs, the illusionistic pergola was used as the decoration of semi-interiors – loggias and porticoes – architectural spaces primarily characterized by the interpenetration of indoors and outdoors. In Rome, the liminal nature of the

⁵ Cf. Lazzaro 1995; Lazzaro 1990, 179.

architectural spaces decorated with illusionistic pergolas was acknowledged from the start, while in northern Italy, semi-interiors such as loggias or porticoes decorated with illusionistic pergolas start appearing only after 1550, for example, the Loggia degli Aranci at the Palazzina Marfisa (1559) in Ferrara (fig. 6.18).

The illusionistic pergola: second period

After the first period of the creation of illusionistic pergolas (1517-1520) in Rome, there is not much activity relevant to the painted pergola until 1550. At the Villa Baldassare Turini (Lante) al Gianicolo, Giulio Romano executed the classicizing stucco decoration of the Loggia (1525). But this was not the trellis inhabited by birds and small animals that Giovanni da Udine painted in the First Loggia of Leo X, the hallmark of the illusionistic pergola of the first period, but coffers with vegetal motifs that appear to represent the trelliswork of a pergola in highly abstracted form. The sack of Rome in 1527 sapped the artistic creativity of the papal capital, and many artists left Rome to seek employment in other cities.

After its creation in Rome in the 1510s, the illusionistic pergola subsequently spread to Lazio, where prominent families established in the papal capital acquired landholdings. A second period of the concentrated creation of fictive pergolas as decoration of semi-interiors can be observed between the year 1550, when works began at the Villa Giulia and at the Villa d'Este at Tivoli, and 1580, when the illusionistic pergola at the Villa Farnese at Caprarola was presumably painted. During the second period (1550-1580), the basic form of the decoration established by Giovanni da Udine in the first period was further developed and adopted in a number of key sites in Rome and its environs. These were villas owned by the papal and aristocratic families, mainly located within an area of about eighty kilometers to the north and east of Rome, in the hill towns dotted around the edge of the plain called the Roman Campagna.

The second period not only saw the appearance of illusionistic pergolas across a broader geographic region, but also the emergence of a number of artists specializing and skilled in the depiction of nature, who were capable of executing these decorations.

While Giovanni da Udine, involved in all projects relevant to the painted pergola, monopolized such commissions in the city of Rome during the first period, each of the major examples of the second period was executed by a different artist. Pietro Venale da Imola painted the illusionistic pergola in the semicircular portico at the Villa Giulia. Matthijs Bril painted the pergolas on the vaults in the First Loggia of Gregory XIII, in a similar style to those by Giovanni da Udine but with original variations. And Antonio Tempesta most likely painted the illusionistic pergola in the circular courtyard at the Palazzo Farnese at Caprarola. During the second period, one may also observe a separate strand of painted pergolas centered around Florence, which developed independently of the Roman tradition. The Florentine and Roman traditions came together when Ferdinando de' Medici commissioned Jacopo Zucchi to paint a fictive pergola in his Studiolo in the garden of the Villa Medici in Rome. Jacopo Zucchi was an artist in the workshop of Vasari. Cristofano Gherardi, also from the workshop of Vasari, painted the unique decoration of the loggia in the Palazzo Vitelli a Porta Sant'Egidio at Città di Castello (figs. 6.19-21).⁶ The painted pergola at the Palazzo Vitelli a Porta Sant'Egidio at Città di Castello can be considered within the Roman tradition, as Cristoforo Gherardi was most likely inspired by the decoration of the Loggia of Cupid and Psyche at La Farnesina. This hitherto little-mentioned example shows a vine pergola made of laths, densely covered with fruits and vegetables of all kinds, as well as a variety of birds and animals. Mythological figures such as Neptune and putti people the scene. The Roman tradition exhibited a more established pattern in terms of artistic networks with concentrated creations recurring at different periods. The Florentine strand, while exhibiting highly sophisticated details in some cases, remained largely confined within the circle of Medici commissions and does not appear to have developed into a phenomenon of comparable scale.⁷

⁶ Dacos 1989, 67-68. Dalla Ragione 2009.

⁷ A number of examples created around Florence may also be considered part of the Roman tradition. Baldassare Peruzzi executed the decoration of the loggia at the Villa Belcaro near Siena. The style was derived from that of the Farnesina loggia, with fruit swags as key elements in the composition of the trelliswork design. Cristoforo Gherardi is assumed to have seen the Farnesina loggia in Rome in 1543, before executing the decoration at the Palazzo Vitello a Porta Sant'Egidio probably around 1550. Thus this example can also be considered as part of the Roman tradition.

The Vatican was at the center of the Roman tradition. It exerted an enormous influence on artistic activity and set the model, in a sense, as it was the most important large-scale *cantiere* of the time. For an artist, it was both prestigious and a practical advantage to be part of the papal cohort of artists; it would have meant financial security, opportunities for artistic networks, and access to artistic works and collections. Rome may be considered the most important hub of artistic activity at a time when Italy was partitioned into a number of independent states. It can be said that there were as many artistic centers as there were independent states – Florence of the Medici, Milan of the Sforza, Ferrara and Modena of the Este, Mantua of the Gonzaga, Parma of the Farnese, as well as Bologna, Venice, and Naples. But travel between cities remained a challenge, and long-distance networking was obviously less efficient than staying put. Rome, especially the papal *cantiere*, was the most likely place for artists to become acquainted with their peers and their works. With the advent of Paul III Farnese to the papacy, Rome regained momentum as an artistic capital. Artistic activity again flourished, especially under Julius III Del Monte, Pius IV de' Medici, and Gregory XIII Boncompagni, who were enthusiastic patrons of art and architecture.

The second period of the proliferation of illusionistic pergolas is further characterized by the contemporaneous interest in real pergolas as an ornamental structure in the pleasure garden. Real pergolas had a long tradition that went back to Roman antiquity, and were a common utilitarian structure in the gardens throughout the Middle Ages. However, during the period in question, real pergolas were no longer considered as isolated structures in the garden, but were designed to be part of a larger circulation system, so to speak, that comprised not only the estate as a whole with its architecture and garden, but also extended to the larger surrounding landscape. In a similar way, the painted pergolas of this period were no longer considered as isolated and self-existent decorations of a semi-interior space, but were often intended to form pendants with their real counterparts outside. Both types of pergolas, the fictive and the real, were frequently combined within the same estate, to serve as semantic and aesthetic counterpoints between them. The systematic arrangement of fictive and real pergolas within the estate

of the villa, often including the approach to the villa, was the striking characteristic of the second period. The pergola as a leitmotiv with its connotation of rusticity and nature set the rhythm for a pleasant kinesthetic experience of the villa.

First Loggia of Gregory XIII

Two major examples of the illusionistic pergola in Rome are known from this period. One is the First Loggia of Gregory XIII at the Vatican, and the other is the garden pavilion referred to as the Studiolo of Ferdinando at the Villa Medici. Both can be seen as a continuation of earlier precedents.

The First Loggia of Gregory XIII (1575), painted by Matthijs Bril, was modeled on the First Loggia of Leo X, in its adoption of the illusionistic pergola as decoration and in the alternation pattern of the vaults (figs 6.22). While the First Loggia of Leo X can be characterized by the originality of its decoration, the First Loggia of Gregory XIII demonstrates that the illusionistic pergola continued to appeal more than ever to the cultured class of Rome in the 1570s. In the eleven-bay Loggia of Gregory XIII, vaults III, IV, VI, VIII and IX were painted as pergolas (figs. 6.23-25), while vaults II, V, VII and X were painted with coffers. Unlike its prototype whose central vault was rendered as a coffer vault bearing the name of the reigning pope, Leo X, the central vault of the First Loggia of Gregory XIII depicted an architectonic pergola in the manner of a quadratura. Masonry balustrades with intertwining plants are depicted, showing the merging of architectonic and organic design elements. Vaults I and XIII at the extremities of the Loggia also carried a pergola of the quadratura type. Quadratura-type pergolas are not seen in the First Loggia of Leo X, and consequently is a newly introduced element. These quadratura-type pergolas on vaults I, VI, and XI may be attributed to Ottaviano Mascherino, while Matthijs Bril would have been responsible for the organic elements. Vaults III and IX, and VI and VIII were symmetrically designed, each pair carrying the same type of trellis. The painted vegetation emphasizes exuberance and abundance, as in the First Loggia of Leo X.

Apart from the use of the quadratura-type pergola, a number of other aspects of the Loggia of Gregory of XII show a departure from its precedent: first, the species of the animals; second, the species of the plants; and third, the trellis forms. While Giovanni da Udine depicted small birds and animals familiar from everyday life, Matthijs Bril introduced exotic species that made an impression by their very presence. An impressive turkey in Vault III is one of the most eye-catching of all the birds (fig. 6.23). Another is the flamingo. The plant species include jasmine, red and white roses, and vine – typical plants grown on a pergola. These plants have already been depicted in a number of painted pergolas that came before, the First Loggia of Leo X and the semicircular portico of the Villa Giulia. The bell-shaped campanula is present, but the melangolo or bitter orange, depicted in abundance in the First Loggia of Leo X, does not appear here. The trellis forms appear to be inspired by Giovanni da Udine's pergolas, but have become more elaborate and refined. Vault IX (fig. 6.25) combines laths or carpentry trellis with carved woodwork, anticipating the painted pergola at the Palazzo Altemps. This detail may be attributed to Matthijs Bril, who was familiar with the northern tradition of carved woodwork. While Giovanni da Udine's trellises appear to be a realistic depiction of their real counterparts commonly seen in the garden, those depicted in the First Loggia of Gregory XIII are more stylized, with emphasis on the design rather than on realistic depiction. In addition to these differences, the sky is painted in a pale blue or covered with clouds, in contrast to the azure of Giovanni da Udine's pergolas.⁸

Studiolo of Ferdinando

The Studiolo of Ferdinando (1576-1577) at the Villa Medici on the Pincio is another significant example that testifies to the continuing popularity of the illusionistic pergola in Rome in the latter half of the sixteenth century. The garden pavilion is constructed on the Aurelian wall, the boundary of the property on the east side. The location of the pavilion on the ancient city wall suggests a belvedere function. The pavilion, from which one enjoys a vast panorama of the city, was the studiolo or study of

⁸ Hess 1935, 1272.

Ferdinando. Views would have been understood in both physical and metaphorical terms. Comparable in a sense to the panoramic view gained from the strategic position at the edge of the wall, studies in the studiolo would have been understood as leading to a clear, perspicacious vision and to the acquisition of broad encyclopedic knowledge. The study of natural history, as represented by the fresco on the ceiling, would have been one of the activities conducted here.

The interior of the pavilion consisted of a corridor and a square room measuring six by six meters. The vault was painted with an illusionistic pergola by Jacopo Zucchi (fig. 6.26). The trelliswork of the pergola is represented as a grid, among which plants and animals are arranged in a randomly natural manner. In contrast to the Vatican Loggias, here the evocation of nature and the countryside by means of pictorial illusionism was not the main objective. There is no blue sky depicted; instead the background was deliberately left white. On this white background, numerous botanical and ornithological species are painted with scientific, schematic precision. A total of 58 species of plants and 108 species of animals are depicted. As Morel points out, the pergola reflects the scientific interest of the Medici, especially in botany and zoology, and the white background would have been deliberately adopted to emphasize its character as a scientific illustration.⁹ The white background may have been intended as an evocation of the paper on which the illustrations appeared in printed copies of natural history treatises. The scientifically accurate depiction of the plants and animals transforms the entire vault into a visual encyclopedia of natural history in three dimensions. The decoration is modeled on the precedents in Florence created under Medici patronage, in the Palazzo Vecchio, in the Palazzo Pitti, and in the Boboli Gardens.

Villa Giulia

The illusionistic pergolas created outside of Rome, in the suburban area just outside the city walls or in the hill towns to the north and east of Rome, were no less impressive than those created within the city boundaries in terms of originality, artistic

⁹ Morel 1989, 62.

quality, and scale. One may even say that these decorations were adopted more readily first in the villas, where the notion of architectural propriety was more loosely interpreted, and the connection to nature, the garden and the landscape beyond was stronger than in city palaces. The villa was more apt to become a laboratory for the experiment of novel artistic forms before introducing them in the design of city palaces.

The Villa Giulia is one of the key sites of the illusionistic pergolas of the second period. It was created from 1550 to 1555, under the patronage of Julius III Del Monte. Several architects were involved in the design of the villa: Giorgio Vasari, Bartolomeo Ammanati, and Giacomo Barozzi da Vignola. The papal archives document a significant presence of Vignola in the *cantiere*.¹⁰ The Villa Giulia offers a unique spatial experience of immersion in the rustic setting, articulated by a series of pleasant surprises in which the pergola plays a significant role. The frontal image of the building, which would also have been visible from the landing point on the Tiber, reveals nothing of the ingenious arrangement of spaces that start unfolding once one penetrates beyond the façade. Nor does the villa's appearance on contemporary maps, showing a quadrangular block, indicate any eye-catching feature. From its façade with a rusticated triumphal arch motif repeated on a smaller scale on the upper storey, one could hardly guess that a complex set of spatial experiences is in store for the visitor. The villa's architecture is a repetition of semicircular and square components: the semicircular portico behind the main façade followed by the square courtyard, and the semicircular sunken nymphaeum followed by the square garden beyond. Pictorial decoration and nature elements further enhance the villa atmosphere. In fact, the entire villa complex can be considered as an elaborate composition of architectonic elements, fresco painting, vegetation, and birds.

The decoration of the semicircular portico consisted of the fresco of a fictive pergola on the annular vault and of grotesque motifs on the walls.¹¹ In the papal accounts

¹⁰ Vignola received monthly salary as an architect starting February 1, 1551, which continued until July 1554. cf. ASR Camerale I serie 18 Fabbriche 1517, 1519. On August 18, 1551, there is question of making a window in Vignola's room: Addi 18 di agosto 1551 per far acconciare una finestra alla camera di Vignuola architetto (Fabbriche 1517, 53r). This passage suggests that Vignola was given a room in the villa, where he could stay for close supervision of the construction.

¹¹ The illusionistic pergola at the Villa Giulia has not been studied in detail. Brief mention is made in Börsch-Supan 1967, Negro 1996, and Allain and Christiany 2006.

of the period 1551-1555, only two painters, Prospero Fontana and Pietro Venale da Imola, are mentioned. As Prospero Fontana was active mainly as a figure painter, Pietro Venale appears more likely to have been the artist responsible for the decoration of the semicircular portico. Venale is a somewhat obscure character. His most common appellation Pietro Venale is an abbreviated form of Pietro Giovenale. In the short entry in Thieme-Becker's *Künstler Lexikon*, he is listed as Pietro Mongardini, with dates of birth and death yet unknown, and only briefly described as a grotesque painter and a stuccoist. He was employed in the Vatican from 1541 to 1568, and was a member of the Accademia di San Luca from 1576 to 1583. If we accept this description, his speciality appears strikingly similar to that of Giovanni da Udine, the creator of the illusionistic pergola in the First Loggia of Leo X. Giovanni da Udine was a painter specializing in the depiction of nature and grotesques, as well as being a skilled stuccoist. The representation of plants and especially of the birds in the painted pergola of the Villa Giulia presupposes the presence of a painter skilled in the depiction of nature motifs and animals. If Giovanni da Udine can be considered the first painter in Renaissance Rome skilled in the depiction of nature and decorative motifs, Pietro Venale da Imola may be considered one of the second generation of such painters, who started to form a distinct identity from the second half of the sixteenth century. This generation included Matthijs Bril and Paul Bril, and Antonio Tempesta, artists responsible for the creation of the illusionistic pergolas in the major villas and palaces in and around Rome.

The combination of the fictive pergola on the vault and the grotesques on the walls in the semicircular portico of the Villa Giulia seems to echo the decorative system of the prototype at the Vatican, the First Loggia of Leo X. However, the spatial conception is essentially different. Here the format is an annular vault rather than a series of discrete vaulted bays. Although the semicircular portico is articulated by bands at intervals, which separate the annular vault into a number of sections, the notion of continuity and the unity of space play a far more important role than in the Vatican Loggia. The inspiration would more likely have been the annular ambulatory of Santa

Costanza, divided into a number of mosaic sections, including those depicting a vine harvest scene.

The painted pergola at the Villa Giulia can be perceived in nine sections: a central cross-vaulted bay at the entrance of the portico from the vestibule, and four symmetrical sections extending along either arm. The marsh reeds peopled by small birds and insects depicted on the white bands that separate the sections are evocative of the candelabra motifs in ancient Roman painting.¹² They are thus an evocation of the antique and a reference to the classical iconography. These white bands are flanked by narrower white bands that bear a meandering linear pattern intertwined with delicate plant motifs.

We can further schematize the decorative program by classifying the sections according to the species of the depicted plants: (A) jasmine; (B) roses; and (C) vine. These three are the typical plants trained on pergolas.¹³ The nine sections that compose the fictive pergola exhibits a regular alternation of these three plants. The central cross vault bears the design of a treillage pergola covered with jasmine. We will designate this section as the type (A) pergola. Adjacent to it, on either side, there are narrow sections with pergolas covered with roses, which we will designate as type (B) pergolas. Following these on either side are long sections with pergolas covered with vine, which we will designate as type (C) pergolas. There follow again the narrow sections with roses, which we will designate as type (B') pergolas. Finally, at the extremities on either side are the sections with treillage covered with jasmine, which we will designate as type (A') pergolas. Thus the entire ensemble can be perceived as having a rhythm of ABCBABCBA. The whole breaks down into two long sections with vine, three square sections with jasmine, and four narrow sections with roses. At first glance, the sections with vine appear to dominate because of their length. However, overall, the three plant species are given more or less equal emphasis, and their breakdown in unequal numbers and lengths may have been for the purpose of introducing variety.

¹² These marsh reeds are also observed in Marco da Faenza's decoration peopled with small insects and birds and other small figures of the ribs that articulate the ceiling of the stairs leading from the Sala di Leone X to the Quartiere degli Elementi in the Palazzo Vecchio in Florence. Cf. Allegri 1980, 178-179.

¹³ The First Loggia of Leo X also featured all three species, with the addition of a citrus species, the melangoli or bitter orange.

The type (A) pergola (fig. 6.27) exhibits a form resembling the diagonal type in catacomb paintings, which was also observed in the trellis form of some of the vaults in the First Loggia of Leo X. From a square opening at the center, painted diagonal carpentry ribs conforming to the webs of the vault extend outward dividing the pictorial space into four triangular compartments. Each compartment has a lunette-shaped window delineated by painted carpentry ribs revealing the sky beyond. Pairs of putti, the Eros and Anteros, sit on the edges of the lunette-windows, as though they were window sills. Vermillion clouds dot the pale blue sky, which seem to suggest dawn or dusk. The oculus shows a blazing gold sky with eight putti around the edge, two of which appear to be playing hide-and-seek. The design is comparable to that of the painted oculus of the ceiling decoration in the Camera Picta (fig. 6.5) by Andrea Mantegna. The remaining spaces are entirely filled in with diamond trelliswork made of thin rods bound by withies. The type (A') pergolas (fig. 6.28) at the extreme ends of the two arms of the semicircular portico are identical in form to the type (A) pergola, except for the oculus which is a small opening in the treillage showing only small birds. A cloudy sky is visible beyond the trelliswork, which may suggest dusk. Eros and Anteros are gathering jasmine and putting it into a basket or a flat vessel, or making a wreath of it. In three of the lunettes, beside the putti is depicted a large bird (eagle, pheasant, quail) together with a number of small birds. A dynastic statement is made in the inclusion of small flags with the Del Monte emblem on them, held by one putto (fig. 6.29). The formal arrangement of type (A) and (A') pergolas reflect the catacomb tradition, in particular in the axial arrangement of the lunettes in relation to the central oculus or opening.

Type (B) and (B') pergolas bear the design of a treillage pergola covered with red and white roses (fig. 6.30). The treillage is painted as a grid of large squares formed by carpentry ribs, which are filled in with diamond trelliswork of thin rods bound by withies. Three openings are depicted in the trelliswork: an octagonal one at the center, and a square rotated forty-five degrees each near the haunches of the vault. A pair of putti occupies each octagonal opening (fig. 6.31). The sky in the type (B) pergolas appear to have more sun-gilded clouds than the type (B') pergolas.

The type (C) pergolas occupy large sections and bear the design of a vine pergola laden with black and white grapes (fig. 6.32). Some of the vine leaves have turned, suggesting the autumn harvest season. As with the type (B) pergolas, the treillage is painted as a grid of large squares formed by carpentry ribs filled in with diagonal trelliswork made of thin rods bound by withies. Along either of the longitudinal edges of the section, there are four openings, octagonal, circular, circular and octagonal, each revealing a blue sky (fig. 6.33-35). Along the crown of the annular vault are five openings, circular, diamond, elliptical, diamond, circular. The elliptical opening is further flanked by two more diamond openings. One of the elliptical openings features two fauns stealing grapes, a scene perhaps inspired by a celebrated passage in Statius' *Silvae* (2.2.100-106).¹⁴ One has climbed onto the other's shoulders, and looks around furtively as he reaches for a bunch of grapes. Apart from this, no indication of a harvest is present. The putti are not engaged in any labor in particular. They appear to be depicted as children at play, looking out of the window-like openings, watching birds, playing with the treillage structure as though it were a jungle-gym; one is even pissing.

The putti of the Villa Giulia—some winged, some not—are a novel element in fictive pergolas. They appear to have been derived from Roman art. A particularly charming precedent in antiquity is the oecus q of the House of the Vettii in Pompeii, where a frieze shows putti intent on artisanal activities. In ancient Rome, putti are present not only in frescoes, but also in other forms of art, mosaic, silverware or glassware among them.¹⁵ However, at the Villa Giulia, the putti are not depicted as they often are in ancient Roman art, performing various activities pertaining to a craft (goldsmith, silversmith, ironsmith, vine-making, perfume-making), or miniaturized versions of other human activities such as fishing, hunting, and chariot-racing. Here they are represented in pairs as Eros and Anteros,¹⁶ which will become a tradition in the illusionistic pergolas of the seventeenth century, as one sees in the Loggia della Pergola (1611-1612) at the Palazzo Pallavicini Rospigliosi.

¹⁴ I owe this reference to Rabun Taylor.

¹⁵ Cf. Santa Costanza vine-harvesting mosaic; Hildesheim silverware; Blue Vase in the National Archaeological Museum of Naples.

¹⁶ For the putti in the Renaissance and their ties to antiquity, cf. Bober and Rubinstein, *Census* 2010.

The representation of the birds also marks a new direction. While the choice of animals and birds in the decoration of the First Loggia of Leo X appears to have been derived mostly from Giovanni da Udine's personal interest, namely familiar animals in the daily life of the north, the Villa Giulia pergola appears to feature a more systematic selection of bird species, both common and rare. There appear to be two categories of birds: first, large birds depicted realistically so as to have a significant presence; second, smaller birds that just denote that they were the common species in everyday scenes. Those falling into the first category are a peacock displaying its feathers, a cormorant about to feast on a fish, a stork stepping gingerly on a carpentry rib, a majestic cock with a red crest, a somewhat obscure parrot, and some owls. These species are represented only once, except for the owls, and only in the sections of the type (C) pergolas that are covered with vine. In the type (B) pergolas with roses and the type (A) pergolas with jasmine, species such as the eagle, the pheasant, and the quail are depicted, but far more numerous are swallows and other commonly seen species, or cursory depictions that just suggest a generic representation of a bird. Perhaps the birds of the first category were those that were kept in the aviaries, while those of the second category were those that were found in the surrounding countryside. The depiction of birds in the Villa Giulia painted pergola would have been derived in part from the idea of creating a lively atmosphere of the outdoors. The birds were conceived as one of the props to create and enhance a sensuous experience of the outdoors. Although it does not appear to aim for a systematic and scientific representation of birds, or to rearrange the birds to create a visual encyclopedia in the manner of the Medici pergolas, it may also have been intended as a kind of book of birds.

In the illusionistic pergola, we may observe the influence of real pergolas that were constructed in the gardens of the time. The pergola with crossing pavilion and four arms, fences, and ornamental structures in treillage shown in Giovanni Colonna da Tivoli's drawings had a basic structure of a carpentry framework of laths with the surfaces in between filled with latticework of thinner rods ("filagnoli") bound together by withies. This type of pergola also appears in the First Loggia of Leo X, in particular the

pergolas covered with jasmine and melangoli. The vine pergolas in the First Loggia of Leo X were depicted as coppice pole pergolas, which were originally utilitarian structures. In contrast, all the pergolas depicted in the Villa Giulia semicircular portico, namely types (A), (B), and (C), are represented as a framework of laths supplemented by a diamond trelliswork of thinner rods bound by withies. They exhibit features of a pleasure pergola in providing a shady walkway for strolling at leisure and in the openings in the form of squares, semicircles, circles, ovals, and octagons, but they also retain vernacular elements from the utilitarian pergolas.

The vine, roses and jasmine are depicted in bountiful manner, in full bloom or laden with heavy fruit, emphasizing abundance and prosperity. The vine and roses were plants steeped in Christian symbolism and repeatedly used motifs in Christian iconography. The vine was synonymous with wine which symbolized Christ's blood. The impression of the prominence of the vine in the painted pergola may also have been appropriate after all, if we think that the Villa Giulia was an elaboration on the Vigna Giulia.¹⁷ In Roman *vigne*, vines were actually grown for the production of wine. Vine would have been grown in the agricultural area of the Villa Giulia estate, which extended beyond the formally designed architectonic complex. And the Pope was often referred symbolically as the guardian of the Lord's garden in the Christian sense, as later the poet Giovanni Battista Marini called Pope Paul V the "Custode della vigna ecclesiastica."¹⁸ The red and white roses were frequently used in Marian iconography: the red rose symbolized martyrdom and the white rose virginity.¹⁹ Numerous paintings of the Virgin Mary or the Madonna and child are in a garden setting, where red and white roses are planted in the background or are trained on trellises, hedges or pergolas.²⁰ The jasmine, a plant with an agreeable scent, does not have an apparent connection to the Christian

¹⁷ Thanks are due to Mirka Beneš for suggesting the idea.

¹⁸ Thanks are due to Mirka Beneš for this citation, and for the idea of the playful use of the vine motif, in regard to its religious and social meaning.

¹⁹ Tongiorgi Tomasi 2002, 19.

²⁰ The Madonna paintings by Stefan Lochner, Stefano da Verona, Bernardino Luini, Martin Schongauer, Domenico Veneziano, Pseudo Pier Francesco fiorentino all feature red and white roses in the background.

iconography. In the Villa Giulia pergola, it may simply have been included as a plant commonly trained on pergolas.

Of the depicted putti, birds, and plants, some were included for their religious meaning, others playfully as props that enhance an agreeable and sensuous villa experience. Eclecticism may be one way to describe it, an assemblage of elements pertaining to a rustic setting regardless of their religious or secular connotations. The semicircular portico was most likely a space for walking and for intellectual conversations, a conscious adaptation of the peripatetic tradition of antiquity. The decoration of the portico, along with its space largely open to the exterior, was designed in such a way as to maximize the experience of the villa.

More important in the overall design scheme of the villa appears to be the rich experience resulting from the cross reference between water, flora, and fauna. Their manifestations in the artificial forms of fountains, pergolas, and aviaries orchestrated a sensuous experience of nature, in a way that would not have been possible with stone architecture alone. This villa experience started even before the point where the boundary of the estate lay. A monumental carpentry pergola covered with vegetation was constructed, leading from the landing point on the Tiber to the Fontana Pubblica on the via Flaminia, serving as the ceremonial corridor of approach to the villa. The real pergola provided a direct path leading to the villa, from the water through a tunnel of vegetation, accompanied by the natural presence of birds. The Fontana Pubblica on the Via Flaminia was a fountain complex accommodating a fishpond surrounded by aviaries (fig. 6.36-37).²¹ The fishpond and the aviary were both design concepts imbued with classical connotations. The semicircular portico inside the villa offered a simulacrum of nature by means of its painted pergola featuring plants and birds, as well as an intellectual experience of the classical tradition through the grotesques on the walls and the putti in the painted pergola, among others. The painted birds may have been intended to resonate

²¹ The aviaries behind the Fontana Pubblica were constructed around the period from October to December 1553. Payment records of the copper netting for the aviaries refer to it in various ways: “uccelliere della peschiera” (the aviaries of the fishpond); “uccelliere della Fontana pubblica” (aviaries of the Fontana Pubblica); “uccelliere di dietro alla Fontana pubblica” (aviaries behind the Fontana Pubblica). Cf. ASR, Camerale I serie 18 Fabbriche 1519, 72v, 73r, and 75r.

with the real birds that were kept in the aviaries behind the Fontana Pubblica. As the aviaries behind the Fontana Pubblica served as a prelude to the painted birds in the semicircular portico, these in turn became the prelude to the aviaries on either side of the loggia beyond the sunken nymphaeum. Hieronymus Cock's print shows the view of the sunken nymphaeum and the architecture beyond: the loggia with a serliana on the second storey is covered by a carpentry roof intertwined with plants, which would precisely suggest a pergola of the kind depicted in the semicircular portico, complete with circular openings (fig. 6.38). The aviaries were located on either side of the loggia.²² Thus the combination of pergola, fountain and aviary was repeated in this rear courtyard with the sunken nymphaeum.²³ Thus the courtyard of the sunken nymphaeum offered another sensuous experience of nature through the unexpected discovery of a fountain supported by caryatids at a lower level and twin aviaries located on a higher level, together with another intellectual experience of the classical tradition through the sculptures including those of reclining river gods. We can say that water, flora and fauna, within Vignola's lapidary world,²⁴ would have provided and enhanced a rich and sensuous villa experience. The architectural space of the Villa Giulia cannot be understood through the analysis of architectonic elements or of the fountain grotto alone. The pergola and the aviary are crucial components of the villa, and the consideration of them would result in a richer and fuller understanding of the intended villa experience.

Villa d'Este at Tivoli

The Villa d'Este at Tivoli (1560-1572) was created for Ippolito II d'Este (1509-1572), Cardinal of Ferrara, and a crowning achievement in his career of artistic patronage. The garden was laid out by the architect and antiquarian Pirro Ligorio (1513-1583) (fig. 5.15). The villa had a real pergola in the garden and an illusionistic pergola in

²² Cf. Coffin 1979, 164-165. Ammanati also mentions the twin aviaries in his letter of May 2, 1555: *Nel uscire vi son due uccelliere le quale rispondeno nella fonte*" (cf. Falk 1971, 173).

²³ Mirka Benes interprets the design of the sunken nymphaeum at the Villa Giulia as inspired by the form of a crypt in a church, with balustrades from which one looks down to the space below and double stairs leading down to it. In that sense, the design is again imbued with Christian iconography.

²⁴ Expression borrowed from C. Frommel 2005, 92.

the interior of the villa building. In the corridor on the garden level running the full width of the palazzo, which imitated an ancient Roman cryptoporticus, a pergola of mosaic and painted stucco on the ceiling has survived from the cinquecento. Notwithstanding its relatively good condition, it has not yet attracted scholarly attention.²⁵

The decoration on the ceiling of the corridor features a treillage pergola, covered with climbing plants and inhabited by birds. A diamond trelliswork is represented, intertwined with vine and roses, and inhabited by birds (figs. 6.39-40). The diamond trellis and the vine and roses were typical features also observed in the painted pergola at the Villa Giulia. The vine is depicted bearing fruit, and the roses with blooming flowers. The decoration on the ceiling was conceived in coordination with the three rustic fountains lining the wall (fig. 6.41). The three fountains in the corridor appear to be generic rustic fountains. Although designed to exhibit a degree of variety, they do not represent a specific view of a recognizable landscape like the one in the Salone, decorated in mosaic with the view of the round temple at Tivoli. The fountains were the work of Curzio Maccarone. Coffin suggests that the idea of the fountain in the Salone, which was used for dining and entertainment, may have been inspired by the monastic refectory.²⁶ However, the fountain in the Salone appears more decorative than functional, and more suited to visual appreciation than the actual washing of hands. Coffin's interpretation does not explain why three more fountains were created in the corridor. If it were just for the practical need of having a lavabo or washing fountain, one would have sufficed. For their elaborate design and their repetition, the three fountains in the corridor clearly exceeded a functional need.

The corridor, decorated by the mosaic pergola and the three rustic fountains, embody the concept of the ambiguity of indoors and outdoors. The most significant implication of this space appears to be that what usually belongs to the outdoors was

²⁵ Denis Ribouillault, in his otherwise comprehensive article on the decorative program of the Salotto of the Villa d'Este, mentions only that the corridor was fashioned as a tonnelle, with three fountains. Cf. Ribouillault 2005, 68. Carl Lamb refers to the decoration of the ceiling together with the fountains, referring to the use of materials such as stone, pebbles, shells to evoke the rustic nature of the ambience. Cf. Lamb 1961, 81.

²⁶ Coffin 1979, 295.

intentionally brought into the indoors – the conscious use of the concept of the interpenetration of indoors and outdoors. The pergola and the three fountains were both made of mosaic and colored stucco. The mosaic and stucco pergola was probably also the work of Curzio Macarone, as its materials and design bear a similarity to the fountains. The pergola was intended, together with the fountains, to create an illusionistic atmosphere of the outdoors. The play between indoors and outdoors was a consciously manipulated design concept, already observed in the first period of the illusionistic pergolas. While the real pergola created an indoor space, so to speak, in the midst of the outdoors, the mosaic and stucco pergola in the corridor achieved the opposite effect. The representation of plants and birds in the mosaic and stucco pergola would have resonated with the real pergolas in the garden, which were covered with vegetation and also housed fountains and aviaries. We should also note that the illusionistic pergola ran transverse in relation to the longitudinal axis set by the real pergola in the garden. The pergolas, both fictive and real, may have been arranged more systematically than they appear at first sight; they were created to act as semantic and aesthetic counterpoints with one another.

The corridor, with the mosaic and stucco decoration of the pergola, was also an explicit reference to the antique. From the raking openings at regular intervals in the barrel-vaulted ceiling, we may infer that the corridor had been designed in imitation of the ancient Roman cryptoporticus. The rooms of the garden level were designed as an *enfilade*, with doors on the garden side leading to adjacent rooms. This would have sufficed to serve the function of circulation. The corridor would have been part of the original monastery complex, but with the decoration of the ceiling and the creation of the three fountains, it was redesigned as a strolling space evocative of the antique. And it would have been interpreted as such by contemporaries, as Scamozzi refers to it and discusses it in connection to the antique cryptoporticus, in the section on loggias, porticoes and galleries in his treatise, *L'idea dell'architettura universale* (1615).²⁷

²⁷ Scamozzi 1615, 328: Conoscendo gli Antichi quanto si convenisse alla sanita dell'huomo il passeggiare al fresco, pero facevano in publico, e in privato alcuni Portici sopra e sotto terra, perche gli uni, e gli altri erano freschi, & ombrosi ancora, che fussero sopra terra, chiamaronli indifferentemente Cripti Portici, e piu propriamente Grotti Portici: de' quali ne habbiamo tocco nel Laurentino di Plinio Secondo: e de' publici si puo dire, che siano quelli a lato sotto le Therme di Antonino nel Monte Aventino, e di Filippo Imperatore

Scamozzi explicitly mentions that porticoes and cryptoporticoes in ancient Rome were often decorated with painted vine forming a fictive bower overhead. The corridor at the Villa d'Este consciously evokes the ancient Roman cryptoporticus, and by means of its form and decoration, transforms a monastic corridor into an intellectual space for the appreciation of art and cultured conversation. The connection to the antique was also expressed by the mythological dimension of the decoration. The central fountain in the corridor bears the citrus motif, representing the golden apples won by Hercules. The citrus fruit is a leitmotiv in the entire iconographical program of the villa, resonating especially with the decoration of the Grotto of Diana, which also had a stylized bower of orange fruit and leaves executed in mosaic.

The iconography of the mosaic and stucco pergola raises a puzzle. In between the diamond trellis patterns, the pergola has blank white spaces where birds or other figures are represented. The largest of these blank spaces shows an allegorical figure with a trumpet. In Renaissance and Baroque art, a winged figure with a trumpet most likely represented the allegory of Fame. The personified Fame is heralding the advent of a figure to the right, which has been poorly preserved. What would have been represented beside the personification of Fame?

One clue to this question may be provided by the Fountain of the Owl in the garden. On the attic of the Fountain of the Owl, two winged figures support the Este coat of arms bearing the Este heraldic eagles. On the fountain itself, a stone eagle presides at the crown of the pediment between two *fleurs-de-lis*, while two others flank the fountain on either side. The Este eagle is one of the most frequently repeated motifs in the entire villa. In the Fountain of the Sleeping Nymph in the entrance courtyard, the Alley of the Hundred Fountains, the Fountain of the Dragon, the ceramic tiles on the Oval Fountain's basin, the mosaic pavement just off the Water Organ – it is omnipresent in the garden.

ne gli Horti di San Pietro in Vincola molto lunghi, e di honesta larghezza, & altezza, i quali havevano il lume per alcune lunette ne fianchi delle loro volte, & erano ornati di Pitture di Viti, e simili cose le quali fino hoggidi si sono conservate molto belle. A Tivoli nella Vigna d'Este (esempio delle cose delitiose, e belle) vi e un Cripto Portico sotterra, a lungo alcune stanze del primo piano del Palazzo, rincontro alle quali s'ergono diverse fontane, che rendono mormorio grandissimo. Questo Portico riceve lume ad'alto ne' fianchi della volta, e le stanze sotteranee.

I owe this reference to Mirka Beneš.

A similar combination of images elsewhere may suggest a direction for our interpretation. In the illusionistic pergola in the loggia at the Palazzo Altemps (1592), a winged figure with a trumpet is depicted beside putti playing with the heraldic animals of the Altemps (ram) and the Orsini (bear) (fig. 7.3). The Altemps example suggests that the lost figure to the right of the Allegory of Fame at the Villa d'Este may have been a heraldic animal of the Este, namely the Este eagle. If it were the eagle, it would be consistent with the representational intention of the villa's iconographical program. An eagle would make sense, as the Cardinal d'Este's virtue would thereby have been acknowledged in the world of artistic and cultural patronage, if not in the real world of ecclesiastical bureaucracy.

The interpretation of the winged figure as the personification of Fame and the lost figure as the Este eagle would also support the hypothesis that the illusionistic pergolas were used as decoration of interiors or semi-interiors with a representational purpose. The corridor fashioned as a cryoporticus would have been conceived as the locus for the celebration of the patron – in praise of his virtue, his culture, his connoisseurship of the antique – and ultimately the justification of his achievements in the hierarchical world of papal Rome.

Villa Farnese at Caprarola

The Villa Farnese at Caprarola was a monumental country residence of the Farnese family, a magnificent pendant to their city palace in the Campus Martius in Rome, and a synthesis of their artistic and architectural patronage.²⁸ The estate in the town of Caprarola, circa 70 kilometers north of Rome and 15 kilometers southeast of Viterbo, was acquired in 1504 by Cardinal Alessandro Farnese senior, later to become Pope Paul III (pontificate, 1534-1549), from Francesco Maria Riario della Rovere. Sometime before 1535, Alessandro Farnese senior commissioned designs for a *rocca*, a fortified castle, from Antonio da Sangallo the Younger and Baldassare Peruzzi. The

²⁸ For basic information on the architecture and gardens at the Villa Farnese at Caprarola, see Coffin 1979, 281-311; Lazarro 1990, 99-108.

original intention was to construct a hunting base rather than an elegant country residence.

The villa in the form we see today owes its creation to Cardinal Alessandro Farnese junior (1520-1589), the grandson of the Pope (fig. 6.42). The construction of the palazzo, together with the piazza in front and the twin gardens directly behind it, dates from 1557 to 1573.²⁹ Vignola, the architect involved in major Farnese building projects, was the chief designer of the estate as a whole. Especially for the interior courtyard, a variety of forms had been proposed by a number of architects – a pentagonal plan (Peruzzi), a circular or square plan (Sangallo), and a decagonal plan (Pacciotti), but Vignola proposed a synthesis of all the plans and the circular form was adopted in the end.³⁰ Vignola also designed an underground level to accommodate utilities and a circulation system that had not been envisioned by Sangallo or Peruzzi. A drawing in the Archivio di Stato di Parma, accompanied by Vignola's handwritten notes, describes a cistern carved out of bedrock tufa (fig. 6.43).³¹ The cistern was located right underneath the circular courtyard. It was to be in the form of a monumental pillar hollowed out within, for the purpose of storing rainwater that entered from the mask-shaped lid at the center of the courtyard. Carriages entering the underground level would drop off their passengers, and turn around the pillar in the manner of a rotary to exit. The visitors would take the spiral staircase to the upper levels.

The Villa Farnese at Caprarola is one of the key sites for the study of the illusionistic pergola, because it had a number of painted pergolas and real pergolas. We know that at least three different painted pergolas or bowers existed at the time: first, the painted pergola decorating the ceiling of the ground level circular portico; second, a narrow corridor on the piano nobile, the “Corridoio del torrione” (Corridor of the tower), painted with trees with intertwining branches forming a fictive bower overhead; and third, the painted vegetal bower of fruit swags and birds decorating the Fountain of

²⁹ Coffin 1979, 285-286.

³⁰ For a comprehensive discussion of the design of the circular courtyard, see Partridge 2001.

³¹ Archivio di Stato di Parma, *Piante e disegni* 49 no.10.

Venus in one of the twin compartment gardens just outside the palazzo, the so-called Winter Garden.

The decoration of the annular vault of the portico surrounding the circular courtyard on the ground level is the most impressive example of the painted pergola we know from this period. It almost rivals the Vatican Loggias of Leo X and Gregory XIII in scale. At Caprarola, the classic combination of the painted pergola and grotesques, which began in the First Loggia of Leo X, and was continued in the semicircular portico of the Villa Giulia, was split into two levels. The circular portico on the piano nobile was decorated with grotesques, while the entire vault of the circular portico on the ground level was decorated with an illusionistic pergola. This may suggest a hierarchy of artistic motifs – that grotesques may have been considered a noble form of decoration more appropriate for the piano nobile. But it may also have been for the reason that the ground level was closer to the outdoors, the affinity for which the illusionistic pergola was intended to embody. The “pianterreno” as it was called in Italian, was literally the level of the ground, with which the portico formed a continuity, in such a way that the elements of the outdoors flowed naturally, as it were, into the architectonic semi-interior.

A real pergola was constructed along the longitudinal path in the so-called Summer Garden, the one on the north side of the two lower gardens designed as compartment gardens. The lower gardens were laid out at the same time as the construction of the pentagonal palazzo (1557-1560), while the upper gardens comprising of the water chain, the giardino segreto with the basket-bearers, and the garden beyond the casino date from 1578-1584.³² The casino and the water chain were created for the visit of Pope Gregory XIII in 1578. The pergola covering the central alley in the Summer Garden is documented in a fresco (1575) in the loggia of the Palazzina Gambarara at the Villa Lante at Bagnaia (fig. 6.44). The fresco shows a view of the Villa Farnese at Caprarola, as the renowned estate which Cardinal Gambarara, the patron of the Villa Lante, sought to emulate, while at the same time also as an expression of a homage to its owner, the Cardinal Alessandro Farnese. The pergola, in the building accounts of the villa, was

³² Coffin 1979, 299-310.

described as one supported by wooden columns.³³ Another pergola stood in front of the Fountain of the Deluge in the Summer Garden (fig. 6.45). In addition, there were vine pergolas between the two lower compartment gardens, which provided a covered walkway leading up to the Water chain. There was also a vegetal structure constructed as a tree house for recreation, which we will refer to later.

Real pergolas at the Villa Farnese, however, did not play a role comparable to those at the Villa Giulia or the Villa d'Este at Tivoli. Most likely they were not as elaborately designed in emulation of high architecture, but rather more rustic structures derived from vernacular tradition. At the Villa Giulia and the Villa d'Este at Tivoli, the real pergola served as a prelude to the villa experience and established a powerful vista designating the goal for the visitors. At Caprarola, the ideological function of attracting attention to the architecture of a dynastic character was already fulfilled by alternative means. Vignola created the main street climbing up to the palace from the provincial road, and that street took on the function performed by the real pergolas at the two other sites. The street provided a ceremonial ascending approach and a framed view of the façade of the palazzo (fig. 6.46).³⁴ While the pergola preceded the villa experience at the Villa Giulia and at Tivoli, at Caprarola, on the contrary, it was subsequent to the villa experience. The one in the lower garden does not appear to have had a meaning other than to provide a shady walkway between the planted compartments. But it may have been a conscious reference to the example of Paul III's Giardino Segreto in the Vatican Gardens, or to provide an echo of the experience of the illusionistic pergola in the circular portico in the villa itself. The pergola supported by satyrs preceding the Fountain of the

³³ Archivio di Stato di Roma, Camerale III 518, 17v, Feb. 21, 1561: per haver piantato e murato cento novantadoi colonelli di legno nel giardino per li compartimenti delli viali insiema monta scudi 28.80 (columns that support the pergola running along the paths of the garden); 45r, Jul. 16, 1563: per haver piantato 14 colonne di legno e' murate per la pergola acanto la Fontana alto l'una piedi 22 stimate 5.25; per haver tirato il tufo in opra 11 archi di legname sopra dette colonne larg l'uno di uomo piedi 20 ecetoli doi che fanno la crociera scudi 3.30 (mention of the wooden columns supporting the crossing and the arms of the pergola); 115v, Nov. 13, 1573: P haver messo 16 archareggie p la tribuna dl giardino novo cio 8 curitate (dentate?) et 8 messe sopra l'una lunga piedi 20 stimate scudi 4.50 (mention of the central pavilion of the pergola).

³⁴ Fagiolo compares the axial approach to the palazzo at Caprarola (650 meters) constructed by Cardinal Alessandro Farnese to that to the Palazzo Farnese in Rome, the Via dei Baullari (230 meters) constructed by Paul III. cf. Fagiolo 2007, 114-119.

Deluge was a prolongation of the grotto, which also served to provide shade for those taking a stroll to the fountain. The vine pergolas along the path to the upper gardens appear to have been of a generic nature.

In stark contrast to the historic and mythological scenes that decorate the rooms of the palazzo, the illusionistic pergola in the circular portico on the ground level (fig. 6.47) and the illusionistic bower in the corridor of the tower (fig. 6.70-71) on the piano nobile, alongside the Sala del Mappamondo (fig. 6.48), are among the most unique and impressive features in the decoration of this villa. It is rather surprising that works on the Villa Farnese at Caprarola have referred to the illusionistic pergola of the circular portico only in passing. Even the artist responsible for the decoration is yet to be confirmed. One of the difficulties in the identification of the artist is the absence of archival evidence. Faldi lists artists whose activities at Caprarola have been documented in various ways.³⁵ Among them, only Jacopo Bertoja (1544-1573) and Antonio Tempesta (1555-1630) are known to have been skilled in the depiction of nature motifs. Bertoja was active in Parma, where he executed the frescoes in the Palazzo del Giardino. He painted the ceiling decoration of the Room of Ariosto, at the center of which a panel picture supported by the trunks of the trees in the manner of an illusionistic bower (fig. 3.39). He was employed in the *cantiere* at Caprarola from 1569 until 1573, the year of his death.³⁶ However, Diane De Grazia, author of the only monograph on Bertoja, does not mention the illusionistic pergola among his oeuvre.³⁷ Partridge, on the other hand, suggests Antonio Tempesta hypothetically.³⁸ He dates the decoration of the ground level arcade from 1579 to 1581, but his attribution to Tempesta is accompanied by a question mark. Tempesta was an artist of broad interests and capacities; human figures, animals, and nature motifs were a significant part of his repertory, executed in a variety of media from fresco to etching. His map of Rome (1593) exhibits his ease in the representation of trees, plantings, and landscapes. His works for the Giustiniani family include the decoration of the Villa Giustiniani at Bassano Romano. The loggia on the piano nobile of the Villa

³⁵ Faldi 1981, 107.

³⁶ De Grazia 1991, 30-31.

³⁷ Cf. De Grazia 1991.

³⁸ Partridge 2001, 272; 276.

Giustiniani, whose decoration is attributed to Tempesta, features a small painted pergola on one of its three arch soffits.³⁹ Eckhardt Leuschner, in his exhaustive study of Antonio Tempesta's œuvre, discusses the landscapes on the walls of the Scala Regia at Caprarola, as they were mentioned by Vasari, and attributes them to Tempesta, who was active at Caprarola from 1580 to 1583. However, Leuschner does not refer to the illusionistic pergola,⁴⁰ probably because no written evidence has yet surfaced, either in the biographies of painters or in the archives.

A valuable contemporary account of the Villa Farnese at Caprarola is Fabio Arditio's narrative of Pope Gregory XIII's visit to the villa in 1578. Arditio, who describes the frescoes of the ground floor rooms depicting the mythological origins of Caprarola and the four seasons, as well as the underground cistern beneath the courtyard, does not say anything in regard to the decoration of the ground level circular courtyard.⁴¹ He only mentions that there were niches along the courtyard to accommodate statues, and grilled openings to provide lighting to the level below. Either the decoration of a fictive pergola seemed too ordinary for him to comment on, or the decoration had not yet been executed. Given the impressive scale of the painted pergola and its high artistic quality, it is difficult to think that, if the decoration were present, it would have escaped attention. Far more likely, the lapidary bareness of the walls and of the vaulted ceiling was still exposed at the time. Arditio in fact notes that some rooms on the ground floor were yet to be decorated. If we accept this hypothesis, it excludes Jacopo Bertoja as the artist, as he died in 1573. This would leave us with the high possibility of Antonio Tempesta as the artist in charge, but confirmation must await further research.

Close examination of the iconography of the illusionistic pergola of the ground level circular portico at Caprarola reveals several salient characteristics in contrast to the parallels at the Villa Giulia and the Villa d'Este. The main differences consist in the following: 1) more variety in the treillage forms; 2) more variety in the plant species; 3) common species of birds and game birds are depicted; 4) the expression of seasonal

³⁹ The pergola motif at the Villa Giustiniani at Bassano Romano is mentioned in chapter 7.

⁴⁰ Leuschner, 2005, 50-52.

⁴¹ Orbaan 1920, 369-370.

change. The entire decoration of the ceiling of the circular courtyard is composed of ten pairs of wide and narrow sections. As the ground-level portico is supported by ten piers alternating with ten arches, the wide sections correspond to the arched openings, while the narrow sections correspond to the piers. Our examination begins from the wide section that lies at the entry point from the vestibule. The following list shows the details of the pergola form, the trellis pattern and the species of the birds and plants in each section.

Table 3 : Details of the sections in the illusionistic pergola of the ground-level circular portico at the Villa Farnese at Caprarola*

Sections	Pergola frame	Trellis form	Birds	Plants	sky
1W (fig.6.49)	Cartouche with fleur-de-lis	Grid scale	Eagle (center) turkey, cock, owl, small birds Cat and mouse	Red roses	cloudy
1N (fig.6.50)	Square-hexagon-square	diamond	White bird	Vine : black grapes (center) blackberries (sides)	cloudy
2W (fig.6.51)	Oval surrounded by rectangles	Grid scale diamond	White eagle	Jasmine	cloudy
2N (fig.6.52)	Square-hexagon-square	Scale(center) Diamond (sides)	White bird	Vine : black grapes (center) Vine : black and white grapes (sides)	cloudy
3W (fig.6.53)	Cartouche with fleur-de-lis	Grid diamond	White eagle Small birds	Pomegranate	cloudy
3N (fig.6.54)	Square-hexagon-square	Grid (center) Diamond (sides)	Falcon ?	Vine : black and white grapes	cloudy
4W (fig.6.55)	Oval surrounded by rectangles	Grid Scale Diamond	Mallard duck and white duck serpent	Melangoli in bloom and bearing fruit	cloudy
4N (fig.6.56)	Square-hexagon-square	Diamond	Small white bird	Melangoli in bloom (center) Jasmine (sides)	Pale blue sky white clouds
5W (fig.6.57)	Cartouche with fleur-de-lis	Grid Diamond ?	Small birds	Vine : black and white grapes	Pale blue sky white clouds

Table 3 (continued)

5N (fig.6.58)	Square-hexagon-square	Diamond	Small birds	Jasmine (center) Red and white roses (sides)	Pale blue sky
6W (fig.6.59)	Oval (circle ?) surrounded by rectangles	Grid Diamond	White bird	Pomegranate	Pale blue sky
6N (fig.6.60)	Square-hexagon-square	Diamond	Falcon Small birds	Red roses (center) Melangoli (sides)	Pale blue sky white clouds
7W (fig.6.61)	Cartouche with fleur-de-lis	Diamond	Swan White cock	Vine : black and white grapes	Pale blue sky white clouds
7N (fig.6.62)	Square-hexagon-square	Diamond	(lost)	Red roses Melangoli	Pale blue sky white clouds
8W (fig.6.63)	Oval (lost) surrounded by rectangles	diamond	(lost) small birds	Jasmine	Pale blue sky
8N (fig.6.64)	Square-hexagon-square	Diamond	(lost)	Melangoli	Pale blue sky
9W (fig.6.65)	Cartouche with fleur-de-lis	Grid Diamond	Hawk/falcon Pheasant/partridge Small birds	Pomegranate	Pale blue sky white clouds
9N (fig.6.66)	Square-hexagon-square	Scale	Small birds	Jasmine (center) Vine : black and white grapes (sides)	cloudy
10W (fig.6.67)	Oval surrounded by rectangles	Grid Scale diamond	Swan (like 7W)	Vine : black and white grapes with colored leaves, red and yellow	cloudy
10N (fig.6.68)	Square-hexagon-square	Scale Diamond	Small birds	Red and white roses (center) Vine : black grapes with colored leaves, red and yellow (sides)	cloudy

* The numbering starts from the section corresponding to the entry from the vestibule, in counter-clockwise direction. There are a total of ten pairs of wide (W) and narrow (N) sections. (Numbers in parentheses correspond to the illustration numbers.)

The trellis frameworks of the painted pergola at the Villa Giulia and the Villa d'Este at Tivoli were relatively simple structures composed of a frame of carpentry ribs with surfaces in between filled in with diamond trelliswork of thinner rods. The painted pergola at the Villa Farnese at Caprarola exhibits a far more complex design. All narrow sections are composed of trelliswork with a hexagon opening at the center and a square opening above and below it, flanked by side bands of diamond trellis. The wide sections display two types of trelliswork that are used alternately. The odd-numbered wide sections exhibit a treillage pattern which can be described as “cartouche with fleur-de-lis,” as the pergola framework is composed of curvilinear and rectilinear forms resembling a cartouche, and a central frame with the Farnese fleur-de-lis at the four corners containing a large bird. The even-numbered wide sections exhibit a treillage pattern which can be described as “oval surrounded by rectangles,” as the central oval contains a large bird, while on the four sides are a pair of elongated rectangles and another of rectangles with a projection resulting in the shape of a T, each one of the pair facing the other. This type may be connected to the decorative pattern of catacombs, as it exhibits an axial arrangement of the squares and rectangles on the four sides in relation to the central oval. The treillage represented in the narrow sections may have been copied from real treillage structures, and resembles those represented in the painted pergolas at the Villa Giulia and the Villa d'Este at Tivoli. However, the pergolas in the wide sections, especially of the “cartouche with fleur-de-lis” type, are composed of complex curves that are not seen in the examples we have hitherto examined. They anticipate the elegant carpentry structure of the illusionistic pergola in the loggia of the Palazzo Altamps (ca. 1592). It is possible to suppose that there was a significant development in the art of carpentry in the second half of the sixteenth century, which made such complex swirling curves and elaborate patterns feasible. The painted forms in the illusionistic pergola could have been a reflection of such advanced techniques in real treillage. If that is the case, we can say that the illusionistic pergola can be read, not only as a sophisticated form of pictorial art but also as an important cultural document that swiftly reflected the garden craft and furnishing practices of the time. For printed documentation

of trelliswork, we have to wait until André Jacob Roubo's treatise on treillage (1769-1775) written in eighteenth-century France to see an array of elaborate patterns, and no drawings but for those in Giovanni Colonna da Tivoli's sketchbook have recorded the practice of treillage in sixteenth-century Italy.

Adding to the complexity of the pergola framework, the trellis pattern in between the carpentry ribs also exhibits a variety. The diamond trellis is the most frequently used pattern; it is found in all sections except for 1W and 9N. The next most used pattern is the grid, which was seen constantly in all sections of the painted pergolas at the Villa Giulia and also at the Villa Medici. A new element introduced here is the scale pattern (sections 1W, 2W, 2N, 4W, 9N, 10W, 10N). The scale pattern goes back to antiquity, and was frequently used in mosaics, wall and vault paintings and in stone grillwork, especially transennas. In the Renaissance it again became a popular motif, especially in stonework and painting. In the Villa d'Este at Tivoli, it is used in the stereotomy of the balustrade overlooking the Oval Fountain. It is not so certain whether the scale pattern was popular or even feasible in real treillage. It may just have been a play of forms adopted in pictorial fiction.

Among the birds depicted in the painted pergola at the Villa Farnese, there are no exotic species or even impressive species such as a peacock. In general, there is a strong preference for the color white, as white eagles, a white turkey, a white cock, and several other generic white birds are depicted. Birds framed by the central cartouche or the central oval may have been species considered more important than others. These include an eagle (1W), white eagles (2W, 3W), a mallard duck (4W), and two swans (7W, 10W). The other sections contain smaller generic birds. Among other notable species are a white turkey, an owl, a cock and a white cock, a hawk, a falcon, a pheasant or partridge, and a quail. Except for the owl, these were birds relevant to hunting or for the table, and consequently species associated with the rural life of the villa.⁴² Many smaller birds are

⁴² The hunting and catching of birds that eventually ended up on the table would have been a far more important activity in early modern Italy than has received general attention. The papal archives mention payments, in some cases a salary, to a "uccellatore," which appears to have been the designation for a person who provided the service of catching birds or procuring them for hunting. The "uccellatore" was responsible for catching the birds that were to be put in the *ragnaia*, an area of planted thicket where the

represented in generic manner, perched or in flight. These were included more for their evocation of rural life than for the realistic representation of an object of scientific interest. In contrast to Giovanni da Udine who painted the First Loggia of Leo X, or Jacopo Zucchi who painted the pergola in the Studiolo of Ferdinando at the Villa Medici, the painter of the illusionistic pergola at Caprarola appears to have had less interest in the realistic or scientific depiction of bird species, or did not have the experience or expertise that would have been required in natural history painting. But that has not been a serious hindrance for the evocation of the rural setting of the villa through the depiction of domestic and more common bird species, especially those related to hunting.

The depicted plants were also species that were more or less familiar. In addition to the typical plants trained on the pergola - vine, roses, and jasmine - which were the three species represented in the painted pergola at the Villa Giulia, the painted pergola at Caprarola further features melangoli, pomegranate, and blackberries. Blackberries appear to be an appropriate choice as a “frutta di bosco,” evocative of the rural surroundings. Butterflies are depicted among the blackberry leaves and spiraling stems.

In terms of the background glimpsed through the depicted trelliswork and the plants, half of the sections show cloudy skies, while the other half show pale blue skies dotted with white clouds. The sections of Caprarola pergola do not suggest a passing of the hours within a single day, as may be observed in the Villa Giulia pergola. Although there are a number of sections with vine laden with grapes, sections 10W and 10N show leaves that have colored red and yellow, while the remaining sections show green leaves.

hunting of birds took place. The following fragmentary evidence from the papal archives gives us an idea of the activities of the “uccellatore,” and his importance in the bird culture of the time. Cf. ASR, Camerale I, Tesoreria Segreta 1299: (fol. 14v) Addi 9 di agosto a Pietro uccellator' di N.S'. scudi dodici b.30 cio e scudi 8 do et $\frac{1}{4}$ per pagar' un cavallo per uso di uccellar' et scudi 3 per una Ragna da Torto' 12.37; (fol. 15r) Addi v di settembre 1560 scudi 2 a Pietro uccellator' er pagar' tante giornate di un garzone ad uccellare in campagna 2; (fol. 15v) Addi x di settembre 1560 scudi 2 b.60 a Pietro uccellator' per oper' et spese fatti ad uccellare; (fol. 16v) Addi 25 di settembre 1560 a Pietro uccellator' per salario di un mese cominciato a mezzo, il mese pnte del garzone ad uccellar' al Boschetto scudi Quattro et scudi tre allui modo per suo salario comincio a detto tempo 7; (fol. 17v) Addi 19 di ottobre 1560 a Pietro uccellator' cio e scudi 4 per sua provisione del garzone et scudi 3 per lui conto dell'uccellar' di un mese cominciato add 15 del pnte 7; Addi 20 di ottobre 1560 per tante spese di detto luogo et del boschetto per l'uso dell'uccellar' scudi 8.

Giovanni Pietro Olina's *Uccelliera* (1622) documents in part this bird culture, as well as the rising interest in the more scientific study of birds.

This may be interpreted as an expression of the passing of seasons. So far, in spatial terms and its immediate connection to the outdoors, the illusionistic pergola at the Villa Farnese at Caprarola appears to be more of an evocation of the rural atmosphere associated with the villa and life in the countryside. However, its symbolic and lexical dimension as a visual encyclopedia of birds and plants will become clear as we examine the space of the circular courtyard as a whole.

Here it is necessary to reconstruct the experience of the illusionistic pergola by contemporary visitors. As suggested by Arditio's narrative, a typical tour of the palazzo would have started from the lower level. After the ceremonial approach along the main road, which only reveals a narrow view of the palace façade until one reaches the piazza in front, visitors on horseback would ascend the *cordonata* (horse ramps) from either side to the ground-level entrance, while those in carriages entered from the underground. The basement level, designed by Vignola, served to accommodate the smooth entry of the visitors, as well as for housing utilities. It was a kind of garage in the modern sense, with the large pillar cistern at the center serving also as a rotary for the carriages. Leaving the carriage, the visitors took the spiral stairs to the ground level, and, as those who had entered from the ground-level entrance had done, admired the vestibule with painted landscapes including two views of Caprarola. From the vestibule, before proceeding to the piano nobile, one would first have explored the circular courtyard with the illusionistic pergola.

The illusionistic pergola was, however, not the only decoration in the circular courtyard. Loren Partridge, in his article on the Farnese circular courtyard, brings to the fore its dynastic dimension, by interpreting the courtyard as a representational space for the display of Farnese family genealogy.⁴³ Partridge includes a complete listing and scheme of the coats of arms displayed along the wall. The Farnese are represented with the two great powers in European politics, the Hapsburgs and the French Valois, to whom they were related through marriage. All other marriage connections are represented, including the Orsini, Aldobrandini, and the Portuguese monarchy. These marriages were

⁴³ Partridge 2001, 259-278.

also celebrated, with emphasis on the historic dimension, in the frescoes of the Room of the Farnese Deeds on the piano nobile. There, large panels of painted scenes present the Farnese family in an international context. Their illustrious members were represented as the key players and mediators of the two ongoing rivalries, France and the Hapsburg Empire, in the events that shaped the history of early modern Europe. The purpose of Partridge's article was to demonstrate that the circular courtyard was intended as the culmination of the villa's entire decorative program.

Partridge interprets the illusionistic pergola within the framework of Christian symbolism and dynastic propaganda.⁴⁴ According to his interpretation, the decoration of the circular arcade would have been primarily a didactic one. The eagle (1W) was a symbol of Christ, and also stood for Paul III. The turkey (1W) from the New World represented the expansion of the Christian world. The cock and turtledove (1W) imply vigilance and love. The owl, dove, hawk and swallow (1W) symbolize wisdom, victory and redemption. The cat with a mouse in its mouth (1W) and a serpent (4W) represent the sin of mankind. The depiction of the cat bears a striking similarity to Giovanni da Udine's cat, also with a mouse in its mouth, in one of the vaults painted as a pergola in the First Loggia of Leo X, and suggests a possible influence or inspiration. The leaves that have colored (10W) imply the cycle of the seasons, the passage of time, and the inevitability of death. Pomegranates symbolize the Church through which atonement is achieved, the white and red roses the purity and the suffering of the Virgin, the embodiment of the Church. Small generic birds and butterflies are age-old symbols of liberated souls. The impressive scale of the courtyard space, with the painted pergola studded with emblems of Christian symbolism, matches the solemnity of the dynastic display of the coat of arms.

Partridge's interpretation of the Farnese painted pergola points to an important iconographic dimension that probably concerned all painted pergolas created at the time. The depicted plants and birds were not just scientific species as the modern viewer would imagine, but each of them was coded with various symbolic meanings and cultural

⁴⁴ Partridge 2001, 277-278.

connotations, which the contemporary viewer would have understood or tried to decode. Christian symbolism would have played an important role in such iconographic schemes, as Partridge demonstrated in his article, given the fact that the painted pergolas were all commissioned by the princes of the Church. However, we must not leave unnoticed the other semantic layers, probably equally as important as the Christian one. There is no doubt that the Christian interpretation would have been particularly important, but contemporary viewers may not have been entirely dominated by it. The depicted objects may not have been seen simplistically as expressing only a single meaning, but as a more complex combination of multiple meanings.

An additional framework of interpretation would have been provided by the reference to the antique. As Partridge also acknowledges it, the eagle is not only a symbol of Christ, but also of Jupiter, the latter referring to Pope Paul III as the Guardian of the Church.⁴⁵ The butterflies represented fluttering souls in antiquity, and would also have been seen in connection to antique scroll reliefs peopled with small everyday creatures including butterflies. Roses would have been seen in association with the notion of beauty and love, as they were traditionally flowers associated with Venus, the goddess of beauty and love. Oranges would have evoked the myth of Hercules and the golden apples of Hesperides, and the notion of deification by means of virtue. The vine would have evoked, not only the wine in connection to Christian symbolism, but also ancient Roman villa life and agricultural production, already familiar among the cultured class through ancient Roman agricultural treatises. The space of the circular portico was obviously intended as a promenade, evocative of the peripatetic tradition and the ancient Roman experience of leisurely walking in a portico or cryptoportico.

A third framework would have been the evocation of the rustic setting, the vernacular culture, and the connection to the larger landscape. The decoration which shows domestic species of plants and animals commonly found in the countryside, as well as the familiar forms of trelliswork, as we have examined above, suggests that the illusionistic pergola on the vaulted ceiling may also have been intended to create an

⁴⁵ Partridge 2001, 278.

agreeable sensation of being in the countryside. The illusionistic pergola is suggestive of the rural setting and the daily life of the villa and the countryside. The birds and plants depicted in the pergola featured common species associated with the quotidian of life in the countryside. The decoration may have been intended to represent the essence of villa experience, and can be considered a prelude to the expanding vista over the countryside to be offered in the loggia of the piano nobile. Arditio relates that one then ascended the ceremonial spiral staircase, the Scala Regia, to the piano nobile. The circular arcade on the piano nobile was decorated with grotesques and niches accommodating busts of Roman Emperors. He comments on the loggia, which is currently called the Room of the Hercules, and the view it offered over the town of Caprarola extending to the surrounding countryside. In many ways, this loggia presents a parallel to the Salone on the garden level of the Villa d'Este at Tivoli. At Caprarola, the space was used for dining, and like the Salone at Tivoli, it contained a fountain by Curzio Maccarone (fig. 6.69). The fountain was decorated in mosaic and colored stucco and featured a sleeping cupid in a riparian landscape. At Tivoli, the fountain, an element evocative of the outdoors, was brought inside a room at the garden-level. At Caprarola, the fountain was brought into the piano nobile, but which, due to the sloping terrain, was also the level providing access to the compartment gardens. Thus the loggia at Caprarola had a close connection with the outdoors, through direct access and the views it offered. In addition to the real views, those of the town of Caprarola and the surrounding countryside, the loggia at Caprarola also featured painted views of Farnese landholdings. The importance of Parma and Piacenza were emphasized by their representation in lunettes. Other feudal holdings and towns in the region with crucial importance in the history of the family were Castro, Capodimonte, Marta, Isola Bisentina, Canino, Fabrica, Ronciglione, and Caprarola itself, represented in square frames on the walls of the loggia. The ceiling was decorated with a mythological painting depicting the Herculanean origin of the Lake of Cimino (currently Lake of Vico). The loggia was consistent in its topographical content and presented a visual overview of the territorial possessions of the Farnese. The representation of family

landholdings was an important tradition of Renaissance Roman villas.⁴⁶ In this sense, the loggia finds a parallel not only in the Salone of the Villa d'Este at Tivoli, where, in addition to the self-portrait of the villa, was represented the Este estate on the Quirinal, but also in the loggia of the Palazzina Gambarà at the Villa Lante at Bagnaia, where not only properties of the family proper but also of those in the possession of related families were represented.⁴⁷ The notion of the view and its metaphoric meaning, the connection to the larger landscape, and the experience of nature would have provided an important framework for the interpretation of the illusionistic pergola.

My intention is not to lessen the contribution of Partridge's dynastic interpretation of the Farnese ground level circular portico. Nor do I intend to put more weight on the rustic aspect of the space decorated by the illusionistic pergola. Rather, I would like to emphasize the hitherto unnoticed significance of the illusionistic pergola in the pictorial decoration of the period, given the fact that it was considered an artistic form noble enough to adorn such an important representational space. The acknowledgement of the illusionistic pergola as a worthy form of decoration for a space for dynastic display was also observed in the Villa Giulia. In either case, its significance was derived from its connection to the antique, and rests on the familiar discourse of classicism as an effective tool of dynastic propaganda. This understanding of the illusionistic pergola by patrons of the second period is worth noting, as changes in this attitude will be observed in the third period.

Green architecture at Caprarola

In the remaining pages of this chapter, it is necessary to examine other forms of vegetal structures, both fictive and real, in the villa, in order to understand the broader context in which the illusionistic pergola was created and experienced.

The Corridor of the tower, between the Room of the Solitude and the Cabinet on the piano nobile, is painted with an illusionistic bower (fig. 6.70). The decoration has not

⁴⁶ Cf. Coffin 1989.

⁴⁷ The loggia of the Palazzina Gambarà at the Villa Lante at Bagnaia contained representations of the Villa Farnese at Caprarola, the Villa d'Este at Tivoli, in addition to the self-portrait of the villa itself.

been mentioned in any of the works on Caprarola, and the artist is yet to be established. On the wall are depicted trees at regular intervals, whose foliage is joined above to form a natural bower overhead. On the lower part of the wall are depicted yellow curtains, evocative of the ancient Roman Fourth Style paintings. The trunks of the trees are concealed behind those curtains, and the curtains' drapes are depicted as though they were pinned to each of the tree trunks. Branches grow from the tree trunks in symmetrical manner, and intertwine with those of adjacent trees, forming a pattern similar to that of a trellis. The intertwined branches are further bound together with thin golden ropes, which form intricate knots of a floral pattern. These knot patterns are called interlace or knotwork in decorative art, and form a distinct group of ornamental motifs.⁴⁸ On the ceiling, the dense foliage is pierced by a series of oculi, showing a glimpse of the pale blue sky. The oculi are framed by the knot patterns of the golden ropes. At the center of the ceiling is depicted the Farnese coat of arms (fig. 6.71). The decoration resembles that of the ceiling in the Sala delle Asse in the Castello Sforzesco to be coincidental. In the Sala delle Asse, Leonardo has painted a forest of mulberry trees, whose trunks and foliage forming a bower appear as though they were columns and the ceiling supported by them (fig. 6.72). In the fresco at the Villa Farnese, the depiction of the tree trunks, the intertwining branches, the intricate knot patterns of the golden ropes, the sky glimpsed through the dense foliage, the species of the tree, and the way the leaves are depicted, some in darker and some in lighter shades of green – are all too similar to Leonardo da Vinci's decoration. The artist would have been one who was familiar with Leonardo's decoration, and one who was trained in the northern Italian painting tradition. This tree chamber type decoration does not appear to bear a direct connection to those of the adjoining rooms. The adoption of this type of decoration in the Farnese palazzo appears to be a reference to the baronial tradition to which the Farnese family would have aspired.⁴⁹ The illusionistic bower or tree chamber type decoration appears to have been influenced by Crescenzi's description of the tree chamber in his *Libro della agricoltura*, in which he discusses gardens for kings and aristocrats. The painted trees with their

⁴⁸ Cf. Gruber 1994, 21-112.

⁴⁹ I am grateful to Mirka Benes who suggested the idea.

foliage were clearly intended to create the illusion of an architectural space. Giovanvettorino Soderini mentions a series of room-like spaces all made of vegetation.⁵⁰ This kind of transposition of design ideas between architecture and garden may in fact have been a familiar notion at the time.

This illusionistic bower can be interpreted within a distinct tradition of knotwork, discussed by Gruber in his chapter on knotwork or interlace in *The History of the Decorative Arts: Renaissance and Mannerism in Europe* (1994).⁵¹ In the Sala delle Asse in the Castello Sforzesco, Leonardo painted an illusionistic bower formed by the foliage of trees with delicate golden ropes or ribbons. Not only the ropes but also the branches are interlaced in various patterns. The golden ropes are knotted in elaborate patterns, some exhibiting floral forms, some seemingly replicating the pattern of interlacing of the branches. In addition, a set of six plates (c. 1498-1500) showing different interlace patterns, probably engraved by one of Leonardo's students, have survived. Gruber suggests that these were most likely visual exercises in the studio.⁵² Leonardo's preparatory drawings for the painting *Leda and the Swan* further reveal his interest in knotwork, in the study of braids for Leda's hair. Knotwork or interlace was also an interest shared by Leonardo and Dürer.⁵³ Dürer, who traveled to Italy twice early in his

⁵⁰ Soderini, *Trattato degli arbori*, 1904, 244-245: E [se] possi avere uno spazio di sito capace d'assai, accomodisene uno piccolo appartato per l'uso della casa piu familiare e vicino, pieno dei piu pregiati arbori che si ritrovino; e l'altro, ove si possi piu lontano, si facci grande et agiato, piu all'aperto e piu universale, facendovegli compartire dentro da quelle parti che venghino meglio accomodati, e piu a ridosso e difesa dei venti maglini o cattivo aere delle selve; [con] spelonche, laghi fatti a mano, fonti in grotte adornati e con disegno ripieno abbondante di prati, vivai e boschetti dei piu pregiati arbori di verdura, come lauri, cerasi di Trabisonda, o, se lo comporti il paese, d'ogni sorte agrumi e altre delizie, con pergole, spalliere, cupole, padiglioni d'arbori, di olmi, mori e quercie, sulle piu importanti vedute formate in vari garbi col gastigo de' legnami che gli guidino a che foggia altrui vogli, non che altro d'un tempio, d'in edifizio, o piano a coprire a uso di pergola, e con capanne coperte di varie sorte d'arbori e passeggiate et anditi similmente coperti di tutte sorte di questi, piegati di sopra in volta di mezzo cerchio, e finalmente un ordine di stanze rivestite di verdura, ordinate in maniera, che nei piu bassi e concavi luoghi e freschi, per l'estate ombrosi, rassembrino un gran palazzo e spazioso, quale si vede oggi in Roma, nella Vigna Estense. Ne vi manchino pilastri, colonne proporzionate fasciate d'ellera, muri di lentaggine, gelsomini e periploca rinvestiti, con le sue camere, sale, salotti, loggie e cucine tutte dalle bande, e di sopra rinvestite di varie sorte di verzure, che tutto si puo fare secondo il giudizio di coloro che di quest'arte, che gli antichi chiamavano Topiaria.

⁵¹ Gruber 1994, 21-112.

⁵² Gruber 1994, 26.

⁵³ Gruber 1994, 26-27.

career (1494-1495 and 1505-1507), during his second trip, most likely saw Leonardo's knotwork prints. Inspired by them, he made knotwork engravings of his own (c. 1506-1507).⁵⁴

Knotwork was in fact an important motif in the Renaissance, and a number of other northern and central Italian artists have shown interest in it, including Andrea Mantegna and Correggio. Mantegna painted the ceiling of the Camera degli Sposi (1465-72) in the Palazzo Ducale in Mantua with an illusionistic balustrade of interlacing patterns, and later painted the *Madonna della Vittoria* (1495-96, Louvre) with a pergola made of festoons above and an interlace motif as a halo behind the Madonna. Correggio's decoration in the Camera di San Paolo (1518/1519) is a painted dome of trelliswork secured with interlace ribbing. As is apparent in these works, there is a strong connection between knotwork and gardens. Although a highly abstract motif by the sixteenth-century, knotwork may originally have developed from vegetal motifs such as acanthus scrolls. The design of compartments or parterres in gardens was also based on interlace patterns. Gruber points out that "garden pavilions and sheltering bosquets were often composed of trellises covered with greenery, fruit, and flowers held in place by knotted ribbons in interlace patterns. These ephemeral structures, generally left standing but a few hours or days, now survive only as depicted in paintings and *trompe-l'œil* decorations."⁵⁵ This statement raises an important issue concerning ornaments and furnishings in Renaissance gardens. Pergolas and pavilions in Renaissance gardens have been understudied, because of the very fact that few physical traces survive. If forms in other artistic categories would provide a clue, the examination of them would serve in the reconstruction of such ephemeral ornaments and structures that have long since vanished.

To come back to the Villa Farnese at Caprarola, another illusionistic pergola is found on the vault of the Fountain of Venus in the so-called Winter Garden, one of the two compartment gardens symmetrically located on the north and west sides of the palazzo. This garden, the one on the north side, was the garden of the summer

⁵⁴ Leonardo's knotwork prints (ca. 1498-1500) are in the Bibliothèque Nationale. The Boston Museum of Fine Arts has a set of Dürer's knotwork prints. cf. BMF Invs. 38.1744.1-6.

⁵⁵ Gruber 1994, 78.

apartments. At the end of the axial path leading out from the palazzo was the Fountain of Venus with a vault decorated as an illusionistic pergola (fig. 6.73). Arditio gives us a full description of the fountain, but does not include details of the vault decoration.⁵⁶ From what has survived, we can distinguish a pergola formed by fruit swags with an oculus at the center, and four arched openings alternating with four rectangular openings around it, showing the blue sky beyond. The oculus is framed by a circular wreath made of various fruits, evocative of the festoons by Giovanni da Udine in the Farnesina loggia. The bands that separate the lateral openings show scale patterns, frequently used in the illusionistic pergola in the circular portico. We can also distinguish vine, melangoli, apples and pomegranates, which were also depicted in the illusionistic pergola of the circular portico. Each of the openings appears to contain a bird: an owl in the oculus, and a red turkey, a white parrot, and another white bird in the lateral openings.

The Winter Garden did not have a real pergola, probably because of its location on the north side, or its use in the winter season, which made such a structure unnecessary. The Summer Garden had a real pergola covering the axial path that led from the palazzo to the Fountain of the Deluge on the rear wall. This was not a cruciform pergola, as it did not have the transverse arms. From the fresco in the Palazzina Gambarà, we see that it had an octagonal pavilion at the center (fig. 6.42). The construction of this pergola is documented in the “Libro delle misure del’Illustrissimo et Reverendissimo Farnese a Caprarola.”⁵⁷ In the Farnese archives, the Summer Garden is referred to as the “giardino nuovo” and the central pavilion as the “tribuna.” This suggests that it was laid out after the Winter Garden. Arditio observes that this garden was not yet completed at the time of his visit. From the archival description, the pergola in the Summer Garden

⁵⁶ Orbaan 1920, 380: In questo giardino sono tre fonti: la prima e principale e dall parte opposta alla porta de dove si entra, in capo del viale di mezzo dentro ad una loggietta quadra coperta di sopra a padiglione, tutta dipinta, con tre portoni che la chiudano, ove e un bellissimo nicchio ed in esso una Venere di marmo ignuda con due figurine da i lati, fatte per termine, posta sopra un monte ornato di pumici, coralli et varie conchiglie marine, et tenendo un catino con ambe le mani, dal cui fondo sorge un grandissimo bollor d’acqua, si bagna tutti.

⁵⁷ ASR Camerale III 518, 45r (July 16, 1563): per haver piantato 14 colonne di legno e’ murate per la pergola acanto la Fontana alto l’una piedi 22, per haver tirato il tufo in opra 11 archi di legname sopra dette colonne larg l’uno di uomo piedi 20 eccetoli doi che fanno la crociera; 115v (November 13, 1573): P haver messo 16 archareggie p la tribuna dl giardino novo cio 8 curitate (dentate?) et 8 messe sopra l’una lunga piedi 20.

appears to have been one supported by wooden columns. The fresco in the Palazzina Gambarà shows a barrel-vaulted form for the tunnel structure. The arched roof would have been made of separate timber ribs that had been attached in one way or another to the wooden supports, and then covered with vegetation. The archives mention the “archareggie,” which would have meant the arched ribs of the dome of the central pavilion. Arditio also mentions another pergola supported by satyrs in front of the Fountain of the Deluge.⁵⁸ This pergola is also known from a print by S. Zucchi (1728) (fig. 6.43).

Caprarola had a number of other pergolas and similar vegetal structures that are worthy of mention. Arditio describes vine pergolas located between the two compartment gardens, the Summer Garden and the Winter Garden.⁵⁹ He mentions the agreeable shady walkway created by the foliage of the various species of trees, juniper, elm, and fir among them, and the pergolas covered with vine. Finally, he mentions an interesting structure made of vegetal materials.⁶⁰ He describes it as surrounded by large, tall chestnut trees, whose branches or foliage above were bound together to form a dome. The entire structure was covered by ivy among other vegetation. This type of tree chamber was also mentioned in Crescenzi’s treatise. It may have been intended as a real counterpart to the painted bower creating an illusionistic tree chamber in the corridor of the tower. It is also

⁵⁸ Orbaan 1920, 385: Il giardino di questo appartamento e fatto di novo et pero non e ancora stabilito bene. All’entrar che vi si fa per la porta della camera et per il ponte si ritrovano due statue di donne, come ne l’altro, dopo le quali e un alto et bellissimo pergolato assai spatioso, che copre tutto il viale principale, in capo et faccia del quale e un altro bellissimo sostenuto da sei grandi satiri et huomini salvatici con varie caverne che si distenda in infinito, tutto fabricato di tartari e di pumici, che sembrano veramente quivi prodotto dalla natura e da l’acqua, che continuamente quivi piove tra le pietre, che discendendo con gratissimo mormorio, viene a fermarsi in una peschiera, dove sono alcuni scogli vestiti di musco, di giuncho, d’edera et altre herbe, intorno a quali guizzano molti sorti di pesce.

⁵⁹ Orbaan, 1920, 386: Tra questo giardino e l’altro del primo appartamento, che confinano – e si va da questo a quello per uno bellissimo portone – si sale per molti gradi a un monte, non molt erto, ma tutto serrato et unito con detti giardini, dove sono bellissimi vie coperte di ombre, con buschetti di ginepri et piantate d’olmi, d’abeti et d’altre sorti di alberi dirittissimi con varie pergolate d’uve.

⁶⁰ Orbaan 1920, 386: Da una parte e una spatiosa piantata d’arbori, di castagni, compartiti insieme con equal ordine et misura. Da l’altra si fa hora un barco da mettervi animali et vicino alla sommita del monte e un bellissimo piano circondati da grossissimi et altissimi arbori di castagni, serrati intorno da cerchiate, vestite di edera et altre verdure.

evocative of the green structures depicted in late sixteenth- to seventeenth-century Dutch garden prints.⁶¹

The Villa Farnese at Caprarola appears to feature the largest number of pergolas and related structures, in both real and painted form, of any of the sixteenth-century villas in the environs of Rome. Being a villa, it is not entirely dominated by high culture, like the Palazzo Farnese in Rome. One of its interesting aspects is that of being a showcase of villa culture, where various forms of pergolas were created and displayed. The species of plants or birds that appear in these real and fictive pergolas were familiar in rural life. The ingenuity of their design lay more in the combination of common elements in the rural sphere to create spaces in which a new way of the experiencing nature would have become possible. In this sense, the pergolas at the Villa Farnese at Caprarola anticipate those depicted in Dutch garden prints. There may also have been an emulation between the Farnese and the Medici, who were also interested in vegetal structures in gardens. In the Medici Garden at Castello, there was a tree house, which also included “water follies” (*giochi d’acqua*). Giovanni Guerra’s drawing of the Medici villa at Pratolino shows a tree house, where several women are enjoying the outdoors. If the real pergolas at the Villa Giulia and the Villa d’Este at Tivoli can be characterized as high architecture in rural dress, those at the Villa Farnese at Caprarola would be rustic architecture reinterpreted through the aesthetics of high taste.

This aspect of the Villa Farnese at Caprarola is all the more remarkable, considering the general tendency of the dynastic character of the fresco decorations in the palazzo. De Grazia has characterized the decoration of Caprarola, which was realized under the patronage of Alessandro Farnese, as dynastic and didactic.⁶² Religious, mythological, and historical themes that enhance the family’s prestige dominate the decorative program of the palazzo. In contrast, the decoration of the Palazzo del Giardino

⁶¹ Johannes Sadeler’s print, “La Primavera (Castle with pleasure garden) after Hans Bol” (Blanton Museum of Art, Austin TX 2002.1641), shows a dome-like pavilion covered entirely with vegetation, with windows on every other side, and a tree house with a circular room on top of a tree. Another print, David Vinckboons’ *Venetian Party in a Château Garden* (1602, National Gallery of Art, Washington D.C. 1986.76.1), features a variety of vegetal structures including tree houses, L-shaped pergola walkways, dining pavilions covered with vegetation, gondolas equipped with pergola-arbors.

⁶² De Grazia 1991, 50-51.

at Parma, realized under the patronage of Ottavio Farnese, was more inclined towards pleasure and amusement. However, the examination of the pergolas at Caprarola has shown that the aspect of pleasure and amusement was not altogether absent. The pergolas, in the manner of the *giochi d'acqua*, were intended to provide an agreeable and enlivening outdoor experience. This was achieved often in unexpected ways through the combination of common elements in the rural setting. The pergola was created as a rustic structure par excellence, but one possessing a distinctive aesthetic serving as a worthy counterpart to the high culture of the urban sphere. The appreciation of rusticity as an aesthetic comparable to the sophistication of urban culture would be a recurring theme in the history of the pergola.

THE ILLUSIONISTIC PERGOLAS IN ROME AND ITS ENVIRONS III: 1600-1620

In the 1590s, little more than a decade after the decoration of the circular courtyard at the Villa Farnese at Caprarola, we see the appearance of the illusionistic pergola at the center of the city of Rome. Thus, our story of the third period will begin from the 1590s, notwithstanding the time frame of 1600-1620. The loggia on the piano nobile of the Palazzo Altemps was decorated with a fresco depicting an elaborate wooden structure covered with vine, adorned with vases of colorful cut flowers and peopled with putti and birds. The Altemps pergola still retained the traditional meaning of the illusionistic pergola - the didactic, spatial and classical connotations. It was a semi-interior space, a loggia opening onto the courtyard. It was a space for the display of antique busts of Roman Emperors, thus a museum of antique sculpture. And it was also a display space for the Altemps family's ties to other prominent aristocratic families through marriage, by means of the coats of arms depicted on the walls. In that sense the Altemps pergola can be considered a continuation of the style and meaning of the painted pergolas of the second period. However, it was a novelty in that it was created within the boundaries of the city, at the very center of the city. Its attention to details, especially in the depiction of the flowers and the elaborate design of the pergola structure, signals a significant change and a marked departure from the traditional form of the painted pergola, anticipating the new trend of those that would follow. Again we see a proliferation of illusionistic pergolas in a concentrated period of a few decades, starting from the turn of the seventeenth century until about 1620. The third period of the creation of the illusionistic pergolas can be characterized by the following: 1) location in the city; 2) non-papal or non-aristocratic context; 3) smaller scale; 4) emphasis on the ornamental

aspect and precise representation of the floral species; 5) loss of central role in the spatial design of the site.

Real pergolas continued to exist in gardens in Rome and its environs in the seventeenth century. Matteo Greuter's panoramic view of Frascati (1620) shows the Villa Belpoggio with an elaborate pergola composed of three parallel walkways, each equipped with a domed pavilion midway (fig. 7.1). A pergola covered with thick vegetation is depicted in Joseph Heinz's view of the Villa Borghese (1625) (fig. 7.2). In Ferrari's *Hesperides* (1646), there is mention of citrus species trained on a pergola in the garden of Cardinal Pio Carlo Emmanuele,¹ a common practice in the seventeenth century. Notwithstanding the fact that the real pergola was a costly structure in terms of maintenance and required constant inspection and care, it seems to have been a popular and convenient means of display of the sought-after species of plants. The emphasis may indeed have shifted to the species of the plants displayed, from the experience of the rustic ambiance gained by the walking through of a treillage structure covered with vegetation. For in the previous periods, the typical species of plants trained on pergolas were the vine, roses, and jasmine, and had been so since the Middle Ages. However, none of the gardens in Falda's *Li giardini di Roma* (1676) are depicted with a pergola. Instead, large spaces of plantings and groves, aviaries, ragnaie, fountains, and long avenues that connect the various areas of the garden appear to be the featured characteristics of each estate. In many of the gardens, including the Quirinal Garden, the Villa Borghese, the Villa Ludovisi and the Villa Pamphilj, we see a marked emphasis on trees and areas with regular rows of planted trees. Moreover, the planted areas have increased to the point of occupying the majority of the estate. The enclosed gardens that accommodated the pergolas, herbs and flowers, usually located close to the casino, have become no more than a small unit within the vast estate. The scale of the garden has changed, and we

¹ Ferrari, *Hesperides*, 1646, 145: in hortis Caroli Emmanuelis Cardinalis Pij, veterum certaminum voluptatem proximo amphitheatro non inidentibus: quod in ijs Pomonae cum Flora innocens est & voluptarium perpetua de amoenitate certamen. Mediam illic palmis circiter ducentis longe procurrentem pergulam contexunt trabeculae duae ac triginta, in quadrum dolartae, summa in parte circulo duplici praeferratae, atquae opere caementitio stabilitae: his praeterea infixi ad sublimem concamerationem arcus serrei, transuersique asserculi binos inter palmos cancellatim adiuncti. Haec autem pergula, intermicantis aurei mali viridissimo vestitu nitide opacata, sub tegetibus magnifice hibernat.

notice the preference for a different kind of spatial experience than that of the compartment garden with a cruciform pergola.

The painted pergolas do not appear to have received the same degree of attention as in the previous periods. The spatial meaning, the iconography, and the classical connotation of the illusionistic pergolas which once constituted their essence – the ambiguity of their location between the indoors and the outdoors, the depiction of various species of plants and birds in realistic manner, and their reference to antiquity through the depicted nature motifs and the kinesthetic experience of walking – became less important and were eclipsed by other design concerns. The very fact that the pergola was used to decorate the intrados of one of the arches of the loggia at the Palazzo Giustiniani-Odescalchi at Bassano Romano² (fig. 7.2) indicates that the painted pergola in this case was nothing more than a decorative motif.

This significant change in the meaning of the painted pergola may be due in part to the rise of new families who sought to establish their standing in the papal capital in ways different from their predecessors. During the previous periods, the artistic patrons were the families who already had a significant presence in the papal capital, namely the Medici, the Este, and the Farnese. They sought to express their social status mainly through an iconographical approach to architecture and gardens. Around the turn of the seventeenth century, we see the emergence of new families who experimented along alternative avenues in the expression of their upward social mobility. The Borghese, followed by the Barberini, Ludovisi, and the Pamphilj, looked to the Farnese, the Medici and the Este as models, and continued to regard architecture and gardens as tools for consolidating and enhancing their social status in the capital. However, instead of the traditional iconographical approach to architecture and gardens, they turned to large-scale landowning as their primary tool for social stability. The Borghese unified the pleasure villa and the pastoral economy on an unprecedented scale.³ Landowning was investment

² I owe this information to Michael O'Neill. The intrados of the right arch of the three-arched loggia is decorated with a pergola motif. Bureca's work on the Villa Giustiniani at Bassano Romano briefly touches on the decoration of the loggia, but no mention is made of this small detail of a pergola. Cf. Bureca 2003, 151-152.

³ Ehrlich 2002, 197-201.

in social status, and had always been part of the aristocratic strategy for the stabilization of power, but never in Rome had it been exercised on such a vast scale. The great expanse of landed estates suggested that the outdoors could now be experienced on a spectacular scale. This also brought about a significant change in garden design, where large-scale parks entered into fashion. The spatial experience sought after in these large-scale park gardens was entirely different from that of the intimate space of gardens of the previous periods. The pergola, whose existence depended largely on the preference for an intimate spatial experience, appears to have ceded the place to other design features such as grand staircases and monumental fountains. The pergola could be constructed on a monumental scale rivaling an architectonic arcade or a building-lined street, but apparently it could not measure up to the sensibility corresponding to the vast scale of landowning practiced by the new social elites. The emerging generation of the landed class no longer invested meaning in the possession of the illusionistic pergola, and such decorated semi-interiors were no longer used as focal spaces of dynastic display. Interior decoration that evoked the outdoors started to take on an even bolder form of illusionism – one that created the sensation of the entire interior space as being immersed in nature.

Design elements previously considered as pertaining to a rural atmosphere came to be introduced in the city. In the post-Tridentine era, after refraining from sumptuous decoration during the pontificates of Gregory XIII and Sixtus V, from under Clement VIII Aldobrandini and his cardinal nephew Pietro Aldobrandini, luxury and pompous display started to be more overtly pursued. Within this new trend of the Baroque era, the illusionistic pergola lost its ambiguous spatial meaning, but started to mediate a new aesthetic that corresponded to the sensibility of the era. There was more interest in the formal qualities, the design component, and the fashionable appearance of the decoration, than in the didactic, spatial and classical connotations it formerly carried. There was experimentation in the painted form of the pergola, especially in its materials: not only carpentry structures but also open lapidary forms were depicted. The most recent developments in horticulture and the art of treillage were reflected in the painted decoration. As rustic structures such as the aviary transformed itself into highly

sophisticated architecture in this period, so too the illusionistic pergola was sought after not so much for its rustic origins or antique connotations but as a form of visually appealing decoration that had great potential for the expression of sophisticated taste. Rusticity in urban attire became the fashion. The illusionistic pergola was created in smaller scale than in the previous periods, and thus enjoyed a broader patronage but socially lesser than it ever did. Non-aristocratic patrons such as the painter Federico Zuccaro included them in the decorative program of his house in Rome. The decoration ceased to be a privilege of the popes and the cardinals and the aristocratic families to which it once belonged; a popularization was in progress so to speak. Its reduced scale already seems to denote that it had become a simple decorative motif; anybody who had the means and who found it appealing was eligible to use it.

Palazzo Altemps

The first instance of the illusionistic pergola created in the center of the city of Rome is the decoration of the loggia of the Palazzo Altemps on Piazza Tor Sanguigna, just north of Piazza Navona. The loggia on the piano nobile on the north side of the courtyard, articulated by five large arches flanked by Ionic pilasters on the exterior, is decorated with a painted pergola (fig. 7.3). Rectangular windows corresponding to the arched openings line the rear wall. Entered from the west end, a rustic fountain at the east end constitutes the visual focus. The entire ceiling was decorated as a vine pergola inhabited by putti and birds.⁴ The combination of the painted pergola and the fountain continues the arrangement of the ground level corridor at the Villa d'Este at Tivoli. The coexistence of the painted pergola and rustic fountains was one of the characteristics of the second period, when Curzio Maccarone, fountain engineer, was involved in the major fountain projects. The artist responsible for the fountain in the Altemps loggia has been identified as Silla Longo.⁵

At the Palazzo Altemps, the space decorated with the painted pergola has become relatively reduced in scale. Far from the monumentality of the semicircular colonnade at

⁴ Cf. Bober and Rubinstein Census 2010.

⁵ Scoppola 1987, 293.

the Villa Giulia, the corridor imitating a cryptoportico at the Villa d'Este at Tivoli, or the circular colonnade at Caprarola, the Altemps loggia is a space with an approximate length of eighteen meters and a width of 4 meters.⁶ Rather than a walking space, it seems more appropriate as a dining loggia for a small group of people. Despite its relatively small scale, it still partakes in the tradition of the loggia as a display space: twelve busts of Roman emperors line the long sides. In this sense it retains a strong connection to the porticoes of antiquity combining a promenade and a sculpture museum. Also present are elements of rusticity, namely landscape depictions, as at the Villa Farnese at Caprarola. On either side of the entry doorway, the wall is frescoed with landscapes. The painted pergola itself was once a rustic element, but at the Palazzo Altemps, it is important to note that these elements evocative of rusticity are no longer found in a rustic setting, but in the heart of the city.

The decoration of the loggia was executed under Giovanni Angelo Altemps (1576-1620). One of the artists involved was Antonio Viviani (1560-1629), as his name appears in a payment document of 1592 referring to the decoration of the loggia.⁷ Pietro Petrarola, author of the chapter on painting in the volume dedicated to the Palazzo Altemps, recognizes Viviani's style in the personifications of Fame (with trumpet) and Victory (with wreath and palm leaf) depicted at either ends of the loggia, but assumes a different hand for the depiction of the elaborate wooden framework of the pergola.⁸ For the pergola, no artist has yet been proposed. Division of labor was quite common, as later in the Loggia della Pergola of the Palazzo Pallavicini Rospigliosi, and it is possible that a painter specializing in the depiction of nature would have been responsible for the execution of the pergola component. The fresco was probably finished before the fountain, which was executed in July 1594.⁹

⁶ Cf. Scoppola 1987, fig. 99.

⁷ Scoppola 1987, 293: *Adi 2 giugno 1592 Antonio Viviani Pittore Urbinate ... a buon conto deli scudi trecento che se li deue per la Pittura che fa in una loggia del Palazzo di Roma.*"

⁸ Scoppola 1987, 226-227.

⁹ Scoppola 293: *Fontana della loggia dipinta del Palazzo di Torresanguigna di Roma di detto [5 luglio 1594] scudi quaranta di moneta per mandato numero 174 fatto a maestro Silla Longo.*"

The pergola is an elaborate structure of woodwork, borrowing decorative forms such as scrolls and balustrades from high architecture. The highly skilled craftsmanship of the structure with its fine carvings may have been an influence of the woodwork of the Tirol region where the Altemps family originated. Examples of wooden tracery, carved wood and marquetry inlay used as architectural ornaments in doorways, gables and facades are found north of the Alps, in sixteenth-century France, Switzerland, and Austria.¹⁰ As the elaborate wooden carvings and openwork in the Altemps pergola does not find a comparandum in any of the other painted pergolas of cinquecento Rome, a northern origin would be more likely.¹¹

The painted wooden ribs of the pergola framework follow the architectural lines, namely the ribs of the vaults. In addition to the carpentry framework, diamond latticework fills in the surfaces in between the wooden ribs. The pergola framework is articulated in four bays with half bays at either end. Vases are depicted in pairs in each bay: one placed above the springing point of the arches and the other at the corresponding point on the other side of the vaulted ceiling. Below each vase is depicted a bird. All four vaults are marked at the center by a wooden octagonal frame, in which are slightly smaller frames of rectangular forms, with semicircular projections in the two inner vaults and quadratura-like forms in the two outer vaults. The former is somewhat similar to the cartouche-like form in the illusionistic pergola at the Villa Farnese at Caprarola. The octagonal frames enclosing a rectangle with semicircular projections are supported by wooden ribs that bear ram's head and cherub motifs (fig. 7.4). The octagonal frames enclosing quadratura-like forms are supported by ribs in the form of a pair of hip herms with ram's heads in between (fig. 7.5). The female hip herms recall those in pergolas in Flemish garden representations and tapestries. These usually appear at the ends of the pergolas. But here they are used as part of the support for the vases, following the curved contour of the treillage structure. Birds depicted in combination with the vases and framed by these herms are represented with more emphasis than other generic birds such

¹⁰ Cf. Gruber 1994, 390-402.

¹¹ Vault IX of the First Loggia of Gregory XIII contains carved woodwork elements at the four corners, but these were painted by Matthijs Bril, a painter of northern origin.

as swallows and doves shown among the foliage. Among these birds are a cock, a turkey and a peacock. On the wooden frame of the second bay from the entrance, a macaw is shown perched, and on the frame of the third bay from the entrance, a mallard duck. The ram's head motif, representing the heraldic animal of the Altemps, is employed everywhere, perhaps in imitation of the classical motif of the bucrania. The center of the octagon is not emphasized; it only shows a cloudy sky with generic birds in flight or perched on the wooden ribs. The entire pergola is covered with exuberant vine laden with fruit. Both black and white grapes are depicted; some of the leaves have colored indicating the passing of the seasons.

The Altemps pergola shows a marked departure from its precedents in the introduction of a new element into the repertory of the painted pergola: vases with cut flowers. The flowers reflect the species that were collected and cultivated in gardens in the sixteenth century. Until the second period, the plants depicted in the painted pergolas were predominantly the vine, roses and jasmine. In the Altemps pergola, alongside these traditional plants, a number of new horticultural species made their appearance, reflecting the contemporary interest in horticulture, especially in colorful floral species. We can distinguish, apart from roses, jasmine, and myrtle, pink, white, and salmon-colored carnations and white trumpet-form flowers that resemble petunias. These colorful flowering plants are depicted, not trained on the pergola, but in the vases, emphasizing their ornamental nature. In the bays on either end, single species are displayed in vases. Nearest to the entrance, there are terracotta-colored vases with white lilies (fig. 7.6). Next there are red roses arranged in white vases (fig. 7.7). In the next two bays at the center of the loggia, we see an arrangement of multiple species in terracotta-colored vases. Red carnations with jasmine on one side, and white carnations with jasmine on the other, followed by red carnations, myrtle, and white flowers of trumpet-like form on either side (fig. 7.8). The flower of trumpet-like form may be *convolvulus arvensis*, of the morning glory family. Butterflies are depicted among the jasmine. In the next bay are white vases with salmon-colored carnations. The combination of different species of flowers in one vase perhaps reflects the birth of the art of flower arrangement, and also the theme of

flowers in vases in still-life painting. Clearly the emphasis has shifted from rusticity and the countryside to sophistication and urban taste.

The vases are antiquarian in inspiration: their form and low-relief ornamentation recall Roman cinerary urns. They are depicted bearing classicizing reliefs in two tiers; the lower tier with stylized motifs such as swags, and the upper tier with figured scenes. The vases of the two central bays are of a terracotta color; those of the two outer bays are white probably evoking marble. These vases may reflect their real counterparts designed after antique models. As demonstrated by Polidoro da Caravaggio's vases painted on the early sixteenth-century façade of the Palazzo Milesi, the Renaissance artists' interest in antique cinerary urns appears to be purely design-oriented, disregarding the funerary context of the artefact. The Palazzo Altemps vases push the trend further, through their use as ornamental vessels for the display of cut flowers. Antique-style vases, devoid of their original cultural connotations, had become a sophisticated ornament in early modern Rome.

The decoration also reflects the introduction and the diffusion of new species from the New World. In the first lunette from the entrance on the rear wall are depicted three putti playing with an ostrich, most likely perceived as an exotic creature (fig. 7.9). One has tied a ribbon around its neck, probably to serve as reins. This is evocative of *The Triumph of Winter* by Antoine Caron (ca. 1521-1599), depicting a festival entertainment at Fontainebleau (ca. 1587), which shows a chariot pulled by birds with ribbons as reins.¹² Perhaps this scene in the Altemps loggia also has a festive evocation, as well as the humor of caricature. The apparently annoyed ostrich looks back to see what the others are up to. A second putto is mounted on horseback on the ostrich, and a third is plucking its tail feathers which he has arranged in his hair. The swag and the vegetal tassels are heavily laden with fruit; the one on the right includes a pineapple, a newly introduced fruit at the time. The putto arranging feathers in his hair may have been an allusion to the custom of the Native Americans.

¹² Cf. Gruber 1994, 78.

The decoration also makes a dynastic statement in depicting the heraldic animals of the Altemps and the Orsini families, but in a different way from the previous period. In the lunettes above the entrance and at the end of the loggia, on either side of the personifications of Fame and Victory, putti are shown playing with the heraldic animals of the Altemps, the ram and bear, as Giovanni Angelo Altemps was descended from the Orsini on the maternal side. In the right lunette above the entrance is depicted the Orsini bear, which scares a prostrated putto (fig. 7.10). One putto looks upon the scene, as though to make sure his comrade is okay. The gesture of the bear was probably meant to evoke the power of the Orsini, but the bear is depicted with a human expression, as though it were one of the putti. The same composition is adopted in the left lunette above the entrance, where the Altemps ram also scares a putto lying on the ground (fig. 7.11). Another putto holds the ram back, while a third feigns a gesture of surprise. The playfulness and the light humor with which these scenes are depicted form a stark contrast with the more explicitly dynastic and didactic character of the depictions of the illusionistic pergolas of the second period.

A new feature introduced in the illusionistic pergola is the wooden supports that are depicted on the rear wall and the sidewall (fig. 7.12). In the previous periods, there was always a division between the ceiling and wall decorations: the pergola was intended only for the ceiling, and a separate scheme was devised for the walls. The Vatican Loggia and the semicircular colonnade at the Villa Giulia had grotesque decorations on the walls, which did not have an apparent connection to the painted pergolas. The pergola started to expand from the ceiling into the walls in the circular courtyard of the Palazzo Farnese at Caprarola. And at the Palazzo Altemps, the pergola shows a continuation between the ceiling and the walls: on the rear wall, beneath each vase holding colorful flowering plants, corresponding to the exterior pilasters, and at the center of the side walls, an elaborately detailed wooden support is depicted that goes all the way down to the socle. The depicted pergola is supported by four supports on the rear wall and an additional one on the fountain wall. The supports, like the pergola framework above, are made of elaborately carved woodwork with curvilinear contours, pierced with openings, through

which is shown the vine growing out of the ground. Here the painted pergola appears not as an illusionistic bower that extends overhead, but rather as a structure that creates a unified three-dimensional space. This feature is one step forward towards the decorations of the late seventeenth century, in which the ceiling and wall decorations become seamlessly merged, giving the impression of the entire room being immersed in nature. The Villa Falconieri at Frascati (1672), discussed at the end of the chapter, is a typical example.

Casa Zuccari

Soon we see another painted pergola inside the city of Rome, this time in a non-aristocratic context. The painter Federico Zuccari (1542-1609), who was employed at the Villa d'Este at Tivoli and the Villa Farnese at Caprarola, both of which featured painted pergolas, applied the decoration in his own residence. The House of Federico Zuccari on the Pincio, on the Piazza Trinità dei Monti, was built between 1591 and 1593. The decoration of the rooms was executed from 1593 to 1603 by Federico himself and his assistants.¹³ In the Casa Zuccari, the painted pergola was used for the vault decoration of the vestibule of Hercules and the adjacent room, referred to as the “loggia of the garden.” The ceilings of the vestibule of Hercules and the loggia of the garden were both decorated with a pergola covered with red and white roses. The roses are depicted with a profusion of flowers in full bloom.

In both rooms, the painted pergola served as a framing device for various scenes. In the vestibule of Hercules, the openings in the trelliswork framed scenes depicting the labors of Hercules (fig. 7.13). The central panel shows a landscape of Tivoli, with the round temple of the Sibyl. It depicts the artist at the fork in the path between virtue and vice, a variation on the familiar theme of Hercules at the fork in the road between virtue and vice.¹⁴ In the loggia of the garden, with a central panel depicting the apotheosis of the painter and the surrounding openings the personifications of the virtues, the eight lunettes

¹³ Acidini Luchinat 1998, vol.2, 200-203.

¹⁴ Acidini Luchinat 1998, 203.

show the portraits of four generations of the Zuccari (fig. 7.14).¹⁵ The central panel depicts the apotheosis of the virtuous.¹⁶ The differentiation between frames of white roses or red roses appears to be more schematic than symbolic. In the vestibule, the two large scenes on the long sides, depicting Hercules and Cacus, and Hercules and the horses of Diomedes, are framed by trellises covered with white roses, while the rest are framed by trellises of red roses. In the loggia of the garden, the personifications of Perseverance and Wisdom are framed by trellises with white roses, while the remaining figures are framed by trellises with red roses. The trellis is of the simple kind used in the painted pergolas of the first and second periods, a framework of laths with diamond latticework of thinner rods. The painted wooden ribs follow the architectural ribs, and the openings are simple squares, triangles or ovals. The birds are common species seen in everyday life, such as sparrows, but there are also impressive species such as the peacock accompanying the personification of wisdom, and the turkey beside the scene of Hercules and the horses of Diomedes. Animals such as a monkey and a marten are depicted. Above each lunette with one or more family members, a small bird is charmingly depicted.

Federico seems to have used the painted pergolas for subjects that were most important to him: Hercules, who was a paragon of moral strength, the virtues which constituted the moral standards of his life, and his family. Hercules was an important figure in the decorative programs in Renaissance villas, including the Villa d'Este at Tivoli and the Villa Farnese at Caprarola. The idea of the painted pergola as a setting for family portraits, in particular, may have been inspired by precedents such as the Farnese courtyard at Caprarola, where the painted pergola, which covers not only the annular vault but also part of the walls, served as the setting for the dynastic display of coats of arms. In that sense, the Casa Zuccari pergola reveals the pride of the patron and continues

¹⁵ On either side of the doorway appear Federico's grandfather, Taddeo Zuccari, and granduncle Angelo Zuccari, a cappucin monk. Next to Angelo comes Ottaviano Zuccari, Federico's father, with his wife Antonia and daughter Bartolomea. Taddeo and Federico Zuccari, sons of Ottaviano, follow. In the next lunette are other sons of Ottaviano, Giovanni Antonio, Lucio, Giovan Giacomo, Maurizio, and Luigi. The sixth lunette portrays Federico Zuccari and his wife Francesca Genga. The seventh lunette shows the sons of Federico – Ottaviano, Alessandro Taddeo, Orazio, and Girolamo – and the eighth the daughters of Federico – Isabella, Cinzia, and Laura. Cf. Acidini Luchinat 1998, 208-215.

¹⁶ Acidini Luchinat 1998, 209.

the tradition of the illusionistic pergolas of the second period. Federico well understood the meaning of the illusionistic pergola, and according to Roman tradition, used it as the decoration of a loggia opening onto the garden.

Villa Aldobrandini at Frascati

The Villa Aldobrandini at Frascati, called Villa Belvedere by contemporaries, was commissioned by Cardinal Pietro Aldobrandini, nephew of Pope Clement VIII Aldobrandini (pontificate, 1592-1603). The villa occupies a prominent position on the hill commanding the town of Frascati and the Roman Campagna (figs. 7.15-16). It is placed at the center of Greuter's panoramic view of the villas of Frascati (1620) (fig. 7.17). Domenico Barrière has documented the villa in a series of etchings (fig. 7.18), and Giovanni Battista Falda has created views of the numerous fountains that adorned the villa.¹⁷ Our focus of interest is a garden room referred to as the Room of Apollo (Sala di Apollo),¹⁸ in the right wing (looking south towards the hillside with the villa building at the back) of the monumental fountain complex known as the water theater (fig. 7.19). The semicircular fountain with the statue of Atlas at the center had wings on either side, and a long frieze continued from the left wing to the right wing. The frieze bore an inscription celebrating the cardinal's achievements extending the entire width of the water theater from the left wing to the right wing: the restitution of Ferrara to the Papal States, and the technical feat of bringing a large amount of water to the villa.¹⁹ The Room of Apollo (fig. 7.20) formed a pendant to a chapel dedicated to St. Sebastian in the left wing. The appellation comes from its main feature, a fountain constructed of artificial

¹⁷ Dominique Barrière, *Villa Aldobrandina Tusculana*, Rome, 1647; Giovanni Battista Falda, *Le fontane delle ville di Frascati nel Tuscolo con li loro prospetti*, vol. 2 of *Le fontane di Roma*, Rome, c.1675.

¹⁸ Also called Sala di Parnaso, delle Muse, or dell'Organo.

¹⁹ PETRUS . CARD . ALDOBRANDINUS . S.R.E. CAM. CLEM. VIII . FRATRIS . F. REDACTA . IN POTESTATEM . SEDIS . APOST . FERRARIA . PACE . CHRISTIANAE . REIP . RESTITUTA . AD . LEVANDAM . OPPORTUNO . SECESSU . URBANARUM . CURARUM . MOLEM . VILLAM . HANC . DEDUCTA . AB . ALGIDO . AQUA . EXTRUXIT. (Cardinal Pietro Aldobrandini, S.R.E. Cam., nephew of Clement VIII, after restoring peace to Christendom and reacquiring the Duchy of Ferrara for the Papal States, erected this villa as a place of repose after his work in the City, and brought the water from Mount Algido.) cf. D'Onofrio 1963, 13-15. Steinberg 1963.

rock in a niche on the rear wall representing Mount Parnassus. On the rock were the statues of Apollo and the nine Muses. The fountain accommodated a water organ.

The villa was constructed in two phases: first, 1601-1605, during the pontificate of Clement VIII; and second, 1613-1614.²⁰ The departure from Rome of cardinal Pietro Aldobrandini, who fell out of favor with the new Pope Paul V Borghese in 1605, caused an interruption in the construction, which was resumed after the cardinal's return in 1613. In the absence of relevant documents, Schwager dates the Room of Apollo to the second phase, 1613-1614, based on circumstantial evidence.²¹ Luigi Salerno argues on the contrary that it can be dated to the years 1605-1606, when Monsignor Giovanni Battista Agucchi (*maggiordomo* of Cardinal Pietro Aldobrandini), Carlo Maderno (designer of the water theater), and Domenichino (painter of the frescoes in the Room of Apollo) most likely had opportunities to convene for exchanging ideas.²² I would be more inclined to support Salerno's claim, based on the stylistic evidence of the painted pergola decorating the ceiling of the Room of Apollo.

The vault of the room is painted as an illusionistic bower of trelliswork covered with vine (fig. 7.21). The work is attributed to Domenico Passignano. The painted wooden ribs follow the architectural ribs of the vault. The vine is shown growing out of the four corners, just as in the ancient Roman mosaics depicting vine. The center of the vault and the four diagonals are covered with vine, but the remaining compartments are covered with jasmine, roses and melangoli. Birds occupy the circular or square openings in the trellis. We can distinguish an eagle, a hawk, a falcon, a peacock, a turkey, a cock, two owls, and other generic birds. A cat is also depicted, recalling the one in the First Loggia of Leo X painted by Giovanni da Udine. Falda's print is focused on the Fountain of Parnassus and shows only part of the ceiling. The Room of Apollo would have been more of a cabinet of curiosities for the display of the marvelous water-operated organ.

²⁰ Schwager 1961-62, 314.

²¹ The fact that the decorative work for the semicircular fountain and the chapel of St Sebastien took place in 1613-1614; and the fact that Cardinal Aldobrandini does not mention Domenichino's frescoes in his account of the situation (which can be dated to 1611) sent to the Duke Carlo Emanuele of Savoy. Cf. Schwager, 1961-62, 355-356.

²² Salerno 1963, 195-196.

The painted pergola would have been only one of the props for the spectacle, with the secondary function of augmenting the agreeable sensation of the outdoors.

Stylistically, this type of painted pergola finds parallels in the examples of the earlier periods. First, the wooden ribs are all depicted as simple straight lines with no curves; complex curves start appearing in the second period, most prominently in the painted pergola at Caprarola. Second, the species of plants and birds depicted here are those that appear in the previous periods; new horticultural species that characterize the third period are not present. Third, there is a clear distinction between the ceiling and the walls, and separate decorations are devised for each; from the second phase, the painted pergola begins to invade the wall, and there is a tendency of a merging of ceiling and wall decorations. Here the painted pergola is limited to the ceiling and the pronounced moldings mark the end of it. While landscape paintings by Domenichino that decorate the walls are characteristic of the third period, the painted pergola on the vault follows the earlier trend of having separate decorative schemes for the walls. These stylistic and iconographic characteristics belong more to the first and second periods. It is more likely that this pergola was created during the period 1601-1605, rather than the period of 1613-1614 when the new type of painted pergola with emphasis on the design aspect had already become the vogue.

Villa Grazioli (Acquaviva-Montalto)

The Villa Acquaviva-Montalto in Frascati, now called Villa Grazioli, was constructed by Cardinal Antonio Carafa (1538-1591).²³ The villa has frequently changed hands, which accounts for the confusing fact that the name of the villa does not necessarily correspond to the patron who executed the decoration to be discussed here. After Cardinal Carafa's death in 1591, the villa passed into the property of Cardinal Ottavio Acquaviva. Scipione Borghese acquired it in 1612, but in 1614 sold it to Michele Peretti. It remained in Peretti-Montalto ownership until Livio Odescalchi's acquisition in 1683. The Odescalchi kept it until 1833, when they sold it to the College of Propaganda

²³ Tantillo Mignosi 1980, 141-144.

Fide. In 1843 it was acquired by the Grazioli family, in whose possession it has remained to the present.²⁴ The decoration of the piano nobile, including a gallery with a painted pergola, dates from the period of Acquaviva ownership. Agostino Ciampelli (1560-1630), who entered Acquaviva service in 1601, painted the decorations on the piano nobile.²⁵ Consequently, the date of the painted pergola of this villa would fall in the first decade of the seventeenth century. Ciampelli was a painter with expertise in the depiction of fruits, flowers and animals, like Giovanni da Udine and Paul Bril before him.

In the gallery of the piano nobile, a painted pergola decorates the ceiling (fig. 7.22). This pergola is different from its precedents, as it does not cover the entire ceiling, but is reduced to a wooden railing supported by consoles which goes around the periphery of the ceiling. The majority of the ceiling space is occupied by the sky, populated by floating putti. The railing is made of wooden framework filled in with diamond trelliswork, and is covered with exuberant vine. The trelliswork has oval and diamond openings at intervals, where birds are shown perched. Large birds such as a peacock are perched on the top of the railing, together with the putti.

Instead of the traditional bower that covers the entire ceiling, the Acquaviva pergola opens up the trellis towards the sky. A similar type of sky-open illusionistic pergola is found in the Grotta della pioggia in the Horti Farnesiani.²⁶ A painted stone balustrade surrounds the ceiling behind which rises a pergola articulated by arches. The pergola is covered with vine with leaves and fruit. A cohort of musicians perform various instruments against the balustrade; the center of the ceiling is open suggesting the sky. Painted pergolas usually had oculi, showing glimpses of the sky. Before the painted pergola, painted vaults often had an oculus – for example, Mantegna's Camera Picta at Mantua – which revealed part of the sky. The Acquaviva pergola expands the oculus to the point of occupying far more space than the trelliswork. The structure that was meant

²⁴ Currently it has been transformed into a luxury hotel, the Park Hotel Villa Grazioli, of the group Relais et Châteaux. Cf. <http://www.villagrazioli.com/italiano/gallery.html>

²⁵ Tantillo Mignosi 1980, 147.

²⁶ Cf. Morganti 1990. Alessandro Allori's decoration at the Palazzo Pitti also showed a sky-open balustrade. Cf. fig. 6.17. A similar type of sky-open vaults may also be seen in the Genoese and Veneto gardens, and in the Borghese sphere (reference from Mirka Beneš).

to provide cover has shrunk, and the sky has become the predominant feature overhead. This pergola seems to indicate the direction in which the painted interior would go. Later in the century, the entire interior would be decorated as though it were the outdoors, as in the Stanza della Primavera at the Villa Falconieri at Frascati.

Palazzo Pallavicini Rospigliosi: Loggia della Pergola

The so-called Loggia della Pergola is today part of the Palazzo Pallavicini Rospigliosi on the Quirinal. At the time of its creation, the property belonged to the Borghese. It was located across the Piazza di Monte Cavallo from the Quirinal palace, where the Pope resided during the summer, and included the ruins of the Baths of Constatine within its confines. Currently a roughly triangular plot defined by the Via della Consulta, Via XXIV Maggio and the Via Nazionale, the Borghese estate on the Quirinal originally extended beyond the Via Nazionale, the construction of which in the 1870s destroyed the lower garden.²⁷

The Loggia della Pergola derives its name from its decoration of a pergola covered with vine and peopled with birds and putti (fig. 7.23). It was one of a series of garden loggias created by Scipione Borghese (1576-1633), nephew of Pope Paul V Borghese (pontificate, 1605-1621), from 1610 to 1616.²⁸ The creation of this loggia consisted in a remodeling of a pre-existing building on the property. The building belonged to Patriarch Fabio Biondo, the pope's *maggiordomo* and prefect of the Apostolic Palaces, which Scipione Borghese acquired in 1610.²⁹ The artist responsible for the pergola decoration has been identified as Paul Bril, from payment documents

²⁷ M. Moretti, *Tronco inferiore della Via Nazionale*, Archivio Capitolino, Roma, reproduced in Hibbard 1964, fig. 2. The lost lower garden is documented in an anonymous view showing the east side of the Borghese estate on the Quirinal (Vienna, Graphische Sammlung Albertina, It. Az. Rom. 1255).

²⁸ On the Quirinal villa of Scipione Borghese, see Hibbard 1964 and 1971; Negro 1996. The ownership of this property changed frequently. In 1616, even before it was completed, Scipione sold it to Giovanni Angelo Altemps. In 1619 the Altemps sold it to the Bentivoglio. In 1641 it entered the possession of Cardinal Mazarin, and in 1686 it passed into Rospigliosi hands. Of the former Borghese garden loggias, the Casino dell'Aurora is open the first day of every month with free admission. The Loggia della Pergola is located in a wing in the present Palazzo Pallavicini Rospigliosi; the ground and third floors are the property of the Confederazione Nazionale Coltivatori Diretti (Coldiretti). Cf. Negro 2003, 100, n.2.

²⁹ Negro 2003, 88.

referring to the loggia.³⁰ Bril painted the treillage structure covered with vine and the horticultural and ornithological species, and Guido Reni painted the putti. The work was executed in 1610-1612.

Although the pergola is open to the exterior only by means of three arched openings, it is composed of five bays on the long sides and two bays on the short. It results from this that there would be two lunettes on the north and south sides, five on the west side, and two at either end of the east side, the one open to the garden. These lunettes bear the landscapes painted by Paul Bril. The treillage structure of the painted pergola exhibits alternate patterns of four concentric circles and octagons. The main ribs, painted as sturdier timber frames, correspond to the architectural ribs of the vaults. The timber ribs of circles and the octagons are connected with a latticework of lighter coppice poles bound by withies in the manner of a cobweb. The vine, with black and white grapes amidst lush foliage, is depicted in a manner commonly observed in painted pergolas. The vine leaves are painted in different shades of dark and light greens, and there also appear to be a few colored leaves. The relatively simple structure of this pergola is closer to the more traditional Aldobrandini pergola than to the elaborate treillage of the Altemps pergola formed by complex curves. The depicted birds are also traditional species observed in the pergolas of the first and second periods. Above each lunette depicting a landscape, an opening in the treillage structure frames a large bird: a peacock, a turkey, a cock, an eagle, a falcon and a bittern. In the oculi at the center of the concentric and octagonal patterns, or in other smaller openings, smaller birds including a mallard duck and a parrot along with other generic birds are depicted. There are also small animals including a mouse and a cat.

The more novel aspect of this pergola consists in the horticultural species depicted. At the springing point of each arch, a pair of putti is depicted, above a vase holding cut flowers of various species (figs. 7.24-25). The motif of vases holding cut flowers combined with a pair of putti was first introduced in the pergola at the Palazzo

³⁰ ASV, Borghese, 23, Rincontro di Banco 1607-1614, 134r (cited in Negro 2003, 89): (August 2, 1612) a M.s Paolo Bricchi Pittore ... per resto di s. 700 p. saldo e intero pagam.to di tutte le Pitture fatte in quindici mesi, loggia et altro.

Altemps. Compared to the richly ornamented vases of the Altemps pergola, here in the Bril pergola, most of the vases are of a plain design with smooth surfaces, but there are a variety of colors from white, terracotta, to beige alabaster with streaks. In the Altemps pergola, white marble vases held single species of flowers, while terracotta vases held two or three species. In the Bril pergola, most vases with some exceptions hold flowers of a single species. The white vase on the north side is an exception and has yellow jonquils, white lilies and orange marigolds. Vases on the west side each hold white lilies, red carnations (*dianthus*), and red roses, and jasmine with white flowers. Those on the east side hold orange lilies, irises, and oleanders, and a fourth has white lilies and red tulips. The depicted flowers appear to reflect the recent developments in horticulture. Roses, jasmine, carnations, myrtle, and citrus species including melangoli (bitter orange) and lemon are frequently mentioned in the “*misure e stime*” (measurements and estimate) of the Borghese garden on the Quirinal, executed at the time of the sale of the property to the Altemps in 1616.³¹ The plants are mentioned either as trained against trellises or planted in vases. The latter include the citrus species, carnations and jasmine. Much sought after and expensive, these would have inspired the depiction of flowers in vases that appear in the painted pergola. There would have been emulation among the aristocracy for the collection of such new species. The decoration can be seen as a demonstration of the social status of the patron who could afford such luxuries.

The Bril pergola is mentioned and described by Baglione in his biography of Paul Bril.³² This is the only instance of the painted pergola referred to in the biographies of artists, after Vasari’s account of the life and works of Giovanni da Udine. As Baglione

³¹ ASV, AB, 308, t. LXVI, 397r, 397v, 398r, 398v.

³² Baglione 1995, *Vita di Paolo Brillo Pittore*, 296-297: Ne’ tempi poi di Paolo V, opero varij paesi; ma particolarmente nel Giardino a Monte Cauallo, che fu poi de’ Signori Bentivogli, & era all’ora del Cardinale Scipione Borghese, formo i paesi, che sono nella loggia verso la strada. E lauorando in vn’altra loggetta, dentro del Giardino, vna volta verso la via, che guarda all’horto di S. Agata, vi ha rappresentata co’l suo pennello vna pergolata d’vue diuerse, con varij animali dal naturale assai belli, & eccellenti. E vi sono alcuni paesi vaghissimi, che furono da lui felicemente condotti dopo, ch’egli rimoderno la sua prima maniera Fiamemga; essendosi egli grandemente auanzato, dopo hauer veduto i belli paesi d’Annibale Caracci, e copiato paesi di Titiano rarissimo dipintore; ond’egli dal buon giuditio portato muto soggia, e diede piu nel buono, & accostossi assai al naturale, & alla buona maniera Italiana, come se ne sono veduti alcuni da lui in questo vltimo eccellentemente espressi, & acquisto tal credito, che non vole a dipingere, se non gli erano pagati cento scudi l’vno i suoi paesi.

does not mention other major examples of painted pergolas, neither of the one at the Villa Aldobrandini attributed to Domenico Passignano nor that of the Villa Farnese at Caprarola attributed to Antonio Tempesta, the fact that it is mentioned would indicate that the decoration was well-known and considered a major work. Baglione comments on the maturity of Bril's landscapes, and situates him in the Italian landscape style formed by Annibale Carracci and Titian. However, only a few years later, in 1616, Scipione Borghese sold the Quirinal garden to Giovanni Angelo Altemps. The "misure e stime" drafted on the occasion of the sale also includes the description of the painted pergola.³³

Scholars have speculated on the reasons behind the selling of what appeared to be a prestigious property. Howard Hibbard suggests that the development of the Villa Borghese on the Pincio (the current Villa Borghese) may have made the Quirinal garden unnecessary for Scipione.³⁴ In addition to the same reason, Tracy Ehrlich states that, after 1613, Scipione's interest in the Quirinal estate waned because of a crucial land transaction. Scipione acquired the Villa Mondragone at Frascati from the Altemps in 1613, and to finance this purchase, he forced upon Duke Giovanni Angelo Altemps an exchange of the Mondragone with the Quirinal.³⁵ Weighing the Mondragone against the Quirinal, to Scipione, the former appeared to be far more attractive in terms of overall value. Scipione's decision appears to be particularly suggestive of the mentality of the new generation of the landed aristocracy. Comparison with the Farnese who took pride in the possession of the illusionistic pergola would make the contrast even more clear. The Farnese used the circular courtyard decorated with the painted pergola as a grand space of dynastic display. They also included an illusionistic bower in the decorative scheme of the palazzo as a reference to the old baronial tradition. In contrast, the sale of the Quirinal property soon after the completion of the painted pergola raises doubts as to the patron's interest in such decorations. Scipione may have been interested in them more as a status

³³ ASV, AB, 308, t. LXVI, 393v: [A di 24 sett. 1616] (Al Pal)azzetto o Casino d.o del Patriarcha Per la pittura della loggia a man manca della facc.a di d[etto] fatta dal S.r Paulo Brillì nella quale vi e dipinta (una) pergola con diversi animali et uccelli (con doi puttini) con ciaschedun peduchio et paesi nelle (lunette con pilastri) incontro le colone il tutto (fatto) con diligenza et esquisitezza stimano (ogni cosa insieme) scudi 700.

³⁴ Hibbard 1964, 164-165.

³⁵ Ehrlich 2002, 40-45.

symbol. From the practical viewpoint of his land management, there would have been no point in keeping two estates located close by. Considering the costs of maintaining an estate, one suburban villa for entertainment would have sufficed, and that one was to be the Pincio estate outside the city walls. He had to let go the Quirinal estate steeped in classical tradition and equipped with a loggia with a painted pergola of high artistic quality.

Villa Lante at Bagnaia

The Villa Lante at Bagnaia was created for Cardinal Giovan Francesco Gambara (1533-1587) from 1568.³⁶ In the garden were built casinos of twin design: the one on the east side is the Palazzina Gambara and the one on the west side the Palazzina Montalto (fig. 7.26-27). Their twin design is attributed to Vignola, but they were built at different periods. The inscriptions on the topmost layer of blocks on the façade bear the names of the cardinals who were the patrons at the time of their construction. The twin casinos have in common an identical exterior appearance of a cubic block topped by a belvedere and a three-arched loggia facing the compartment garden on the north side.

The Palazzina Gambara was painted under cardinal Gambara from 1574 to 1578. The painted landscapes are attributed to Antonio Tempesta. The ceiling of the loggia is decorated with grotesques and small panel pictures. The walls are divided into compartments framed by painted herms, which show the views of the garden and park of the Villa Lante (fig. 7.28), the Villa d'Este at Tivoli, the Villa Farnese at Caprarola, and the town of Bagnaia. The theme of the decorative program is the topography of the place and the major villas and gardens. Contemporary parallels of the representation of the villa within the villa can also be found at the Villa d'Este at Tivoli, the Villa Farnese at Caprarola, and the Villa Medici in Rome.³⁷ As Lazzaro noted, the represented villas or estates are usually those in the patron's possession. The Palazzina Gambara's loggia is a rare example in which estates belonging to persons other than the patron are depicted.

³⁶ For a detailed account of the history of the villa and documentation, see Lazzaro 1974 and 1990, and S. Frommel 2005.

³⁷ For the so-called self-portrait of the villa, cf. Coffin 1989; Lazzaro 1990, 245; and Ribouillault 2005 and 2008.

However, they can be interpreted as prominent examples of villas and gardens that would serve as models to be emulated. They may also have been intended as a homage to greater patrons than oneself.³⁸

The loggia of the Palazzina Montalto, decorated under cardinal Montalto from 1613 to 1615, although continuing a consistent theme of landscape and villa life, exhibits a different style. The decoration is attributed to Agostino Tassi (1566-1644). The rear wall is decorated with generic landscapes framed by painted pilasters and cornices. The ceiling decoration consists of two painted domes inhabited by birds (fig. 7.29). The domes are painted on the vaults formed in the spaces in between the three arches of the loggia façade. What is depicted here is not a wooden trellis structure, like the previous examples, but a stone quadratura-like structure. In fact, the entire loggia is decorated to evoke the sensation of being inside a grandiose architecture of masonry construction, quite contrary to its rustic surroundings. The pilasters on the walls that frame the landscapes, the octagonal dome with an octagonal opening and inhabited by birds, and an illusionistic architecture on the end wall that appears to recede into the distance – these all create the impression of a luxurious palace building. The illusionistic architecture is composed of pilasters and cornices identical to those that frame the landscapes on the wall, and appears to make the loggia continue three bays further beyond the wall. The vaults of these three illusionistic bays are marked by oculi with stone balustrades.

The lapidary quadratura-like structure peopled by birds is not covered by plants of any kind. However, ribs are painted in the octagonal opening, and we can somehow distinguish what appears to be netting that covers the surfaces in between those ribs. This detail would suggest that the structure may have been intended to represent an aviary rather than a pergola. The ribs and the netting represent a netted dome that often tops an aviary structure. The view of an aviary in Giovanni Pietro Olina's *Uccelliera* (1612) shows a two-storied masonry structure with balustrades and netted domes (fig. 7.30).

There are also what appear to be iron beams or tie rods intended perhaps as perches for the birds; in fact some of the birds are depicted perched on them. We find a

³⁸ Thanks are due to Mirka Beneš for this idea.

similar structure in stone painted on the vault of the Sala della Pergola in the Palazzo Lancellotti in Rome,³⁹ but this stone pergola is covered with vine (fig. 7.31). Agostino Tassi painted the Lancellotti pergola during the period 1617-1621. The room in the Palazzo Lancellotti is currently called the Sala della Pergola, although the pergola structure is made not of timber or other vegetal materials but of stone. The birds are depicted perched on the stone ribs, and balustrades give the entire structure an architectonic appearance. The painted lapidary structure is covered with vine, as though it were a remnant of earlier pergolas. It is not the lush exuberant vine that we saw in the pergolas of the Villa Giulia, the Villa Farnese, the Palazzo Altemps, or the Palazzo Pallavicini Rospigliosi, but a delicate frail vine that would be more akin to the aesthetics of the Rococo. The quadratura-like structures at the Palazzina Montalto and the Sala della Pergola at the Palazzo Lancellotti are similar in appearance, and we can easily recognize in both the hand of the same artist. The only difference between them is the absence of the vine in the former.

The important point here is not what can or cannot be called a pergola, but that at this moment the pergola inhabited by birds started to be depicted as a lapidary structure instead of a carpentry structure. This crosscurrent appears to be contemporaneous with an increased interest in the aviary in high culture from the turn of the seventeenth century. In Rome, with the twin aviary pavilions (1600-1633) in the Horti Farnesiani on the Palatine, aviaries that emulate high architecture started to appear in major aristocratic gardens. The Aviary Pavilion (1617-1618) in the Villa Borghese on the Pincio is another typical example, which we will discuss in the following section. In the mid-sixteenth century, the real pergolas realized sophisticated designs by borrowing forms from stone architecture and executing them in diaphanous and translucent materials, and this trend was reflected in their painted counterparts. The idea of borrowing classic forms and rendering them in light materials was considered novel at the time. What is happening here during the first decades of the seventeenth century is the complete reverse. The pergola, originally a light garden structure, started to be depicted as a lapidary structure, which would have given it

³⁹ On the Sala della pergola in the Palazzo Lancellotti on the via Coronari, cf. Cavazzini 1998.

more weight both physically and symbolically. The stone pergola may have been more of a fiction that existed only in the pictorial world, but we know that its rustic cousin, the aviary, surely had counterparts in masonry in the real world. At one time, the aspiration and the virtuosity of imitating stone architecture in light materials were considered the ultimate form of sophistication. Fifty years later, the execution in prestigious stone of structures of rustic origin such as aviaries had become the cutting edge of fashion. For the pergola, however, as we have no surviving evidence of examples built in stone in high design, the idea appears to have remained a pictorial fantasy.

Borghese Aviary

The Villa Borghese on the Pincio was an estate for entertaining and for representational purposes developed by Cardinal Scipione Borghese soon after the election of his uncle Camillo Borghese to the papacy.⁴⁰ The Pincian estate covering more than ninety hectares was to become a new type of villa, what may be called a landscape park rather than the formal garden of the sixteenth century. From 1606 to 1609, Scipione acquired plots of *vigne* in the area just outside the Aurelian Walls along the present-day Viale del Muro Torto and the Via Pinciana. From 1610 to 1616, he turned his attention to the Quirinal garden, acquiring plots and commissioning four garden loggias and fountains. Consequently, not much progress was seen in the Pincio estate during this period. However, the sale of the Quirinal estate in 1616, as we have seen above, marked Scipione's decision to focus on the Pincio estate as the dynastic suburban villa.

Among the villa buildings at the Pincio estate, the Casino (the current Galleria Borghese) and the Aviary Pavilion were built for Scipione Borghese, while the Meridiana (Sundial) Pavilion was built for Giovan Battista Borghese (1639-1717). The Aviary Pavilion, located at the other end of the giardino segreto of the Casino, was built in 1617-1618, under the supervision of Giovanni Vasanzio (fig. 7.32).⁴¹ Carrying a classical connotation, aviaries became a common feature in gardens from the cinquecento. Major villas of the mid-sixteenth century included an aviary, the Villa Giulia, the Villa d'Este at

⁴⁰ For the garden pavilions of the Villa Borghese on the Pincio, see Campitelli 2003 and 2008.

⁴¹ Campitelli 2003; 2008, 18.

Tivoli, and the Villa Lante at Bagnaia among them. However, from the turn of the seventeenth century, an important change in the architecture of aviaries began to take place. Cinquecento aviaries were rustic structures, either made of timber, or if they were masonry structures, constructed in a vernacular style. They were also frequently combined with fountains in a treillage pavilion.⁴² Independent aviaries of high design did not exist before the seventeenth century. In Tarquinio Ligustri's view of the Villa Lante at Bagnaia (1596) (fig. 7.26), the aviaries are marked by the numbers 8 and 17. They are twin structures arranged in pairs along the central axis, one pair on either side of the Fountain of Lights right behind the twin casinos, and the second pair at the top of the garden. Architecturally, they appear to be nothing more than plain outbuildings, devoid of ornamentation. Hunting lodges of the Farnese at Caprarola or the Este at Bagni di Tivoli, a cubic block topped by a belvedere-like structure that served as a dovecote, were derived from the vernacular farmhouse style.⁴³ In the first decades of the seventeenth century, aviaries underwent a dramatic transformation from rustic structures to sophisticated garden pavilions. The twin aviary pavilions (1600-1633) in the Farnese Gardens on the Palatine Hill in Rome, recorded in numerous prints beginning from Falda's (1676), were elegant masonry structures with curved roofs. They formed part of an elaborate fountain complex and were the visual foci of the garden's monumental façade. They are worthy of being called high architecture, and were created under the direction of architects who engaged in high design. The Borghese aviary was built within this new trend of the aviary in villa gardens.

Mesh roofs were also a novel feature in the design of the aviaries. Copper netting was used not just to cover just the front sides of an aviary, but also the roofs, which often exhibited creative forms. The ogival roofs of the Farnese aviary pavilions were the eye-catching element of the Horti Farnesiani's monumental façade overlooking the Roman Forum. The Borghese aviary was a two-chambered symmetrical structure, and each chamber was covered with an elongated bell roof made of an iron framework covered

⁴² The crossing pavilion of the pergola at the Villa d'Este at Tivoli and in Giovanni Colonna da Tivoli's design for the Ghinucci garden in Italy; château of Gaillon in France.

⁴³ Cf. Coffin 1979, 133-145; Lazzaro 1985.

with netting which terminated in a pair of small cubes topped by spheres. The meshed roofs rose in between the broken pediments on either façade.

Today the façades of the Borghese Aviary Pavilion are decorated with a profusion of sculptural ornaments including fragments of antique reliefs and busts. The façade on the Casino side, articulated by fluted pilaster strips with stucco capitals with dragons and eagles, carries the coat of arms of Cardinal Scipione Borghese at the center. The antique relief of Trajanic date inserted into the façade bears the image of a sacrificial ram. Above is an attic crowned by the bust of a consul flanked with two travertine eagles. The consul can be dated from the specific style of the toga that was popular in the third century A.D. Eight travertine globes top the finials, which appear to resonate with the four globes crowning the meshed roofs. All these sculptural ornaments were added by Carlo Rainaldi to match the Meridiana pavilion when the latter was built in the 1680s.⁴⁴ Joseph Heinz's view (1625) (fig. 7.33) shows the original appearance of the aviary pavilion with its roof of characteristic form.

The Aviary Pavilion was decorated with an illusionistic pergola in the interior (fig. 7.34). The illusionistic pergolas with birds and plants that we have seen above were spaces for the human beings. The Borghese Aviary was also for human beings as well as for birds, as numerous visitors came to admire the Borghese bird collection. However, the rooms where the birds were kept were also decorated with frescoes, which depicted birds. Therefore, live birds were kept in a place where there were fictive birds depicted on the wall. The painter has been identified as Annibale Durante from a payment document bearing the date of June 20, 1618.⁴⁵ Because the aviary was a two-chamber structure, each chamber was considered a separate aviary, and they are referred to as "uccelliere" in plural in the documents.⁴⁶ Each chamber was painted with a pergola on the ceiling and landscapes and festoons on the walls. The fresco has been poorly preserved, and even

⁴⁴ Campitelli 2008, 23-24.

⁴⁵ Campitelli 2008, 137 (ASV, Archivio Borghese, b. 4170): Adi 20 giugno 1618 Havendo Io sottoscritto visto il presente conto de lavori di pittura e oro fatte da me Anibale Duranti per servitio del illustrissimo e Reverendissimo Signore Cardinale Borghese tassato come in margine e scritto distintamente appare importa netto l'infra scritta soma ... per le pitture delle due Uccelliere scudi 600.

⁴⁶ Campitelli 2008, 45.

after the restoration of 1997-1998, not all the decoration has been recovered. But the archival documents describe in detail what had been depicted. On the vault of the corridor between the two chambers had been painted a pergola of wooden framework covered with vine and jasmine.⁴⁷ The decoration of the vaults of the two chambers has been partially restored. Although there is a wooden framework of the pergola on which are perched birds of various species, there do not seem to have been plants, nor does the payment document mention any.⁴⁸ The wooden framework of the pergola is composed of familiar forms such as rectangles, ovals, and semicircles, held together by ribs, as we have seen in other pergolas. From the state of the restoration details are difficult to reconstruct, but this pergola may have been closer in form to that of the Loggia della Pergola (fig. 7.23-25) at the Palazzo Pallavicini Rospigliosi, except for the material of the pergola framework. Annibale Durante was also involved in the decoration of the palazzo at the Borghese estate on the Quirinal in 1616, and thus he would have been familiar with the pergola by Paolo Bril.⁴⁹ The one striking feature is that in the Borghese Aviary pergola, there is a variety in the species of the birds depicted – peacocks, macaws, parrot, stork, grouse, chaffinch, skylark, turkey, goose, jay, robin, nightingale, magpie, swallow, and sparrow.⁵⁰ Not quite the encyclopedic dimension of the Medici pergola, but the precision and the variety of the birds are remarkable.

The decoration of a pergola inhabited by a multitude of birds was intended to echo the live birds that would occupy the aviary. As the collecting of birds was one of the occupations of a gentleman, in addition to the collecting of antiquities and horticultural species, Scipione was also engaged in the collecting of birds, especially exotic species that were considered rarities. The aviary was built to house his bird collection. With the transparent roof of netting and the fresco depicting a transparent pergola structure with

⁴⁷ Cf. Campitelli 2008, 137. ASV, Archivio Borghese, b. 4170: Et prima per la volta dell'andito tra le due Uccelliere quale e fatta con diversi compartimenti di legname e viti con uva et foglie con diverse piante di gelsomini et ripieni i vani di diversi uccelli e animali il tutto sino al posamento della volta importa scudi cento.

⁴⁸ Cf. Campitelli 2008, 137. ASV, Archivio Borghese, b. 4170: Per haver fatti diversi compartimenti di legname et infiniti uccelli nell quadri sopra li Archi delle sudette due uccelliere di lunghezza di palmi 20 importa luna scudi 12 e in tutto quattro insieme scudi 50.

⁴⁹ Campitelli 2008, 49.

⁵⁰ Campitelli 2008, 54-55.

birds perched or in flight, the intention was to create a space that gave the illusion of the outdoors. However, in terms of the practical maintenance of the aviary, there would have been a problem similar to that facing Lucullus in ancient Rome who entertained in an aviary where he and his guests dined on birds while their live siblings fluttered above.⁵¹ Although it is understandable as a logical consequence, from a practical viewpoint, the idea of decorating an aviary with exquisite frescoes depicting birds may be something that exceeds wittiness and approaches decadence.

Villa Falconieri at Frascati

The Villa Falconieri at Frascati, originally called the Villa Rufina, was the earliest villa to be built in Frascati.⁵² The patron was Alessandro Rufini, whose presence in Frascati was most likely related to the revival of Tusculan villeggiatura by Pope Paul III. The original villa building dates from around 1549. Greuter's view of the Frascati villas (1620) shows it as a cubic block with four corner towers, with a loggia on the façade. In 1628 it passed into Falconieri property, where it remained until 1883.⁵³

In the 1660s, the building was enlarged by the construction of two wings on either side, and the façade was remodeled, resulting in an impressive Baroque appearance. The expansion and the remodeling, formerly attributed to Borromini, are now considered the work of Cirro Ferri (1634-1689), from the circle of Pietro da Cortona.⁵⁴ Our focus of interest is one of the rooms in the side wing, the Stanza della Primavera, painted by

⁵¹ Varro, *Rerum Rusticarum*, III.iv.3: Lucullus coniunctum aviarium, quod fecit in Tusculano, ut in eodem tecto ornithonis inclusum triclinium haberet, ubi delicate cenitaret et alios videret in mazonomo positos coctos, alios volitare circum fenestras captos. Quod inutile invenerunt. Nam non tantum in eo oculos delectant intra fenestras aves volitantes, quantum offendit quod alienus odor opplet nares. (Lucullus claimed that the aviary which he built on his place near Tusculum, formed by a combination of these two [aviary for pleasure and aviary for profit], constituted a third class. Under the same roof he had an aviary and a dining-room, where he could dine luxuriously, and see some birds lying cooked on the dish and others fluttering around the windows of their prison. But they found it unserviceable; for in it the birds fluttering around the windows do not give pleasure to the eyes to the same extent that the disagreeable odour which fills the nostrils give offence.) (translation Loeb edition).

⁵² Tantillo Mignosi 1980, 83.

⁵³ Currently it is the seat of CEDE (Centro Europea dell'Educazione) and INVALSI (Istituto nazionale per la valutazione del sistema educativo di istruzione e di formazione).

⁵⁴ The attribution to Cirro Ferri is Joseph Connors'. I owe the information to Mirka Beneš who kindly shared it with me.

Giovanni Francesco Grimaldi (1606-1680) in 1672. From its late seventeenth-century date, the decoration of this room would fall outside the scope of our third period of the illusionistic pergolas, but nevertheless it shows the new direction in which the sensibility towards nature and the exterior was heading in the design of the painted interior. The Stanza della Primavera exemplifies in a sense the kind of spatial experience that came to be sought after in the seventeenth century.

Grimaldi painted the entire room as an illusionistic garden, adorned with statues, fountains, and vases filled with flowers, and trees with exuberant foliage growing up to the sky (fig. 7.35). The boundary between wall and ceiling is nonexistent; a seamless continuity between wall and ceiling has been realized. The doors appear to have been eclipsed, invaded by the foliage of trees, and have become part of the overall *trompe-l'œil* garden. The trees, fountains, and statues are used as props to create a sense of depth, which reveals Grimaldi's experience in stage design.⁵⁵ Beyond the garden is a landscape of the Roman campagna that extends into the distance and merges with the sky. The triumph of Flora, with garlands and accompanied by putti with baskets full of flowers, at the center of the ceiling, is attributed to Cirro Ferri (1680). Reference to classical culture is omnipresent – the depiction of columned architecture with figured reliefs, putti holding swags among the foliage, statues of deities associated with the garden, Diana, Venus, Bacchus, and Apollo, and the marble herms. The illusion of being immersed in the garden and surrounded by nature is stronger than it has ever been. The spatial experience is no longer that of the cinquecento loggias and porticoes with interpenetration of indoors and outdoors. In those semi-interiors one still had the sense of the indoors to a certain extent. In the Stanza della Primavera, the sensation of the outdoors is predominant – one would feel as though entirely surrounded by nature. Grimaldi is known to have executed around this time a similar decoration for the casino of the Chigi located at the Quattro Fontane, which unfortunately has not survived.⁵⁶

The change in the sensibility towards the outdoors and the surrounding landscape demanded a more dynamic expression of nature. The expanding scale of gardens found

⁵⁵ Tantillo Mignosi 1980, 96.

⁵⁶ Tantillo Mignosi 1980, 96.

an alternative expression in the painted interior, where *trompe-l'œil* gardens and the painted equivalent of large-scale landscapes came to be depicted. At the Stanza della Primavera in the Palazzo Falconieri at Frascati, the illusionism was pushed forward to the extent that the interior could be perceived almost as though it were the exterior. The painted pergola was no longer capable of expressing this new sensibility. Although it continued to be used after the mid-seventeenth century, it was no more than a decorative motif that was visually appealing, devoid of its connotations which once constituted its essence. It no longer had the momentum that was behind the creation of the painted pergolas at the Vatican Logge, the Villa Giulia, or the Villa Farnese at Caprarola. For the revival of the pergola, we must wait until the nineteenth century, when small-scale gardens with intimate spaces would again come into focus. Only then would the spatial connotations of the pergola be re-appreciated, and its design potential re-explored.

THE ILLUSIONISTIC PERGOLAS BETWEEN MYTH AND SCIENCE

The illusionistic pergolas were closely connected to the collecting and the study of natural history in the sixteenth and the seventeenth centuries, especially of flora and fauna, in the following ways: first, they reflected the species that were the object of collecting as well as those newly introduced from the East or the New World; second, they were in themselves an artistic display of the collection of flora and fauna, a visual encyclopedia of natural history with a degree of artistic license, so to speak; and third, they sprang from and flourished in this particular cultural climate before modern science was established, which can be characterized as a curious coexistence of myth and scientific observation, and of which the classical tradition was a part.

The sixteenth century was a particularly dynamic period of globalization in European history; cross-cultural interactions and exchanges on various levels would have been an ongoing phenomenon at all times. Parallel to the geographic expansion of the known world to the east and to the west, which necessitated a redrawing of boundaries in political, economic, and cultural terms, a similar expansion of knowledge occurred within the classical tradition, which led to the establishment of natural history as an independent discipline. A resulting social phenomenon was the emergence of a new kind of professional – the naturalist – equipped with highly specialized knowledge, based not only on the book-based study of ancient culture but also on the direct observation of nature and the physical world. Although patronage still played an influential role and continued to be a guarantee of stable employment and prestige, recognition in princely courts was not necessarily a prerequisite for the establishment of the profession. In the sixteenth century, potential spheres of professional activity other than the patronage system began to arise.

Collecting became increasingly varied, both in the social class of the collectors as well as in the objects collected. It was no longer confined to monarchs, aristocrats, and the princes of the Church. All ranks of the cultured class participated in it, in some cases from a genuine interest in the acquisition of knowledge and to make sense of the changing world around them, in others to profit from the social connotations associated with it. Merchants, through the accumulation of wealth, scholars through the acquisition of specialized knowledge, and artists, from personal interest as well as the increasing number of commissions in the depiction of nature, participated in the culture of collecting and study. Collecting promoted a lively interaction between the members of the cultured class. Scholars often belonged to aristocratic circles, where they gained recognition. Ulisse Aldrovandi was a relative of Pope Gregory XIII Boncompagni, whose native city was also Bologna. Cassiano dal Pozzo belonged to the circle of the Barberini, who were relatively favorable to the heliocentric views of Galileo. The Medici are particularly noteworthy for their interest in natural history and science: they sponsored the creation of the botanical gardens in Pisa and Florence, and commissioned art works related to natural history and science. Artists and scholars under Medici patronage include Jacopo Ligozzi, who elevated plant illustration to an art, and Egnazio Danti, cosmographer and mathematician who was responsible for the map decorations and the large globe in the Medici Guardaroba in the Palazzo Vecchio. Danti also worked later for Gregory XIII. The Farnese were collectors of botanical specimens and sought-after species since the time of Pope Paul III. They were also interested in scientific objects, for example, maps and globes, as we see in the Sala del Mappamondo at the Villa Farnese at Caprarola.

Antiquarian culture and classicism, as a pedigree of authenticity, functioned as an effective tool for the establishment and enhancement of social status. In a similar way, the interest in natural history became an important tool for the improvement of social status. Thus collecting and study were the major means through which one could connect oneself to the intellectual culture. Collecting also played an important role in the expression of identity of the patrons. Political power, accumulation of wealth, and acquisition of land may be a means for social ascendancy, but not an ultimate goal.

Sophistication of the individual lay in something beyond material wealth; the cultivation of the mind was a prerequisite for a fully formed personality in high society of the age.

A wide range of items from art works to natural history specimens – not only sculptures, coins and gems, but also printed books, plants, animals, birds, and stone specimens among others, became the object of interest of the collectors, and the displays of the collected objects also grew more varied. Collecting was not only for the purpose of assembling objects of interest as an aristocratic activity; it was also important to make the collection visible as widely as possible and acquire a reputation for having a significant collection. In this respect, straightforward display in a museum or study space was not the only way of publicizing the collection. The collection was often arranged in an art form, such as a painting, a fountain, a planted garden, or an architectural space, which were themselves the object of artistic appreciation.

This chapter will focus on the intersection of the intellectual culture and the illusionistic pergolas by discussing key figures and trends relevant to the culture of natural history. Particular attention will be given the characteristic feature of the cultural climate of the age – the coexistence or mixture of myth and science observable in the mentality of the intellectuals of the time, which, in the opinion of the author, was the factor which contributed in a significant way to the flourishing of the illusionistic pergolas within the time frame of 1500-1620.

Artists of nature

In the first half of the sixteenth century, the interest in natural history, especially in relation to the pictorial arts, was more prominent in central and northern Italy. While Florence was the center for the humanistic studies through the rediscovered Greco-Roman texts, Rome was the center for antiquarian studies – the collecting of antique art objects and the direct observation and documentation of ancient Roman architecture. However, in the cultural centers in northern and central Italy, such as Milan, Padua, and Bologna, where archaeological remains of antiquity were not so explicitly present, interest in the natural world became a prominent characteristic of the early Renaissance.

It was in Padua, the Venetian center for academic studies, and Bologna, with its own university, that botanical studies flourished and early botanical gardens were created. Although the first botanical garden in Europe was the one created at Pisa in 1543 under Medici patronage, the one at Padua created in 1544 by the Venetian Republic can be considered the first botanical garden with civic sponsorship.

Artists with a strong interest in the understanding of the physical world or specializing in the depiction of natural history were based or trained in the cultural centers of northern and central Italy, as well as those north of the Alps. Among them are Leonardo da Vinci, Giovanni Bellini, and Giovanni da Udine.¹ The transmission of this trend to Rome was largely due to the relocation of artists. Especially influential in the design of the illusionistic pergola was Giovanni da Udine, who, after training in Udine and Venice, joined Raphael's workshop in Rome and became the author of the illusionistic pergolas in the First Loggia of Leo X. In the workshop of Raphael, sketching from nature was a basic training required of all artists;² but in the execution of the projects, Giovanni da Udine was mainly responsible for the depiction of animals, birds and plants, while other artists worked on the figures. Leonardo da Vinci (Anchiano near Vinci, 1452-Amboise, 1519), well known for his interest in science,³ is the author of the decoration of the Sala delle Asse, most likely the model for the illusionistic bower at the Villa Farnese at Caprarola.

An important trend outside of Italy is the study of botany in the cultural centers north of the Alps.⁴ The first scientific herbals in the Renaissance, Otto Brunfels' *Herbarum vivae icones* (Strasbourg, 1530) (figs. 8.1-3) and Leonhart Fuchs' *De Historia Stirpium* (Basel, 1542) (figs. 8.4-7), were published in Germany and Switzerland. In Italy, Matthioli professed himself the direct descendant of the ancients through the publication of his commentaries on Dioscorides (first published in Siena, 1544; first illustrated edition in Venice, 1554, with 562 large woodcuts by Giorgio Liberale da

¹ For still-life painting in Italy, see Zeri and Porzio 1989.

² Thanks are due to Valerie Taylor, who kindly shared with me her knowledge regarding the training of the artists in the circle of Raphael.

³ Cf. Capra 2007.

⁴ For herbals from the Middle Ages through the sixteenth-century, see Appendix 2.

Udine and Wolfgang Meyerpeck) (figs. 8.8-11), and claimed the privilege of being part of the Italian classical tradition. However, it is important to note that plant study was still considered the prerequisite of a physician and thus part of medical training in the sixteenth century, as it was in the time of Dioscorides. Consequently, sixteenth-century herbals were not encyclopedias of botany in the modern sense, but manuals of plants compiled for the purpose of knowing the materials out of which medicinal compounds were made – how to recognize the plant species, what kind of medicinal effects they had, and how to use them in actual practice. They could often include other aspects of plants than their botanical properties, which would appear to be non-scientific from a modern perspective, but were perceived by contemporaries as relevant to plant knowledge. Thus alongside herbals with a focus on the botanical aspect of plants, there were also a significant number of works that were focused on plant lore or plant myth, in modern terms. Partly because of the coexistence of seemingly opposing currents in the realm of natural history – scientific investigation and the remnants of the non-scientific – herbals continued to be diverse.

The tension between science and superstition, as well as antiquity as an authoritative model and a mark of pedigree, were familiar paradigms in the intellectual discourse of the time. These are observable in the discussion surrounding the establishment of botany as an academic discipline, and its official integration in the physician's training. The scientific interest in plants and in natural history, its recognition as an aristocratic pastime, its elevation as a respectable discipline in the academic hierarchy, and the establishment of the naturalist as a respectable profession – the issues show similarities with those regarding the situation of the painter and architect in Renaissance Italy. The latter case also involved the issues of the intellectual dimension of artistic practice, recognition in courtly circles, and the social status of the craftsmen. A century earlier, Alberti was writing treatises on painting and architecture to provide the artisanal trades with intellectual frameworks. In order to elevate painting and architecture to high art, courtly pastimes and activities worthy of princes, Alberti used the authority of the antique. Referring to antique precedents was an effective tool for conferring

authenticity on the subject. His treatise played an important role in establishing the painter and architect as intellectual professionals, occupying a higher position in the social hierarchy than the uneducated craftsmen.⁵ The difference may be that natural history introduced empirical and concrete components as worthwhile subjects of study into the theory-dominated discipline of medicine, while for the painters and architects, it was the hands-on crafts and artisanship that were provided with theoretical frameworks in order to be elevated into high art.

Perhaps it can be conjectured that the relative freedom from the classical tradition and the merchant culture born of trade and exchange in the Netherlands prepared the ground for the development of botanical studies based on direct observation and experiment. Three Flemish scholars, Rembert Dodoens, Charles de L'Ecluse, and Matthias de L'Obel, contributed greatly to the advancement of the study of plants, not only in their scientific approach, but also in that they exchanged information and formed a scholarly network through correspondence and publication.

In a similar way, the absence of antique remains would have enabled the northern artists to focus on nature, landscape, and the topography of the land unencumbered by a classical perspective. Northern artists excelled in the depiction of nature and landscapes, and a significant number of Dutch and Flemish artists are known to have been active in Italy.⁶ Directly influential in the creation of the illusionistic pergolas were Matthijs and Paolo Bril, who were responsible for the depiction of nature in the First Loggia of Gregory XIII and the Loggia della Pergola at the Palazzo Pallavicini Rospigliosi respectively. The Bril brothers also executed the landscapes in the Vatican Palace, and made a significant contribution to landscape painting in Italy.⁷ Giusto Utens, who painted the lunettes of the Medici villas and their gardens for Ferdinando de' Medici, was also a Flemish artist trained in the north and became naturalized in Italy. Ludovico Pozzoserrato was the Italianized name of Lodewijk Toeput, a Flemish painter in the workshop of Tintoretto. Toeput was also active in Treviso and specialized in depictions of gardens

⁵ Cf. Kostof 1977, 124-160.

⁶ Cf. Hendriks 2003; Schmidt 1999; *Fiamminghi a Roma* 1995; Rinaldi and Luciani 1988.

⁷ Cf. Hendriks 2003.

with pergolas covered with green vegetation, in the manner of Vredeman de Vries. Thus one can say that artists became the carriers of artistic forms of nature and mediators in the transmission of the style of nature painting, through artistic networks and patronage.

During the course of the sixteenth century, the illustration of natural history became an artistic subcategory, which may relate, in turn, to the still-life genre of flower painting that flourished in the seventeenth century. The specialization of artists and the division of labor in the workshop became more pronounced, and there emerged a group of artists specializing in the depiction of nature. They not only executed commissions from aristocratic patrons but also served the naturalists, newly established as intellectual professionals, in the documentation of botanical, ornithological, and zoological species. Jacopo Ligozzi (Verona, 1547-Florence, 1627) was a typical artist of nature who elevated plant illustration to an art. Ligozzi was employed as scientific draughtsman by Grand Duke Francesco I de' Medici from 1577, and made drawings of plants and animals until 1591 (figs. 8.12-13). From 1587 he became court painter to Grand Duke Ferdinando I de' Medici.⁸ Ligozzi's style can be characterized as the accurate depiction of the plant in its natural dimensions, without neglecting aesthetic effects. He combined realism and artistic beauty in his works and went a step further in the field of natural history illustration. He also decorated the Tribuna degli Uffizi, intended to house the *naturalia* and the *artificialia* in the Medici collection. Here he painted the wainscot (no longer extant) with a frieze of birds, fish, plants and shells. The Medici had an earlier depiction of a similar nature, the scrittoio of Cosimo I (before 1552) in the mezzanine level of the Palazzo Vecchio. The decoration by Bachiacca (Francesco Ubertini Verdi, Florence 1494-1557) has survived in a deteriorated condition, but we can distinguish an illusionistic arbor peopled with birds and fish depicted with scientific accuracy.⁹ The Uffizi Tribuna would have been decorated within this tradition.

⁸ Tongiorgi Tomasi 2002, 39-40. Ligozzi's drawings collection (housed in the Gabinetto Disegni e Stampe degli Uffizi) consists of seventy-eight works in gouache on paper.

⁹ I owe this reference to Robert G. La France. Cf. Allegri and Cecchi 1980, 49. Vasari describes the decoration as follows: il Bacchiacca andato al servizio del duca Cosimo, perché era ottimo pittore in ritrarre tutte le sorti d'animali, fece a Sua Eccellenza uno scrittoio tutto pieno d'uccelli di diverse maniere e d'erbe rare, che tutto condusse a olio divinamente. Fece poi di figure piccole, che furono infinite i cartoni di tutti i mesi dell'anno. (Vasari 1568, VI, 455).

Ligozzi also contributed to the documentation of Ulisse Aldrovandi's private museum (discussed below), consisting of specimens of minerals, plants, and animals that the Bolognese naturalist collected, studied, and classified. Aldrovandi's project resulted in an encyclopedia of natural history illustrated with almost 7000 drawings.¹⁰ Ligozzi can be characterized as the first artist specializing in the scientific illustration of plants.

Gardens as display spaces and museums of natural history

The illusionistic pergolas, occupying a mediating space between architecture and garden, can be considered visual encyclopedias of natural history with a degree of artistic license. The depicted species of flora and fauna could be represented as realistically as possible, but since they belonged to the realm of art, they did not necessarily have to meet scientific standards of precision in the rigorous sense. They did not have to be arranged in taxonomical order, which would have been required in a scientific treatise on plants. In the illusionistic pergola in the Studiolo of Ferdinando at the Villa Medici, for example, the specimens of plants, birds, and animals are arranged in a seemingly random manner; obviously, their arrangement is different from the more systematic arrangement in a botanical or zoological treatise. One can say that the illusionistic pergola followed its own order of arrangement, one that makes the whole a harmonious composition agreeable to the eye. This artistic order was used also in other forms of display in the garden. The Medici estates had a variety of garden spaces for the display of the collection of nature. The first chamber of the Grotto of Buontalenti (fig. 6.11) in the Boboli Gardens is a painted zoo, while the Grotto of Animals in the Villa Medici at Castello (fig. 6.16) is a menagerie of sculpted animals, birds, fishes, and marine animals in a variety of stone arranged in the form of a fountain – thus it is the display of a zoological, ornithological, ichthyological, crustacean, and a lapidary collection.¹¹

From the turn of the seventeenth century, the garden became the display space of horticultural collections. The compartment gardens in the Horti Farnesiani (fig. 8.14) and the garden of the Palazzo Barberini were spaces for the display of horticultural species,

¹⁰ The manuscript and the illustrations are held in the University of Bologna Library.

¹¹ Cf. Lazzaro 1995.

especially the colorful bulb flowers which became the fashion from the turn of the seventeenth century. As Hervé Brunon notes, the layout of these flower gardens was probably similar to that of the botanical gardens of the period.¹² Citrus species were often displayed on pergolas for visitors to walk through, as we see in the illustration of Cardinal Pio's garden in Rome (fig. 8.15).¹³

In contrast to the artistic arrangement of the collection in aristocratic gardens, the museums of naturalists, apothecaries, and physicians generally appear to show less concern for the style of display. The museums of Francesco Calzolari in Verona (fig. 8.16), Ferrante Imperato in Naples (fig. 8.17), and Ferdinando Cospi in Bologna (later annexed to Aldrovandi's museum) (fig. 8.18), viewed by modern standards, share a seeming lack of sophisticated order in the display of objects. In Calzolari's and Cospi's museums, horizontal shelves filled with objects cover the entire space of the walls from floor to ceiling. Shelves and cabinets partitioned into sections are set against the walls and filled with objects, leaving no free space. Even the ceiling is not exempt from this *horror vacui*; objects are attached and displayed wherever space is available. The arrangement of the objects is comparable, in a sense, to Giorgio Liberale's illustrations for Matthioli's herbal, where the entire page is filled with details. Liberale's style forms a strong contrast with Ligozzi's, which always left a certain amount of free space where nothing was depicted. The entire room of these early modern natural history museums gives the impression of a rather crowded storage than a carefully designed space to be seen and appreciated. The emphasis appears to have been more on the public display of the richness and the variety of the collection, rather than the individual experience of learning and discovery through direct contact with the specimens on exhibit. The arrangement is distracting as much as it is monotonous, since the objects are placed too close to one another, and in most cases, no single object stands out among the others.¹⁴

¹² Brunon states in regard to the planted compartments of the Villa Medici in Rome that there was no clear difference in layout between the compartment gardens of a villa and the botanical gardens. Cf. Brunon 1999, 71.

¹³ Cf. Coffin 1991, 178-181.

¹⁴ Ferrante Imperato's museum has a large crocodile at the center of the ceiling, which would have been intended as the eye-catcher in the collection.

There seems to have been little concern for attracting the viewers' interest to specific objects, and engaging them to examine them more closely.

However, this kind of arrangement may be seen in a different perspective.¹⁵ In contrast to the botanical gardens, which were designed within the tradition of the Italian garden,¹⁶ the museums of natural history may have been conceived as a totally new kind of space. The layout of the rooms including those for display would have been within the architect's scope. But in regard to the arrangement of the objects inside those rooms, the collectors may not necessarily have sought the intervention of an architect or artist to devise a style of display. The continuous display on walls and ceilings, especially that the ceiling was included as part of the display, may have been derived from the decorative scheme of palaces and villa buildings, where the interior decoration covered not only the walls but also extended to the ceiling. Our illusionistic pergolas were precisely the decorations of ceilings in the semi-interior spaces in villas and palaces. It would have appeared natural for the contemporary visitors of these museums to have something to look at not only on the walls but also on the ceilings. Moreover, this crowded clutter, on closer examination, can be considered to have its own rules of display. If the display with emphasis on the aesthetic aspect can be called artistic display, the display in these early modern museums may be called catalogue display. The issue here was more about collecting, cataloguing, and arranging the objects in systematic order than in an aesthetically pleasing way. Collecting also involved the issue of how to classify, identify, and store the collected objects, in order to make the collection more valuable and useful to other collectors and scholars. The shelves with subdivisions and drawers of identical form and size would have facilitated classification and identification, as well as the memorization of the location and ease of access. Thus the memory theater would most likely have provided a model for these catalogue displays. The early modern museums may be considered akin to books and treatises rather than museums in the modern sense; something like encyclopedias in visual, three-dimensional form, rather than artistic

¹⁵ I am grateful to Rabun Taylor for suggesting the ideas relevant to the display of objects in early modern museums.

¹⁶ For botanical gardens in sixteenth-century Italy, see Appendix 3.

compositions, where the primary emphasis would be more on the aesthetic aspect of the arrangement. Athanasius Kircher's Roman College Museum, as shown in a publication of 1676 (fig. 8.19),¹⁷ appears to show a compromise between the two forms of display: artistic display and catalogue display. The vaulted corridor space is impressive with wall and ceiling frescoes depicting scientific subjects and an aligned display of colossal obelisks, but nevertheless shows a similarity with the museums of Calzolari, Imperato and Cospi in the monotony of the horizontal arrangement in the left foreground. The illustration emphasizes the sensation of awe inspired by the scale of the space as well as the content of the collection, suggested by the relative smallness of the visitors represented in the foreground.

Scholars of natural history

From the latter half of the sixteenth century onwards, we see the prominence of a number of aristocrats, who, instead of striving for political and territorial power and the election of a family member to the papacy – the traditional dynamics of upward social mobility – distinguished themselves by means of the intellectual culture, and played an important role in the advancement of scientific knowledge and scholarly study. Typical figures that belong to this group of aristocrats include Ulisse Aldrovandi, collector and scholar of natural history, Federico Cesi, founder of the Accademia dei Lincei, the first scientific society in Rome, and Cassiano dal Pozzo, scholar and a significant patron of collecting who made a notable contribution in the documentation of his collection.

Ulisse Aldrovandi (1522-1605) was born into a family of the local elite in Bologna. His father was secretary major to the Senate of Bologna, and his mother was of noble birth, related to Pope Gregory XIII.¹⁸ Aldrovandi received a broad education in law, letters, philosophy, logic and mathematics at Padua and Bologna, and graduated with a degree in medicine and philosophy from the University of Bologna in 1553.¹⁹ He traveled widely in France, Spain, and Italy, and went on several expeditions for the

¹⁷ Giorgio de Sepi, *Romani Collegii Societatis Iesu Musaeum Celeberrimum*, Amsterdam, 1678. Findlen 1994, 87, fig. 5.

¹⁸ For Ulisse Aldrovandi's biography, cf. Simili 2004, 7-8; 131-143.

¹⁹ Simili 2004, 132-133.

investigation of plants and other natural subjects in the company of prominent plant specialists such as Francesco Calzolari (1521-1600), an apothecary who had a museum of natural history,²⁰ Luca Ghini (c. 1490-1556), a naturalist who held the directorship of the botanical garden and the lectureship of simples at Pisa, and Gabriele Falloppia (1523-1562), anatomist who held the lectureship of simples at Ferrara, Pisa and Padua. Aldrovandi was appointed to the new chair in natural history at Bologna in 1561, and to the *Protomedicato* in 1565.

In spite of his training, Aldrovandi never taught or practiced medicine in his career, although his medical degree would have qualified him to do so. Instead, he diverged to natural history. In the opinion of the physicians of the time, the study of natural history was regarded as supplementary to the more essential precepts of medicine, and hardly worthy as the primary occupation for a man of talent. Falloppia's letter to Aldrovandi (Padua, 23 January 1561) typically expresses that view.²¹ While in the mid-sixteenth century lecturing on medicinal plants became part of the medical curriculum, the difference in social status and salary was evident compared to the teaching of theoretical and practical medicine.²² Aldrovandi was probably motivated more by his own intellectual interests than the social prestige or salary.

²⁰ Findlen 1994 includes illustrations of some of the famous natural history museums of the time, that of Francesco Calzolari (1521-1600), p.118, fig. 8, from Benedetto Ceruti and Andrea Chiocco, *Musaeum Francisci Calceolari Iunioris Veronensis*, Verona, 1622; Ferrante Imperato (1550-1625), p.39, fig. 2, from Ferrante Imperato, *Dell'istoria naturale*, Venice, 1672; and Ferdinando Cospi (1606-1686), p.120, fig. 9, from Lorenzo Legati, *Museo Cospiano annesso a quello del famoso Ulisse Aldrovandi e donato alla sua patria dall'illustrissimo Signor Ferdinando Cospi*, Bologna, 1677.

²¹ Di Pietro 1970, 56: Non scrivendo rimarrete un herbolao. Sicchè mi dispiace che habbiate fatto questo transito, non perchè la professione me dispiaccia la quale sapete che anchora io indegnamente faccio, ma perchè mi piace più la prima et mi pare più degna in ogni conto et vi confortarei come vero e fedele amico di ritornare alla prima ogni volta he lo potiate fare con vostro honore, lasciando questa a chi la vole cosi potessi io lassar la mia, et quella dell'Anatomia, et attendere solo alla medicina come lo farei et farò volentieri quando mi venga occasione. (I do not wish to imply that you will simply be a herbalist. However, it displeases me that you have made this transition – not because I dislike the position, which you know that I still perform unworthily, but because I liked the first one better. It seems to me the one worthy in every respect, and I will embrace you as a true and faithful friend if you return [to medicine] at the first opportunity that you can do so with honor, leaving the other to whoever wishes it. Thus I am able to leave my duties in *materia medica* and those in anatomy to attend only to medicine, as I would and will do voluntarily as the occasion arises.) (English translation from Findlen 1994, 255).

²² Cf. Findlen 1994, 255. At the University of Bologna, Girolamo Cardano (Pavia, 1501-Rome, 1576) was paid 521 scudi to teach *theoria* (theoretical medicine) from 1562 to 1570, while Aldrovandi's salary for teaching natural history was 400 scudi. Girolamo Mercuriale (1530-1606) received 5400 lire to teach

Aldrovandi collected animals, plants, and minerals – the *naturalia*, as they are termed. He also collected *artificialia* – artifacts of material culture from antiquity as well as those from the New World.²³ His private natural history museum was widely known in Italy, and the visitor’s book preserves the names, ranks, and the dates of those who visited it. In 1579, his museum’s holdings counted 14,000 objects and a herbarium composed of 6,000 desiccated specimens. At the time of his death in 1605, his collection had accumulated 18,000 objects and 7,000 desiccated plants.²⁴ After his death, the private museum was transferred to the city of Bologna and maintained as a civic institution by the Senate of Bologna.²⁵ The scale of the collection as well as the breadth of his interest is already remarkable.

In addition to building a museum of encyclopedic scope, Aldrovandi contributed greatly to the introduction of a scientific approach to nature through publication. He mobilized a group of artists specializing in the illustration of nature to make drawings documenting the collection, and created a virtual museum alongside its real counterpart. He published his studies on ornithology, zoology, ichthyology, entomology, and dendrology as extensive volumes. His collecting was new in that it proposed a methodology for the study of natural history through the precise documentation and the classification of the objects in the collection. In this sense, Aldrovandi exemplifies the emergence of the modern scholar in the society of early modern Italy. More concerned about advancing research than using the collection as a tool for enhancing social status, his collecting activity indicated a new direction for a professional of intellectual culture.

Aldrovandi’s interest in catalogue documentation was already manifest in his earliest work, the catalogue of ancient Roman statues in the private collections in

theoria from 1587 to 1593.

²³ For basic knowledge on Aldrovandi’s museum, cf. Findlen 1994, 17-31. Aldrovandi’s museum was also important for its “book of friends,” in which visitors were required to write their names. The “book of friends” shows the social dimension of the museum. cf. Findlen 1994, 137-146. For Aldrovandi and antiquities, cf. A. Brizzolara, “Lo studio delle antichità” in Simili 2004, 95-115; for objects from the New World, cf. L. Minelli, “Le culture del Nuovo Mondo” in Simili 2004, 90-94.

²⁴ G. Olmi, “Il collezionismo scientifico” in Simili 2004, 20.

²⁵ Findlen 1994, 24.

Rome,²⁶ published as an appendix to Lucio Mauro's *Le antichità della città di Roma* (Venice, 1556). This is a valuable contemporary catalogue of the antique sculptures that were collected by Roman patrons in the sixteenth century. In the field of natural history, Aldrovandi's predecessors included French apothecary and naturalist Pierre Belon (1517-1565) and Swiss physician and naturalist Conrad Gessner (1516-1565), who both published on natural history. Aldrovandi's first work in natural history was *Ornithologiae* (Bologna, 1599), an extensive work in three volumes, with woodcut illustrations by Lorenzo Bennini, Cornelio Schwindt, and Jacopo Ligozzi. It was an encyclopedia of birds that built upon Belon's *Histoire de la nature des oyseaux* (Paris, 1555) and Gessner's *Historia animalium* (Zürich, 1551-1558). New ways of classification had been proposed in these two works: alphabetical arrangement in Belon, and a taxonomic attempt in Gessner. But Aldrovandi's work, discussing 450 species in contrast to Gessner's 250, was an ambitious project to present the animal kingdom as a systematic structure of families and orders.²⁷ In addition to the morphological characteristics of the subjects, Aldrovandi also discussed their treatment in myths, coins, and emblems, as well as their culinary and pharmacological uses. The illustrations recreated the natural habitat of the birds by representing the species of the trees and shrubs necessary for their nidification or alimentation. A combination of natural history and antiquarianism, Aldrovandi's *Ornithologiae* can be seen as a broad cultural approach to the study of birds rather than a purely scientific one, and one that would only have been possible to an author with a solid background in the humanities.

A characteristic of the *Ornithologiae*, which also finds a resonance in Ferrari's *Flora* (1633), is the inclusion of the "uccelli fantastici," imaginary winged creatures such as harpies and griffins. Tommasini and Taliaferri comment that these creatures still had their place in the animal world of the sixteenth century. But their inclusion in

²⁶ The exact title reads: LVCIO MAVRO. *LE ANTICHITA DELLA CITTA DI ROMA. Breuemente raccolte da chiunque ha scritto, o antico o moderno; per Lvcio Mavro, che ha voluto particolarmente tutti questi luoghi vedere: onde ha corretti di molti errori, che ne gli altri scrittori di queste antichita si leggono. Et insieme anco di tutte le Statue antiche, che pertutta Roma in diuersi luoghi, e case particolari si ueggono, raccolte e descritte, per M. Vlisse Aldroandi; opera non fatta piu mai da scrittor alcuno.*

²⁷ S. Tommasini and M. Taliaferri, "La ricerca zoologica" in Simili 2004, 60-61.

Aldrovandi's bird study is suggestive of the blurred boundary between science and myth in this period, and the general perception of the natural world as a harmonious mixture of the two. The same mentality can be observed in Aldrovandi's fascination with a "dragon." The auspicious creature that made a timely appearance in Bologna on May 13, 1572, the very day Ugo Boncompagni was scheduled to return to his hometown for investiture to the papacy as Gregory XIII (pontificate, 1572-1585), was probably just a species of reptile. But by calling it a dragon, not only the intellectual community of Bologna but also Aldrovandi himself were recognizing the animal not in the modern zoological sense, but in a more comprehensive way, as a simultaneously natural and a supernatural creature rich with all its connotations of symbolism, myth and iconography. The sensation caused by the appearance a dragon in Bolognese society is only understandable if we take into consideration the lack of doubt in general, among the intellectual minds of the time, as to the appropriateness of discussing real and imaginary animals on the same arena. As a relative of the new Pope, Aldrovandi claimed possession of the rare animal with two feet for his museum, which immediately attracted a large number of gentlemen visitors.²⁸ The Buoncompagni even adopted the dragon on their coat of arms. Aldrovandi had written a study of dragons, entitled *Dracologia*, which at the time was in manuscript form and was published posthumously in 1640. In the winter of 1572, after the incident of the dragon, there were so many requests for the manuscript version that Aldrovandi protested that he had neither the time nor the scribes to meet the demands.²⁹ Amidst this cultural climate where science coexisted with myth, Aldrovandi strived to focus solely on the natural historical values of the specimens he collected, and part of his work can be considered successful in this sense. The tempera and watercolor drawings of plants and animals executed by Giovanni Neri, Jacopo Ligozzi, and Cristoforo Coriolano among others, exhibit the realism and the precision of scientific illustration.³⁰

²⁸ Findlen 1994, 17.

²⁹ Findlen 1994, 20.

³⁰ Cf. Simili 2004, 36-48; 70-80.

Aldrovandi's *Ornithologiae* is an encyclopedic work that assembled in one volume all information pertaining to birds that one could have found at the time. In that sense, it can be considered a continuation of Pliny's *Natural History* and the medieval encyclopedias. Science and the modern study of natural history may be considered to have started when the distinction was established between what can be proven through direct observation or experiment from what cannot be explained by those means, and by choosing to focus solely on the former. Subsequently Aldrovandi published works on various taxonomic groups of the animal kingdom – mammals, fish, crustaceans and mollusks, insects, trees – but he also published works on dragons and monsters.³¹ That dragons and monsters could be part of his research interest alongside the study of real animals is again suggestive of the mentality of the intellectuals of the time.

Federico Cesi (1585-1630) is known as the founder of the first modern scientific academy in Rome, the Accademia dei Lincei (Academy of the Lynxes).³² Born into a noble Umbrian family connected to the old baronial families the Caetani and the Orsini, and whose main estate lay in the town of Acquasparta, Federico became interested in the plants, animals and fossil remains that he found during his explorations in the surrounding countryside. In 1603, the eighteen-year old Cesi founded an academy of science with three of his friends, Francesco Stelluti (1577-1653), Anastasio de Filiis (1577-1608), and Dutch physician Johannes Heck (1576-1618?). Cesi called his academy the Accademia dei Lincei, not just after Lyncaeus, the perspicacious member of the Argonauts, but above all the lynx, for its keen eye. The academy was formed by a small group of individuals who were dedicated to scientific research and engaged in direct observation and experiment for the study of the natural world. It was in existence only during Cesi's lifetime, and did not number more than twenty living members at its height. Prominent members include Giovanni Battista della Porta (1535-1615, elected 1610), Galileo Galilei (1564-1642, elected 1611), Francesco Barberini (elected 1622), and

³¹ *De animalibus insectis* (Bologna, 1602), *De reliquis animalibus exanguibus, mollibus, testaceis, et zoophytis* (Bologna, 1606), *De piscibus* (Bologna, 1613), *De quadrupedibus solidipedibus volumen integrum* (Frankfurt, 1623), *Serpentum et draconum historiae* (Bologna, 1640), *Monstrorum historia. Cum paralipomenis historia omnium animalum* (Bologna, 1642), *Dendrologiae* (Bologna, 1668).

³² For Cesi's biography, cf. Freedberg 2002, 65-77.

Cassiano dal Pozzo (elected 1622). The Academy played an important role in the establishment of science as an accepted discipline in society by supporting scientists such as Galileo who was at variance with the Catholic authorities. The discord between science and the Church was inevitable, and the efforts of individual scientists as well as of those who provided support to them became the main driving force in changing the cultural climate. Cassiano, in particular, played a facilitating and sponsoring role, which proved crucial for the protection of the activities of the Linceans.

Cassiano dal Pozzo (Turin, 1585-Rome, 1657) can be considered the only other comparable figure to Aldrovandi in terms of the documentation of natural history.³³ Born into a family that held prominent positions in the court of the dukes of Savoy, he received his university education at Pisa and graduated with a degree in civil and ecclesiastical law in 1607. He accompanied Cardinal Barberini on a diplomatic mission to Paris in 1625, and to Madrid in 1626. On his return to Rome in 1626, Cassiano and his brother Carlo Antonio (1604-1689) moved into a palazzo on the via dei Chiavari, where they began to build a collection of paintings, books, medals, and drawings. In addition to assembling his own drawing collection, Cassiano acquired Federico Cesi's collection after the latter's untimely death in 1630. In 1633 Cassiano bought the books, manuscripts, and scientific instruments that constituted Cesi's library and museum, and incorporated the drawings Cesi had collected into his own collection. Cassiano made the purchase not just to help Cesi's widow, Isabella Salviati, but above all to ensure that the collection would not be lost, especially under the challenging circumstances that affected the Academy, at a time when its most prominent member, Galileo, was undergoing trial.³⁴

Cassiano referred to his drawing collection, comprised of the documentation of ancient Roman architecture and antiquities on the one hand, and of natural history on the other, as the *Museo cartaceo*, the paper museum.³⁵ The use of the word 'paper museum'

³³ Haskell and MacBurney in Freedberg and Baldini 1997, 9-12.

³⁴ Freedberg 2002, 59-60.

³⁵ The drawings have been published in two series: Series A, Antiquities and Architecture in 10 volumes, and Series B, Natural History, in 8 volumes. Series A documents ancient, medieval, and Renaissance architecture, mosaics, paintings, sarcophagi, metalwork, glass, and terracotta, among other works of art, and is formed mostly by the drawings housed in the Windsor Castle Royal Library, the British Museum, the British Library, and Sir John Soane's Museum. Series B documents fauna, flora, fungi, geological

shows that the term museum had already become an established term to designate a collection, and moreover, that a collection on paper could have a cultural value in its own right, equivalent to the collection of real objects. Perhaps an analogy can be made with the case of an architect's executed works and the built or unbuilt projects recorded on paper. The idea that drawings could provide as much valuable information as can be gained from the direct observation of the object itself would have existed already in the early sixteenth century, when architects considered the documentation of ancient architecture in Rome as part of their professional training. Giuliano da Sangallo and Baldassare Peruzzi, among many others, had created a collection of drawings of ancient architecture, which in turn became sources of inspiration for other architects. However, access to the drawings of architects would have been largely coincidental, depending on the artistic network and the location. The paper museum of Cassiano da Pozzo would have made the collection available to a wider public, and guaranteed access to a larger number of intellectuals who would visit the museum to look at them.

As the currently surviving drawings included both those inherited from the Cesi collection and those commissioned by Cassiano himself, there was the question of which of the drawings were made for Cesi, and which for Cassiano. In natural history, the fossil, fungi and most of the flower drawings would have come from the Cesi collection, while the drawings of birds and citrus fruit were most likely commissioned by Cassiano.³⁶ The bird drawings were made in preparation for Cassiano's own entry piece to the Academy,³⁷ the *Uccelliera* (Rome, 1622), and the citrus fruit drawings for the illustrations of Ferrari's *Hesperides sive de malorum aureorum cultura et usu* (Rome, 1646). Birds and citrus fruit were subjects of natural history, but above all, they represented two of the favorite and fashionable pastimes of the affluent class, hunting and collecting. What needs explanation is that, although it is known that Cassiano himself played a key role in the preparation of these two works, his name as an author is scarcely

specimens, citrus fruit, and birds, and is formed mostly by the drawings housed in the Windsor Castle Royal Library, the Library of the Royal Botanic Gardens at Kew, the Institut de France in Paris. Cf. Freedberg and Baldini 1997, 6; 29-30.

³⁶ Freedberg and Baldini 1997, 35-39.

³⁷ One had to submit a work on a scientific subject to be admitted to the Academy.

mentioned in either. *Uccelliera* is presented as the work by a lawyer Giovanni Pietro Olina, and *Hesperides* as the work of the Jesuit priest and professor, Giovanni Battista Ferrari, who was also the author of *De Florum Cultura*.³⁸

The question of Cassiano's authorship in regard to the two major works in which he was involved may give us a clue as to what may have been considered socially important for a person of rank in his age. In *Flora* (1638), Cassiano's name appears twice.³⁹ In *Hesperides*, Cassiano's name also appears twice.⁴⁰ Freedberg points out the

³⁸ Both works mention Vincenzo Leonardi (fl 1621-c.1646) as the author of the drawings on which the engraved illustrations were based. The mythological plates in *Flora* were made by Johann Friedrich Greuter and Cornelis Bloemaert, among others, based on the designs of Pietro da Cortona, Guido Reni, Andrea Sacchi, and Giovanni Lanfranco, and the illustrations of flowers were also made by Cornelis Bloemaert. Bloemaert was also responsible for the illustrations of the citrus fruits in *Hesperides*, based on the drawings by Vincenzo Leonardi, as well as the mythological plates, based on the designs by Nicolas Poussin, Domenichino, Andrea Sacchi among others. One typical example is the robin, of which a drawing by Vincenzo Leonardi (Windsor RL 27626) was made into an etching for the illustration of the *Uccelliera* (Olina, *Uccelliera*, 1623, 15). As Freedberg has pointed out, the connection between the two is apparent, with the difference that in the etching, naturally, the right and left appear reversed (Freedberg 2002, 54-55).

³⁹ Freedberg 2002, 55.

The first mention appears in the section on the Indian jasmine, in Book III, where he is mentioned as the first person to introduce the species to the Barberini Gardens, and which was sent to him by the antiquarian Nicolas Fabri de Peiresc from Aix-en-Provence. Cf. Ferrari, *Flora* 2001 (reprint of 1638), 389: Il Gelsomino giallo, o sia delitia della China orientale, o, come altri vuole, dell'India occidentale, e miracolo del nostro mondo, in niun'altro teatro meglio sarebbe di mostra, che negli Horti Barberini; a' quali risplende felicemente il Sole Urbano, nella Vaticana maesta risplendentissimo. Il primo, che inuitandolo a questa amenita romana, ve lo raccogliesse, fu il Cavalier Cassiano del Pozzo, persona abbondeuolmente dotata de' beni dell'animo, del corpo, e della fortuna; prerogatiue, che per altro di rado sogliono insieme vnirsi. Mandogliene sin d'Aix di Prouenza Nicolo Fabritio di Peires, huomo d'ordine Senatorio non meno per la prudenza, che per la dignita: le cui cure, solite ad impiegarsi fruttosamente ne' maneggi della republica, souente son temperate, e raddolcite da un lodeuole piacere, ch'ei si prende dalla cultura de' fiori.

The second mention is in regard to a painting made of real flower petals and painted pigment in Book IV, where the author mentions that he had seen such a painting in the house of Cassiano dal Pozzo. Ferrari, *Flora* 2001 (reprint of 1638), 439: Ma in vero il contrafare i fiori colli colori e miracolo horamai ordinario, e comune. Quello e assai piu degno di marauiglia, che co' veri fiori si facciano fiori contrafatti. E' vn trouato nuouo, e gratioso, che i fiori si ritraggano da se stessi. Adunque a ritrarre vn fiore senza colore, si prende vna foglia d'vn vero fiore, o intera, o diuisa; e con gomma arabica s'attaca in vna tauoletta, o in vna carta. I rilieui, e l'ombre, e gli altri onamenti della pittura vi si fanno con tirar sopra i colori bellamente in maniera, che resta in dubbio, se la natura, o se l'arte vi debba aggiugnere il solito, Faciebat. Vna tal pittura fatta con doppio artificio, abbellita, e illuminata ancora con Caualiere Cassiano del Pozzo, huomo riguardeuole per per la chiarezza del sangue, e altri beni della fortuna, per vna scelta, e copiosa libreria, e museo pieno di cose rare; e sopra'l tutto per le rare doti dell'animo; e per costumi soauissimi, atti a cattiuarsi gli animi d'ogniuno. Onde non e marauiglia, s'vna tal soauita cosi gradita, e amata sia dall'Api Barberine, le quali non possono non hauer' in grado tutto quello, che sa di mele. Da lui questa mia opera, cioe i fiori de' Giardini riconoscono la beniuoglienza, con cui sono stati graditi, e honorati dalle Api regnanti.

⁴⁰ Freedberg 2002, 56.

The first mention appears at the beginning of Book II where Cassiano is mentioned for his extraordinary

meagerness of these references considering Cassiano's involvement in the books. Cassiano had not only provided help in funding the publication of *Hesperides*, but had also gathered the majority of the information contained in it, as well as assembling many of the citrus drawings and the designs for the allegorical plates.⁴¹ The scarce mention as author notwithstanding the major involvement in the project applies even more in the case of *Uccelliera* (1622). It was a book on birds that bore the name of Giovanni Pietro Olina as the author, dedicated to Cassiano dal Pozzo. However, it was the result of Cassiano's own research and was presented to Cesi as his work on the occasion of his election to membership of the Accademia dei Lincei. It is clear that Cassiano had considerable knowledge of birds based on firsthand observation.⁴² The *Uccelliera* was a comprehensive study of birds that included not just ornithological knowledge, but all sorts of information pertaining to birds – methods of bird hunting and trapping, culinary uses, their songs, and the cages and aviaries where the birds were to be kept. It can be seen as roughly following the lines of Aldrovandi's *Ornithologiae* (1599), an encyclopedia that is a mixture of science (in the modern sense), folklore and mythology.⁴³

Freedberg has posed the question why Cassiano preferred to have his name suppressed in these works, and suggested a possible answer as the modesty of the gentleman-virtuoso.⁴⁴ However, it may be possible that in the seventeenth century authorship did not carry the same weight as it does for scholars of today, for whom published works are crucial for career development. Rather than the problem of

erudition and keen eye for art. Cf. Ferrari, *Hesperides* 1646, 99: Sed nullum habet admiratorem laudoremque liberaliorem, quam Equitem Cassianum a Puteo, cum eruditione vniuersa, tum aestimandae picturae prudentia clarissimum, & alienae virtutis praeconio ac patrocínio sua decora cumulantem.

The second mention appears in Book III chapter 35, where lemon sherbet is discussed. Cf. Ferrari, *Hesperides* 1646, 360: Eandem porro rationem nihil descriptam tradidit Eques Cassianus a Puteo: cuius aequae animus ac domus Musarum omnium Parnassus est.

⁴¹ Freedberg 2002, 57.

⁴² Freedberg 2002, 59. Before the *Uccelliera*, Cassiano had also prepared at least four separate treatises on birds, which are preserved in manuscript form. These focused on the toucan, the bearded vulture, ruby-throated hummingbirds, and the Dalmatian and European pelicans respectively.

⁴³ Freedberg also acknowledges the presence of non-scientific material as a significant characteristic of the *Uccelliera*: “folkloric, culinary, and fabulous and emblematic material of the kind that characterizes writers like Aldrovandi is still present in the *Uccelliera*.” Freedberg 2002, 58.

⁴⁴ Freedberg 2002, 58.

suppressed authorship or editorship, the issue may have been what was considered prestigious to one's name or personality at the time. If we note that passages referring to Cassiano in *Flora* and *Hesperides* do not fail to mention his museum as his greatest achievement, a "Parnassus," it is apparent that possessing a museum and collection carried weight in the aristocratic sphere perhaps far more than having a publication under one's name. As many works were dedicated to aristocratic patrons who sponsored the works by providing funding, to gentlemen-virtuosi like Cassiano, it may have appeared to bring more prestige to be celebrated as a patron with a significant collection who appreciated art and scholarship and was mentioned in a dedication, than to be designated as an author of a book.

The question of more relevance to our painted pergolas, whether the ornithologists assisted in choosing and painting the bird species depicted in them, is yet to be investigated in depth. From the fact that scholars were often part of aristocratic circles and that artists also participated in the intellectual culture, it is likely that there would have been interactions between the patrons, the scholars, and the painters on various levels. In the case of Pope Gregory XIII, patron of the First Loggia of Gregory XIII and the landscape decorations at the Vatican Palace and who was related to Ulisse Aldrovandi, it is most likely that he was familiar with Aldrovandi's scholarship. The depiction of plants and birds in the illusionistic pergolas of the First Loggia by the Flemish painter Matthijs Bril would have reflected the taste of the patron as well as the artist's interest in objects of nature.

Horticultural treatises

An important phenomenon from the first decades of the seventeenth century is the appearance of books specifically focused on floral plants, which in style and content were clearly intended for the enjoyment of the ornamental and aesthetic quality of flowers.⁴⁵

⁴⁵ These include Emanuel Sweert's *Florilegium* (Frankfurt, 1612), Basilius Besler's *Hortus Eystettensis* (Nürnberg, 1613), and Crispijn van de Passe's *Hortus Floridus* (Arnheim, 1614). Emanuel Sweert's work is composed of two parts, the first focusing on bulb plants, and the second on seed plants. Basilius Besler's impressive large-format work, dedicated to the Bishop of Eichstätt near Nürnberg, is composed of a short text of twenty-four pages and 367 engraved illustrations. It is a catalogue of the flowers grown in the

Among them, the most important is Giovanni Battista Ferrari's (1583-1655) *De florum cultura* (1633). Published in the same year as Galileo's trial, it was the first significant work on horticulture focusing on the ornamental aspect of flowers, including their use and display. It featured the exotic species that had been introduced to Rome from the latter half of the sixteenth century, which had already appeared in the illusionistic pergolas of the third period, at the Palazzo Altemps and in the Loggia della Pergola at the Palazzo Pallavicini Rospigliosi. Although the book contains a large number of illustrations, the text remains the main component of the work, in contrast to the florilegia composed mainly or solely of illustrations. The Latin edition of 1633 was dedicated to Cardinal Francesco Barberini, nephew of Pope Urban VIII Barberini. Francesco Barberini was a collector of flowers, and many species were cultivated in the garden of the Barberini palace on the Quirinal.⁴⁶ The Italian edition *Flora overo cultura di fiori* (1638) was dedicated to Anna Colonna Barberina, Taddeo Barberini's wife.

Ferrari completed his humanistic studies in his native Siena and moved to Rome in 1602, where he joined the Society of Jesus. He became a professor of Hebrew and Rhetoric at the Collegio Romano and horticultural consultant to Cardinal Francesco Barberini. *Flora* is divided into four books, each with a different focus: Book I on the creation of the flower garden, garden furnishings and tools; Book II on the description of the different species of ornamental flowers (with particular emphasis on bulb species – tulip, narcissus, crocus, crown imperial, iris, lily, orchid, hyacinth, anemone, ranunculus, peony, dianthus, and rose); Book III on the planting and cultivation of flowers; and Book IV on the various ornamental uses of flowers.

Bishop's garden, classified according to the season of their bloom. The majority of the species fall into either the Spring or the Summer categories, while Autumn and Winter occupy only a limited percentage of the whole volume. Crispijn van de Passe's work is composed solely of engraved plates depicting ornamental flowers – tulips, narcissus, hyacinths, and crocus among them – with no accompanying text. The titlepage shows a formal garden with pergola walkways surrounding a central compartmented space with planting beds. The pergolas have hip herms supporting the structure at regular intervals. Like Besler's work, Crispijn van de Passe's florilegium also takes a four-part composition, and the flowers are arranged according to the season. The striking feature of these florilegia is their attention to bulb species and newly introduced species including the tulip.

⁴⁶ Cf. MacDougall 1994, 219-347.

The illustrations included in the book fall into two categories: first, illustrations of flowers, planting designs for compartment beds, garden tools, arrangement of flowers, and vessels for the display of cut flowers; second, a number of plates of a mythological or allegorical nature. The inclusion of illustrations visualizing pseudo-mythological stories is a notable characteristic of Ferrari's works.⁴⁷ The episodes visualized in these illustrations with classical divinities and personifications of natural entities, providing advice on questions related to gardens, or explaining natural phenomena or the mythical origin of animals and plants, were all inventions of Ferrari's. These mythological plates were executed by the most important artists in Barberini patronage. The establishment of the Accademia dei Lincei in Rome in 1603 by Federico Cesi leads us to suppose that the scientific study of plants was well under way by that time. Thus it is interesting to note that Ferrari's discourse on flowers was still imbued by the notions of classical mythology and fiction. In that sense, Ferrari's *Flora* continues the strand of Sandro Botticelli's (1444-1510) *Primavera* (1478), in which the nymph Chloris, through contact with Zephyr, is transformed into the goddess Flora. The same applies to Ferrari's other important work on citrus species, *Hesperides sive de malorum aureorum culturum et usu* (1646). *Hesperides* evokes the golden apples in the Gardens of Hesperides as the justification and the valorization for a manual and a treatise on the cultivation and enjoyment of citrus species. Here again we may observe the coexistence of myth and science in the mentality of the intellectuals of the age. The attempt for a divorce between the two may be a typically modern notion, alien to the early modern perception of the world. The coexistence of myth and science would have been perceived as an authentic classical tradition, the order of things inherited from antiquity and accepted by the Church, whereas science and the theory of the heliocentric universe proposed by Galileo, which meant an end of the Aristotelian and Ptolemaic worldview,⁴⁸ still appeared too radical in the early seventeenth century.

The titlepage of *Flora* is an etching designed by Pietro da Cortona and engraved by J. F. Greuter (fig. 8.20). It shows a garden with a classicizing quadrangular portico

⁴⁷ Cardon in Ferrari 2001, xlv-xlv.

⁴⁸ Freedburg 2002, 76.

with arched openings on all four sides. On the side facing the viewer, above the arch is the Barberini coat of arms with an inscription plaque inscribed FLORA SIVE FLORUM CULTURA, the book's title. The depicted figures in the foreground are Flora and the four nymphs symbolizing the four seasons.⁴⁹ To the left is a herm of the bi-frontal Janus, on which is inscribed "REDIMITUR FLORIBUS ANNUS" (the year is reborn by means of the flowers). A nymph is putting a flower wreath on his head, while another puts a garland around his neck and body. On either side of the herm are vases holding cut flowers for making the garlands and the wreaths; one of them has the sign of Aries, and the other has a sign of Cancer. These signs of the zodiac correspond to the Spring equinox and the Summer solstice, indicating the seasons represented by the two nymphs. Roses are scattered on the ground. To the right, two other nymphs are making wreaths. The vases they are holding bear the signs of Balance and Capricorn, representing Autumn and Winter. The central figure, Flora, adorned with flowers in her hair, points to garden tools – sieve, hoe, trowel, watering can – with her left hand, while her right is held towards the inscription on the podium of Janus. The substitution of Janus for Priapus, the deity more commonly associated with gardens, emphasizes the cyclical sense of time; for Janus bears the faces of a young and an old man. The illustration proposes a diachronic understanding that the garden changes constantly all the year round, and consequently the celebration of the enduring reign of the Barberini throughout the recurring seasons. The depiction of the portico evokes the titlepages of major architectural treatises of the sixteenth and early seventeenth centuries. Those by Palladio, Serlio, Vignola, and Scamozzi show on the titlepage a classicizing portal through which the reader would be led into the world of architecture.⁵⁰ In our case, the depicted portal can be interpreted more directly as the one leading to the Barberini garden on the Quirinal, or its virtual form as recreated in the book, where the reader would find the same flowers as in the real garden.⁵¹

⁴⁹ Tongiorgi Tomasi in Ferrari 2001, xii-xiii.

⁵⁰ I owe this idea to Mirka Benes.

⁵¹ Cardon suggests a slightly different interpretation: Flora comes to take abode in the Horti Barberini to open a new era, the age of flowers, under the auspices of the eminent patron, Francesco Barberini. Cf. Cardon in Ferrari 2001, xlvi.

An illustration in chapter IV of Book I, “On the maintenance of gardens and the gardeners,” was designed by Andrea Sacchi and engraved by Greuter. It shows a piazza recognizable as the one in front of the Barberini palace on the Quirinal, with Flora and her four attendant nymphs, a putto, and two men, who were brothers and gardeners, Limace and Bruno (fig. 8.21).⁵² Through a portal, a garden with compartment beds and a portico is revealed, which most likely refers to the Barberini gardens. The portal, flanked by hip herms and crowned by a pair of reclining figures with baskets on their heads, bears the Barberini coat of arms and an inscribed plaque beneath. The inscription reads: “HIC VER ASSIDUUM / MELIO QUAM CARMINA / FLORES / INSCRIBUNT. OCULIS / TU LEGE / NON MANIBUS.” (Here, flowers, better than poems, proclaim eternal Spring. Read with your eyes, not with your hands.) This formula refers to the *Lex Hortorum*, frequently found in Roman gardens in the sixteenth and seventeenth centuries. It is a way of referencing the antique in its use of a Latin formula, and at the same time emulating other prominent gardens in Rome. This inscription lays down the rules for the visitor of the garden: one is invited to enjoy the view of the blooming flowers, but not to pluck them. Flora is inflicting punishment on the two gardeners, Limace for neglecting the care for the flowers, and Bruno for having plucked and stolen them. Flora had hit them with a flower in her hand, which transformed Limace into a slug snail (*lumaca* in Italian, thus there is a play of words) and Bruno into a caterpillar. Both were transformed into creatures that are harmful to the garden. The story was intended to explain the origins of creatures related to gardens in a classical mythological guise. It is told in an Ovidian vein, but it is an entire invention of Ferrari’s, and has no earlier literary or iconographic source.

The illustration at the end of the book, designed by Pietro da Cortona and engraved by Greuter (fig. 8.22), also depicts a scene of metamorphosis. The setting is a garden with a palace building and a fountain recognizable as those of the Barberini estate on the Quirinal. The protagonists here are Apollo crowned by a laurel wreath, Melissa and Florilla, twin daughters of the Heavens and the Earth, and their five attendant

⁵² The story of the transformation of Limace is related in Ferrari 2001, 49-54.

damsels. Except for Apollo, the figures appear to be fictive characters invented by Ferrari. Melissa was a follower of the Muses and devoted to the arts, while Florilla was a follower of Flora, and had created a garden of delights.⁵³ The group settled down under the shade of the laurel tree to hear Melissa sing a celebration of the beauty of the garden, accompanied by the cymbal of one of the attendants. The other damsels all have a musical instrument – sistrum, tambourine, and triangle. Florilla was moved by her sister’s enchanting song, languished and was transformed into flowers. Melissa changed the tone of her song to a lament, and herself underwent a metamorphosis into a swarm of bees. Apollo incises the words “HIC DOMUS” (in this place is our abode), alluding to the Barberini palace set amidst a flowery garden that attracted bees. The scene may have been a reference to the passage in Vergil’s *Georgics* referring to the bees. But more directly, it appears to be a pseudo-mythological episode invented by Ferrari for the specific purpose of the celebration of the Barberini, whose coat of arms bore bees.

The contrast of this mythological discourse with the practical and scientific information on flowers laid out in Books II and III, as well as the coexistence of two different kinds of discourse in Ferrari’s work, makes it a unique example of a seventeenth-century treatise on horticulture. This mixture of the two may have been a necessity in the society of Rome at the time, as an acknowledgement that the traditional approved world order continued to be valid. The inclusion of both may have been a practical solution as well as a strategy for publishing purely scientific knowledge, which would not have been able to stand on its own yet as an approved subject.

The illusionistic pergolas, too, can be seen as a mixture of myth and science, in that they depict mythological figures such as putti, satyrs, goddesses of Victory and Fame, as well as the realistic forms of the plants and birds based on the most recent developments in natural history studies. The Villa Giulia pergola uses pairs of putti as a recurring motif, as well as the vine-harvesting satyrs, the latter most likely as a direct reference to classical literature. The Loggia della Pergola also uses pairs of putti, the Eros and the Anteros, as a recurring motif, alongside the most sought-after species of flowers

⁵³ Ferrari 2001, 511-512.

displayed in vases. The Altemps pergola includes the allegorical figures of Victory and Fame for the celebration of the Altemps and the Orsini families. Here we may note the selective use of mythical figures in the illusionistic pergolas. Although we have seen the interest in supernatural creatures like the dragon in Bologna of the 1580s, such fictive creatures do not appear in the illusionistic pergolas. When patrons use a mythical creature or figure in their artistic displays, there is almost always a reason for the choice and it almost always indicates or is associated with an ideological intention. The unicorn in the Grotto of Animals at the Villa Medici at Castello is a typical example. The mythical animal was invested with the beneficial role of purifying the water and providing it in abundance for Florence, which in turn became an allegory of the Medici and the prosperity of the city under their rule.⁵⁴ Mythical creatures or figures included in the illusionistic pergola may have been perceived as elements of a common visual language used by the aristocratic patrons to express the awareness of a shared cultural background and the ability to engage in a cultured discourse with those who were familiar with its logic.⁵⁵ If that is the case, myth may have been used for attenuating the impact of pictorial subjects of nature such as plants and birds depicted with scientific accuracy, in much the same way as in Ferrari's *Flora*. Or it may have been used to further the recognition and the appreciation of the value of such subjects newly introduced into the artistic repertory. In either case, myth would have been consciously used as a tool for negotiating the tension between the accepted old world order and the emerging new world order, and to allow for a smooth transition to the new perception of the world without causing commotion or chaos.

In Ferrari's *Flora*, various uses of cut flowers are proposed by means of illustrations. Compared to the illusionistic pergolas, this is a rather belated recognition of actual practices in floral display that were already widely diffused. As shown in the illustrations, cut flowers were used to make sumptuous bouquets or arrangements (figs. 8.23-24),⁵⁶ vessels for cut flowers had holes to keep the stems in place (fig. 8.25). Flower

⁵⁴ Châtelet-Lange 1968, 57-58.

⁵⁵ I am grateful to Rabun Taylor for suggesting this idea.

⁵⁶ Ferrari 2001, 399; 405.

arrangements of this sort would have become possible only after the cultivation of a variety of ornamental flowers in the garden had become widespread from the turn of the seventeenth century. Two illustrations depict a classicizing vase with cut flowers (figs. 8.26-27).⁵⁷ In form, both vases appear to have been modeled on Roman cinerary urns, with strigillated patterns and acanthus motifs. The handles on either side are in the shape of snakes. The species of the cut flowers placed in the vases were tulips, narcissi, and dianthus. Classicizing vases holding cut flowers have already appeared in the illusionistic pergola in the Altemps loggia in 1592, and in the Loggia della Pergola of the Palazzo Pallavicini Rospigliosi in 1616. The display of cut flowers in vases of classicizing design, even though it may have been a novelty in the 1590s when the Altemps pergola was painted, would have been a common practice by the 1610s when the Loggia della Pergola was painted. Ferrari's illustration of these vases in his treatise on horticulture in the 1630s appears to be an acknowledgement that the display of cut flowers was no longer a novelty but by then a widely spread practice. In this sense, the illusionistic pergolas more speedily reflected current practice than illustrated books. This may have been due to the artistic license of painting that allowed artists to depict subjects reflecting new trends without reservations. Printed books required papal authorization for publication, which may have caused a delay for this kind of flower display to appear in published form.

Modern science begins with Galileo and his rupture with the Catholic Church.⁵⁸ As one realized that the direct observation of nature caused too many conflicts with the traditional worldview, to prioritize the former over the latter became an inevitable choice. Thereafter one began to separate what could be proven through direct observation or experiment from what could not, eliminating the latter from the area of scientific research, and to embrace the new worldview as opposed to the traditional worldview

⁵⁷ Ferrari 2001, 419; 421.

⁵⁸ On the biography and basic information on Galileo, cf. Tongiorgi Tomasi 2009; Freedberg 2002, 101-147.

imbued with myth and lore. This may have brought about a significant change in the patrons' attitude towards myth.

When we observe in parallel the falling out of fashion of the illusionistic pergolas after the third period of proliferation and the progressing rupture between the scientific and the mythical, we are tempted to see a connection between the two phenomena. The illusionistic pergolas from the three periods we have examined here, created in the cultural climate characterized by the coexistence of myth and science, can be interpreted as a kind of formal and artistic code that conveyed the intellect and the education of the patron or the painter.⁵⁹ The commission, design and execution of an illusionistic pergola required familiarity with the intellectual culture and garden culture, as well as the ability to engage in mythological or allegorical discourse derived from classical tradition with those who were familiar with its logic. It is quite possible to say that the illusionistic pergola may have been something akin to coins minted by various rulers and political leaders in history on the model of ancient Roman coins.⁶⁰ Those who minted coins with their profiles in relief just like the ancient Roman coins bearing the emperors' profiles, Napoleon I among them, by so doing intended to express a set of specific cultural meanings often of an ideological nature: the statement of being a cultivated and educated ruler with an understanding of antique culture, a legitimate claim to power by presenting oneself as a parallel to the ancient Roman emperors and an authentic cultural descendant of them, or even challenging ancient authority by means of cultural emulation. In a similar way, the illusionistic pergola may have been a cultural code of a visual and artistic form shared by a group of people from the upper tiers of society, who participated in a common culture and who sought a common language to make that statement.

At the time when science started to exclude from reality what cannot be proven by means of experiments as non-scientific or superstitious, there may have occurred a shift in the patrons' intellectual minds to prioritize science over myth. For a reason yet to be determined, the patrons no longer found the illusionistic pergola to be the most appropriate form and means for their expression of cultural identity. Although we

⁵⁹ Thanks are due to Rabun Taylor for suggesting the idea.

⁶⁰ I am grateful to Anthony Alofsin for the analogy.

encounter sporadic returns of the illusionistic pergola in the eighteenth century,⁶¹ apparently they have lost momentum and appear to be no more than cliché ornaments devoid of the meaning they once had.

The revival of the pergola and its fictive counterpart from the late nineteenth century is a phenomenon closely related to the recovery of this lost meaning. The pergola both real and fictive cannot be entirely explained by design parameters alone, because they were closely related to the expression of the cultural identity of those who commissioned, designed and executed them. The modern revival of the pergola was not just interest in its form and function, or the spatial experience it offered, but above all in the cultural meanings and connotations it carried.

⁶¹ For the eighteenth century illusionistic pergolas, cf. Appendix 1.

EPILOGUE

Our story of the illusionistic pergola comes to a close with an epilogue on the revival of the pergola in the modern period. After a strong revival of antique forms in the Renaissance, the pergola was again the key focus of garden design in the age of modernity. The modern revival of the pergola happened within the context of the fast-progressing modernization of society, and the rethinking of the individual experience of architectural space and nature.

In Europe, there was a return to fashion of the pergola in garden design from the nineteenth century. In Germany, Karl Friedrich Schinkel (1781-1841) used the pergola as a key design element in the Court Gardener's House and the Roman Baths at Schloss Charlottenhof (1829-36). Schinkel's use of the pergola was closely related to the adaptation of ideas from antiquity, and the pergola was perceived as a mediating structure between the indoors and outdoors. In France, Jean-Claude-Nicolas Forestier (1861-1930), landscape architect and conservateur, worked on the restoration of French gardens in an eclectic style between French formality, the English naturalistic landscape, Mediterranean details, and the innovations of modernism. He restored the Bagatelle in Paris among others, reintroducing the French formal style in the Perennial and Rose gardens, where he used the pergola as a display device, as an extension of the flowerbed in the vertical dimension.

In France in the early twentieth century, we also witness a strong interest in treillage, the art or craft of carpentry associated with the creation of the pergola. A large number of French pavilions in World Expositions and other fairs were created in treillage.¹ Treillage became a favorite style for garden structures and furnishings in urban

¹ Cf. Van Reyndorp 2006, 52-55. 1900, Exposition Universelle Paris, Palais de horticulture, M. Gautier,

and country residences, the majority of them designed by the landscape architect and conservator Achille Duchêne (1866-1947).² Duchêne, who also worked in the restoration of historic gardens, was familiar with the long tradition of treillage in France. Duchêne and the firm Tricotel played a crucial role in this renewed interest in the art and practice of treillage and its adaptation in modern design.³ Duchêne executed works also for foreign clients, which encouraged the transmission of the style to other countries.⁴ One of his clients, Elsie de Wolfe – Lady Mendl, an American interior designer, contributed to the transmission of treillage to the United States. Treillage, with its ethereal, light, transparent and translucent quality, and its potential for a new spatial experience of the outdoors, became a particularly attractive design feature in architecture and gardens.

On this side of the Atlantic, the revival of the pergola around the turn of the twentieth century owes much to the English garden designer and writer Gertrude Jekyll, who dedicated a chapter on pergolas in *Gardens for Small Country Houses* (1913). Jekyll's design ideas were based on the aesthetic of the cottage garden and embroidery, and her focus in garden design was the plantings of flowers. Jekyll experimented with color scheme and planting composition, and designed borders and pergolas that were expressive of volume as much as color. Her ideas and garden designs had a tremendous influence on the American gardens of the Country Place Era. Three American landscape architects, Charles Platt (1861-1933), Ellen Shipman (1869-1950), and Beatrix Farrand (1872-1959), who shared a strong interest in the flower garden and horticultural elements in garden design, created pergola designs in which horticultural elements played a central role. Platt, Shipman, and Farrand also shared an affinity for the Italianate tradition of

Architecte en Chef des Bâtiments et Palais Nationaux; 1907, Exposition du Livre au Grand Palais, Portique de M. Deglane, Architecte Conservateur du Grand Palais des Beaux Arts; 1910, Exposition Universelle de Bruxelles, Section française, galerie de treillage de Guirard de Montarnal, Architecte du gouvernement.

² Cf. Van Reyndorp 2006, 72-141. 1895, Petit Salon, Palais Rose, for Boniface de Castellane, by Achille Duchêne; end of the 19th C., Palmarium, garden in Boulogne-Billancourt, for Albert Kahn, by Achille Duchêne; before 1903, treillage portico, Château de Baillon, Achille Duchêne; before 1904, treillage portico, Condé-sur-Iton, for comte de Jarnac, by Achille Duchêne; 1903-1910, Villa Trianon, Versailles, for Elsie de Wolfe-Lady Mendl, Achille Duchêne; 1907, Salon de Madame, Champs-sur-Marne, for the Cahen d'Anvers family, by Achille Duchêne; 1910, treillage portico, Hôtel Matignon, for Matignon family, by Achille Duchêne.

³ Cf. Van Reyndorp 2006, 142-163.

⁴ Duchêne produced designs for clients in Herzèle (Belgium), Nordkirchen (Germany), Stenockerzeel (Netherlands), Paington (England) and California and New York.

garden-making. The hallmark of Italian pleasure gardens was the terracing of the terrain, the axial arrangement of space, the vista, architectonic elements, water features, and the display of sculpture. Pergolas in Italian Renaissance pleasure gardens were carpentry structures covered with thick green vegetation. Those in the gardens of the Country Place Era were combined with flowering plants or merged with colorful planting compositions in the immediate surroundings. The emphasis on the horticultural elements in the design of the pergola may have been a notion developed in the context of English and American gardens. Jekyll's ideas on the pergola and planting compositions would have had a significant influence on the pergolas by Platt, Shipman, and Farrand, who, based on a synthesis of the Italian tradition and the Jekyll style, created distinct designs of their own. The American pergola was born of the marriage of the Italian pergola and the English flower garden.

A pergola in the American Country Place Era that is a direct descendant of the Renaissance garden tradition is the Wisteria Arbor at Dumbarton Oaks⁵ in Washington D.C., designed by Beatrix Farrand for Mildred and Robert Bliss in the 1930s (fig. 9.1-2). The Blisses' acquisition of the Georgetown property, subsequently named Dumbarton Oaks, stemmed from the desire to have a country residence within the city and a base for their growing Byzantine and pre-Columbian collection,⁶ very much like the Renaissance villas. As Farrand explicitly states in her *Plant Book*, the Arbor Terrace was designed in the Italianate garden tradition as a *giardino segreto*, and the inspiration of the arbor came from Du Cerceau's illustration of the pergola gallery at the Château of Montargis.⁷ Du Cerceau's pergola gallery is a treillage structure composed of three ogival-roofed pavilions with arched openings interconnected with barrel-vaulted galleries. The Wisteria

⁵ For basic information on the Dumbarton Oaks gardens, see Tankard 2009, 143-157; Karson 2007, 149-179. On the design of the Wisteria Arbor, see Lott 2001, 16-19; Lott 2003.

⁶ Balmori in Beatrix Jones Farrand 1982, 99.

⁷ Cf. "Wistaria Arbor and Herb Garden" in Beatrix Farrand's *Plant Book* (1941), edited by Diane Kostial McGuire. McGuire 1980, 71-72: It (=the Arbor Terrace) is not a display garden but, rather, one in which shaded seats can be occupied under the big Wistaria arbor, which was placed in this position in order to minimize the rather overwhelming height of the stone wall which was needed to retain the northeast corner of the Rose Garden. This arbor was modified from a design of Du Cerceau (from his drawing of the Chateau Montargis). It is planted almost entirely with Wistaria, mainly of the lavender variety but with some few plants of white. The Wistaria Arbor is designed so as to be seen from below, so that the hanging clutches of the flowers will make a fragrant and lovely roof to the arbor.

Arbor in the Arbor Terrace is a barrel-vaulted gallery with three arched openings, and accommodates a fountain on the rear wall visible through the central arch. Modified in simplified form, the treillage structure of the Wisteria Arbor retains its connection to stone architecture in the ornamental use of the capitals of the pillar supports and the keystones above the arches. The Arbor was intended as an intimate space for quiet intellectual activity and inspiration. A stone plaque with the inscription from Dante's *Purgatorio* "Quelli chanticamente poetaro leta delloro/ & suo stato felice forse in parnaso esto loco sognaro"⁸ was placed on the wall. A lead bookcase was placed in one of the niches to contain one or two books one could read sitting on the benches, but soon proved to be impractical, owing to the dampness of the position.⁹ A wall fountain was designed to alleviate the austere impression of the high retaining wall of the Rose Garden against which the arbor was placed. A number of drawings show that various design possibilities were discussed, before the current design was adopted. One drawing shows a lion's head¹⁰ and another a satyr.¹¹ The current fountain head, purchased in Versailles in 1947, is that of a river god surrounded by sheaves of wheat, from the Bliss coat of arms, and cattail buds.¹² The sheaves of wheat evoke Ceres, the goddess of harvest, and resonate with the Blisses' motto, "quod metis severis (reap what you sow)." The cattails on either side of the river god's head recall those depicted in Italian Renaissance paintings, for example, Botticelli's *Birth of Venus* (ca. 1482).

Parallel to the real pergolas, we also witness the appearance of painted pergolas in the United States. I have yet to assess the scope of this renewed interest in this type of decoration and track down other surviving examples if any. The two examples that are

⁸ Dante, *Purgatorio*, Canto XXVIII, ll. 139-141. English translation by Caroline Phillips, a friend of Mildred Bliss, as quoted in a letter to Mildred Bliss, dated July 9, 1933: Those who in olden times, sang of the Golden Age, and its happy state, perchance dreamed in Parnassus of this place. Phillips, in the same letter, thanked Mildred Bliss for the visit to the garden, and suggested quotations from Dante as inscriptions to be included in the garden: I have found three little extracts from Dante's Earthly Paradise at the end of *Purgatorio*, which I think fit into your garden. There might one day be a stone or block of wood to carry them on, if you want some words of the Divine Poet in your wood. Cf. Farrand-Bliss Correspondence in the Garden Library at Dumbarton Oaks cited in Lott 2003, 209.

⁹ McGuire 1980, 72.

¹⁰ Lott 2001, 16.

¹¹ Lott 2001, 19.

¹² Lott 2003, 213, n. 13.

known to the author as of February 2012 were both created in Washington D.C. around 1900, and can be interestingly characterized by a conscious reference to intellectual culture.

The first example is in the Thomas Jefferson Building of the Library of Congress. Located on either side of the marble stairs that lead to the gallery of the Rotunda, the domed Central Reading Room, a pair of vaults was painted as illusionistic pergolas by the mural painter William Brantley Van Ingen (1858-1955) in 1897.¹³ Each vault shows a trellis covered with plants. The vault on the south side shows a trellis with vine, and the one on the north side with jasmine (figs. 9.3-4). Birds and animals are largely absent, and the depiction of plants is more or less stylized, but the exuberance of nature is emphasized in colors evocative of the Pre-Raphaelites. The vaults are not in themselves the primary visual foci, but serve to highlight the lunettes beyond, where figured scenes evocative of Milton's works are depicted. The two works are Milton's well-known poems – *L'Allegro* (Mirth) on the north side of the staircase and *Il Penseroso* (Thoughtfulness) on the south side.¹⁴ *L'Allegro* is represented as a young woman with two children, and the scene is that of spring. *Il Penseroso* is represented as a pensive woman in meditation, amidst the autumn scene with colored leaves. The seasons of the vault decorations do not match those of their corresponding lunettes, as *L'Allegro* in a spring scene is paired with a vine pergola laden with fruit, while *Il Penseroso* in an autumn scene is paired with a pergola with jasmine showing white flowers in bloom. Here the illusionistic pergola plays a suggestive role rather than being a realistic depiction, evoking the culture and literary world of the Renaissance. It also presents garden and nature as the locus for inspiration and elevation of the mind. The pergolas in the Jefferson Building may have been related to the revival of pergolas in garden design in this period, but they appear to

¹³ William Brantley Van Ingen (1858-1955) is an American mural painter born in Pennsylvania. He was trained at Pennsylvania Academy of the Fine Arts under Christian Schuessele (1824-1879) and Thomas Eakins (1844-1916), John La Farge (1835-1910) in New York, and Léon Bonnat (1833-1922) in Paris. Major works include murals for the U.S. Mint in Philadelphia, the Jefferson Building of the Library of Congress in Washington D.C. (1897), and the Rotunda of the Administration Building at Balboa Heights in the Panama Canal Zone (1914-1915). Cf. *American Art Annual. Biographical Directory of American Artists* 1929, 817; *American Artist* 1960, 10.

¹⁴ Cole and Reed 1997, 118.

be only loosely connected to the tradition of the illusionistic pergola. The choice of the decoration seems to have been made based simply on its ornamental quality which would have appealed to the taste prevalent at the time. It is doubtful whether, on the part of those who commissioned the decoration, there was an awareness of the specific connection of the illusionistic pergola to the intellectual culture.

The second example is in the Smithsonian Castle. The ceiling decoration of the former Children's Room (1901), the current south vestibule of the building opening out onto the Enid A. Haupt Garden, features a vine pergola inhabited by birds of gay plumage.¹⁵ In contrast to the Jefferson Building pergola, the Smithsonian pergola can be situated within the tradition of illusionistic pergola. The Children's Room was commissioned by the then Smithsonian Secretary Samuel P. Langley (1834-1906; Smithsonian Secretary, 1887-1906) in 1899, as a venue for natural history exhibits aimed at a young audience. Langley's guiding principle was a loose paraphrase from Aristotle, "knowledge begins in wonder." For the room to serve an educational purpose for children, Langley thought that a different approach to exhibit design was necessary. Designed by Washington architects Joseph Hornblower and James P. Marshall, the Room included an aquarium filled with fish of bright hues and gilt cages suspended from the ceiling containing live birds. The exhibit cases were placed at a child's eye-level, and Latin labels were replaced by more entertaining inscriptions. A special kaleidoscope designed by Langley with a triangular tank at the end containing live fish was installed.

The interior designer Grace Lincoln Temple (1864-1953)¹⁶ is responsible for the Room's ornamental details. Lincoln was one of the first women to work in the decoration

¹⁵ Information on the design of the Children's Room can be found in the online Smithsonian Archives <http://www.si.edu/ahhp/childrens%20room%20exhibit/decorativedesignofthechildrensroom.html> and in Field, Stamm and Ewing 1993.

¹⁶ Grace Lincoln Temple (1864-1953) was one of the first women interior designers in the U.S. who worked on government commissions in addition to the decoration of private residences. She was born in Boston, MA, and educated at the School of the Museum of Fine Arts, Boston. After teaching art in Cleveland for several years, she moved to Washington D.C. around 1896. She rearranged the East Room at the White House for Mrs. Grover Cleveland, and worked on the interior decoration of the President's home in Princeton. She was in charge of the interior decoration of the United States Government Building at the Louisiana Purchase Exposition (St. Louis World Fair, 1904). Landscape and nature as wall decoration appears to have been one of her many interests; among innumerable activities, she gave a lecture "Old Landscapes, Old Wallpapers and Their Story" at St. Margaret's Church Parish Hall, Washington D.C., on

of public buildings. Colors and imagery were chosen for an appropriate setting for the experience of nature for young visitors. Langley had wanted to recreate Correggio's illusionistic pergola in the Camera di San Paolo he had seen in Parma. As creating an exact copy proved to be too expensive, Langley asked Lincoln for a variation on the theme. Lincoln's design consisted of a diamond-trellis pergola with hexagonal openings showing a light blue sky, very much in the authentic tradition of the illusionistic pergola as we have examined in our study. The Smithsonian pergola is intertwined by grapevine with leaves rendered in light and dark hues of green, and with birds perched on the edge of the hexagonal openings, just like their presumed ancestors in the Renaissance. The birds are not as numerous as in the Italian precedents, and appear to feature species familiar and recognizable to children such as house martins and eagles, but are rendered in bright colors, like red and blue and yellowish green. The painted birds were intended to look down on the live birds in the cages below, and the lively song of the real birds was to animate their cousins perched above. The shady bower of the vine peopled with birds would have created an atmosphere of nature most suitable for the natural history exhibit, and the interaction of the one and the other would have further stimulated the sense of wonder.

The Smithsonian pergola can be connected to the tradition of the illusionistic pergola in terms of both form and context: first, the use of the familiar motifs of a painted pergola - diamond trellis, hexagonal openings, grapevine and birds; second, the use of the painted pergola as a decoration for the display space or museum of natural history. Although the painted pergolas in early modern Italy were themselves museums of natural history, and not decorations of museum spaces, the natural history connection has been happily revived here. The direct source of inspiration of the Smithsonian pergola – Correggio's pergola in the Camera di San Paolo in Parma – was the decoration of the Refectory of the Abbess in the convent, thus appears to explain only the aesthetic dimension. We can only conjecture that it was also Langley's implication to evoke the pergola's natural history connection by adopting it as a decoration for the

January 15, 1936. Cf. *Washington Post*, July 3, 1903; January 16, 1936; February 24, 1953.

‘Wunderkabinett’ (which evokes more the wonder of the natural world) for children. The idea of the interaction between the depicted birds and their numerous living specimens also appears to resonate with the Renaissance painted pergolas. Moreover, the knotwork ornaments of the gilded molding also evoke, if only coincidentally, the knotwork used in a number of illusionistic pergolas or bowers, Correggio’s Camera di San Paolo, the model of the Smithsonian pergola, and Leonardo’s Sala delle Asse among them.

The Smithsonian pergola has yet another episode to it. The Children’s Room continued in existence until 1939, when the room was converted into an office space, and the decoration was completely painted over. In 1987, the space underwent further renovation to be adapted to its current use, the Castle’s entrance vestibule from the garden. The Smithsonian paintings conservator recovered Lincoln’s decoration from under the layer of pigment, and the pergola decoration reappeared largely intact. It now appears as the perfect decoration for the new function of the room, because of its connection to the outdoors and the garden. As we may recall, the illusionistic pergola had an intrinsic connection to the outdoors, and was used as the decoration of spaces largely open to or leading to the exterior, such as loggias, porticoes, and garden pavilions. Whether as a more or less direct reference to its Italian Renaissance precedent or a happy coincidence resulting from a purely aesthetic inspiration, the Smithsonian pergola appears to be a perfect embodiment of the tradition of the illusionistic pergola both in terms of form and context.

The illusionistic pergola is revealed to be a nexus of interrelationships between ornamented surface, built structure, garden and landscape. The reference to the antique and to the vernacular, the ambiguity between art and craft, the mediation between indoors and outdoors, the tension between the architectural and the organic, the ambivalence of the pseudo-architectural, semantic and aesthetic cross reference between architecture and garden, visual encyclopedia of natural history, the connection to intellectual culture – the issues and themes we have explored in this study, constitute a set of meanings associated

with the illusionistic pergola which makes it more than just a visually attractive ornamentation. Much more than an aesthetically pleasing decoration of a tectonic structure, expanding spatially and illusionistically from the ornamented surface to the architectural interior, the garden and the landscape beyond, the illusionistic pergola can be rightly defined as a cultural phenomenon in early modern Italy that reveals the emerging ideas and sensibilities resulting from the changing perception of the physical world. Bound into these ideas and sensibilities were the more fundamental values and strategies that constituted the cultural dynamics of early modern Rome. Beyond the acquisition of political power, material wealth, and land, it was the fundamental desire to become more cultivated and to be seen as such that the aristocratic and intellectual class of early modern Rome sought an expression of their cultural identity in this form of decoration. For the educated class of the early modern age, the cultivation of the mind was the higher goal. It was for this quasi-existential reason that the illusionistic pergola was often used as the decoration of spaces with a connotation of the antique or related to dynastic display. The cultural dynamics of this kind also have resonance in later times. It was not only to the educated class of early modern Rome that the illusionistic pergola had the potential to appeal. The revival of the pergola and the appearance of its fictive counterpart in modern times on both sides of the Atlantic can be seen as evidence of the multivalence and the timeless significance of the illusionistic pergola. It is proof that, across time and space, the illusionistic pergola still has the potential to connect with the modern world, and reveal something of the fundamental relationship between man and nature. It is precisely this set of meanings associated with the illusionistic pergola that makes it worthy of study, and which still resonates with the values and strategies that hold true today.

APPENDIX 1

List of illusionistic pergolas in Italy, 1500-1700

Illusionistic pergolas in intra- and suburban Rome

Villa/palace	Building/room	Patron	Architect/artist	Date*
Villa Farnesina, Trastevere, Rome	Loggia of Cupid and Psyche	Agostino Chigi	Baldassare Peruzzi Raffaello Giovanni da Udine	1517-1518
Palazzo Apostolico Vaticano, Rome	Loggetta of Cardinal Bibbiena	Cardinal Pietro Bembo?	Circle of Raphael Giovanni da Udine	1518
Palazzo Baldassini	Sala di Giovanni da Udine	Melchiorre Baldassini	Giovanni da Udine	1519
Palazzo Apostolico Vaticano, Rome	First Loggia Leo X	Pope Leo X Medici	Giovanni da Udine	1519
Palazzo della Cancelleria, Rome	stufetta	Cardinal Riario	Circle of Peruzzi Giovanni da Udine	1520
Villa Lante al Gianicolo	loggia	Baldassare Turini	Giulio Romano	1525
Villa Giulia, Rome	Semicircular portico	Pope Julius III Del Monte	Vignola Ammanati Pietro Venale	1550-55 1552
Palazzo Apostolico Vaticano, Rome	First Loggia of Gregorio XIII	Pope Gregory XIII Boncompagni	Matthijs Bril Ottaviano Mascherino Lorenzo Sabatini	1575
Villa Medici, Rome	Studiolo di Ferdinando	Ferdinando de' Medici	Jacopo Zucchi	1576-77
Palazzo Altemps, Rome	loggia	Giovanni Angelo Altemps	Antonio Viviani	1592
Casa Zuccari, Rome	Vestibule, loggia	Federico Zuccari	Federico Zuccari	1593-1603
Horti Farnesiani, Palatine, Rome	Ninfeo della pioggia	Cardinal Alessandro Farnese	Vignola Giacomo del Duca Girolamo Rainaldi	(1570-1635) 1600
Palazzo Pallavicini Rospigliosi, Rome	Loggia della Pergola	Cardinal Scipione Borghese	Paul Bril Guido Reni	(1610-1616) 1611-12
Santa Maria sopra Minerva, Rome	cloister		Francesco Nappi	1615-1616
Palazzo del Quirinale, Rome	Logge dipinte, Sala Regia	Cardinal Scipione Borghese		1616
Villa Borghese, Pincio, Rome	Aviary Pavilion	Cardinal Scipione Borghese	Annibale Durante	1617-18
Palazzo Lancellotti, Via dei Coronari, Rome	Sala dei Palafrenieri Sala della Pergola Stanza della Pergola	Cardinal Orazio Lancellotti	Agostino Tassi Guercino Lanfranco	1617-21 1621-23
Palazzo Odescalchi	Stanza degli uccelli		Girolamo Curti o Vincenzo Corallo	1620 1667

Illusionistic pergolas in Lazio

Villa/palace	Building/room	Patron	Architect/artist	Date
Villa d'Este, Tivoli	Garden-level corridor Grotto of Diana	Cardinal Ippolito d'Este	Pirro Ligorio Girolamo Muziano Curzio Macarone	1550-72
Palazzo Vitelli a Porta Sant'Egidio, Città di Castello	loggia	Vitelli	Cristoforo Gherardi	c. 1550
Palazzo Farnese, Caprarola	Circular portico, ground level Corridor of the tower Ninfeo di Venere	Cardinal Alessandro Farnese	Vignola Taddeo and Federico Zuccari Antonio Tempesta	1557-77 1579-1581 ca.1569
Villa Aldobrandini, Frascati	Room of Apollo	Cardinal Pietro Aldobrandini	Domenico Passignano Domenichino Il Viola	1601-1605 1616-1618
Villa Grazioli (Acquaviva-Montalto), Frascati	Gallery piano nobile	Cardinal Ottavio Acquaviva	Agostino Ciampelli	1591-1606
Villa Lante, Bagnaia	Palazzina Gambarà, Sala della caccia Palazzina Montalto, loggia	Cardinal Gianfrancesco Gambarà Cardinal Alessandro Peretti Montalto	Vignola Antonio Tempesta Agostino Tassi Claude Lorrain	(1568-78) 1613-15
Palazzo Pamphilj, Valmontone	Sala del Principe	Pamphilj	Gaspard Dughet	1658
Villa Falconieri, Frascati	Stanza della Primavera		Giovanni Francesco Grimaldi Cirro Ferri	1672 1680
Villa Taverna-Borghese, Frascati	Galleria dei paesaggi		Giuseppe and Domenico Valeriani	1735

Illusionistic pergolas in Northern Italy, 1450-1700

Villa/palace	Building/room	Patron	Architect/artist	Date
Palazzo Ducale, Castello di San Giorgio, Mantova	Camera Picta	Ludovico Gonzaga	Andrea Mantegna	1465-74
Abbey of Viboldone, Milano				
Castello Sforzesco, Milano	Sala delle Asse	Ludovico Sforza	Leonardo Da Vinci	1498-99
Camera di San Paolo, Parma	Refectory of the abbess	Abbess Giovanna da Piacenza	Correggio	1518/19
Rocca Sanvitale, Fontanellato	Saletta di Diana e Atteone	Galeazzo Sanvitale and Paola Gonzaga	Francesco Mazzola detto il Parmigianino	1523-1524

Villa Imperiale, Pesaro	Sala delle Cariatidi	Francesco Della Rovere	Dosso Dossi Girolamo Genga	1529-38
Sant'Andrea, Mantova	Cappella Mantegna			1530
Villa Belcaro, Siena	loggia	Turamini	Baldassare Peruzzi Giorgio di Giovanni	1535
Palazzo Chigi Saracini, Siena	loggia		Giorgio di Giovanni	
Palazzo Grimani, Venezia		Giovanni Grimani Vettore Grimani	Giovanni da Udine	1537
Delizia di Belriguardo, Voghiera near Ferrara	Sala delle Vigne	Niccolo III d'Este	Giovanni da Siena (building 1435) Girolamo da Carpi Dosso Dossi Benvenuto Tisi	1537
Palazzo Vecchio, Firenze	Scrittoio Stairs	Cosimo I	Bachiacca (Francesco d'Ubertino Verdi) Marco da Faenza	1550
Villa Barbaro, Maser	Sala dell'Olimpo	Daniele and Marc'Antonio Barbaro	Paolo Veronese	1551-59 (1560-61)
Villa Emo, Fanzolo	vestibule	Leonardo Emo	Gian Battista Zelotti	1558
Palazzina Marfisa, Ferrara	Loggia degli Aranci	Francesco d'Este		ca.1559
Giardino di Boboli, Firenze	Grotta del Buontalenti	Francesco de' Medici	Bernardo Buontalenti Bernardino Pocetti	1574
Villa Cicogna-Mozzoni, Bisuschio, Lugano	loggia		Fratelli Campi	1575 (1580)
Villa Caprile, Pesaro	Salone centrale Camera matrimoniale Camera di Ercole	Marchese Giovanni Mosca	Giulio Cesare Begni (1579-1659)	1640
Palazzo Balbin-Gropallo, Genova	Sala delle Rovine		Gregor de Ferrari	1648
Certosa di Calci, Pisa	Loggia del Priore		Giovanni Antonio Guidetti, Cassio Natilli, Angelo Somacci	1765

Illusionistic pergolas in Southern Italy

Villa/palace	Building/room	Patron	Architect/artist	Date
Villa Campolieto, Resina	salone		Vanvitelli Fedele Fischetti	1770

* Dates refer to the decorations; dates in parentheses refer to the building.

APPENDIX 2

Herbals and the study of plants

Herbals constitute a continuous strand of plant study from antiquity through the early modern age, and therefore are good indicators of how plants were regarded and used in our period of focus. The plants' aesthetic and ornamental qualities, alongside their practical uses, would have been acknowledged at all times, and the distinction or tension between the two would always have been present. With the diffusion of collecting among the cultured class during the course of the sixteenth century, there emerged a particular interest in the aesthetic and the ornamental quality of plants, which became even more manifest in the publication of *florilegia* from the early seventeenth century.

During the sixteenth century, the study of plants was established as an independent discipline. It was long considered to be a branch of medicine, the equivalent of modern pharmacognosy rather than modern botany.¹ This may appear to be an unfamiliar notion to the modern mind, but the majority of the authors of the herbals discussed here were physicians who studied plants out of necessity. Plants and their medicinal or pharmacological properties were an indispensable part of the knowledge of a man of medicine. It is also for this reason that, the first botanical gardens, created from the mid-sixteenth century in Italy, were usually associated with the school of medicine at the university. Botany would be recognized as a science in itself only at the beginning of the seventeenth century, when Federico Cesi established in 1603 the first science academy in Italy, the Accademia dei Lincei. The illustrated herbals, published throughout the sixteenth century, can be considered to have paved part of the way.

Interest in plants in the medieval period stemmed largely from utilitarian and practical concerns, as to their potential for food, aroma, or medicine. Before the sixteenth century, knowledge on plants was mainly in demand for their pharmacological use. Knowledge of the medicinal properties of plants was required for those who had to do with the treatment of diseases – the physicians, the apothecaries who prepared the

¹ Azzi Visentini 1984, 12; De Koning in Minelli 1995, 57.

recipes, and the monks and nuns who often assumed the role of caregivers for the ill and disabled. Medicinal plants were grown in the gardens of the monasteries and convents for the monks and nuns to use. For this reason, the study of plants was long considered part of medicine and the focus of study was on herbs with medicinal properties. In this context, the herbal was a practical handbook for physicians, apothecaries, and caregivers describing the medicinal properties of plants and how to use them.

The English term herbal is defined as ‘a book containing the names and descriptions of herbs and plants in general, with their properties and virtues.’² The term was not exclusively applied to works of a medico-botanical nature, but also more broadly to those on natural history in general. The Latin word herbarium is used to refer to a collection of dried specimens of plants for the purpose of scientific study, as well as books on plants. The Italian word for herbs and plants with medicinal properties was ‘semplici.’ *Semplici* or simples meant ‘medicinal plants’ or ‘single, primary ingredients from which compounded prescriptions were made.’³ The botanical garden at Pisa, the first to be created in Europe, at the time was not called *Giardino Botanico* or *Orto Botanico*, but *Giardino dei semplici*. The word ‘semplici’ frequently appears in the plans of the gardens of early villas and palaces in Italy, to designate areas with planted beds of herbs and flowers. In contrast, there was the term *spezie* or spices, which specifically referred to prescriptions. The Italian word *spezieria* meant a pharmacy where the apothecaries prepared and sold medicaments of natural base. The *spezieria* was often attached to a monastery, where the knowledge and practice of herbal medicine was handed down among the monks. One survives in the church of San Giovanni Evangelista in Parma.

Plant treatises of antiquity were handed down in the form of manuscripts which were copied and preserved in the libraries of the monasteries. When the printing industry was established in the fifteenth century, manuscript herbals were issued as incunabula editions. From the late fifteenth century onwards, printed herbals contributed to the diffusion of botanical knowledge through the publication of multiple copies and editions

² Cf. OED, ‘herbal.’

³ Anderson 1977, 45-46.

as well as wide circulation. The manuscript herbal and the printed herbal both contained illustrations, the former in miniature, the latter in woodcuts and engraving. The medieval and early Renaissance herbals can roughly be classified into two categories in terms of content and audience: first, works focusing exclusively on plants with medicinal properties, intended for physicians, herbalists, and the common people; second, works of an encyclopedic scope treating all aspects of the natural world, of which one section was on plants, aiming for the education of the reader.

Macer Floridus' *De Viribus Herbarum* (11th C., first unillustrated edition Naples 1477; first illustrated edition Milan 1482) was one of the medieval manuscript herbals that were printed during the incunabula period. Based on Pliny the Elder, the work contained the descriptions of the medicinal properties of 77 plants. It was written in hexameter Latin verse, for the reason that verse was easier to memorize than prose. Another example of a medicinal herbal is *Liber de Simplici Medicina* (also known as *Circa Instans*, c. 1130-50, first edition Venice 1497), attributed to Matthaeus Platearius, a physician at Salerno. In reaction to the theoretical tendency of medieval herbals, the work was intended as a return to the practical herbal that would help the physician and the herbalist to identify the plants.

Most medieval and early Renaissance herbals were written in Latin, the *lingua franca* of the intellectual community of early modern Europe. However, if the author was not well versed in Latin or if the work was aimed at those not learned in Latin, works were written in the vernacular. Works published in Latin would later be translated in the vernacular, and in many cases, works originally published in the vernacular were later translated into Latin. Peter Schöffer, Gutenberg's associate and successor who inherited his press and type, published the *Herbarius Latinus* (Mainz 1484), and a year later, its German translation, *Der Gart der Gesundheit* (Mainz, 1485). Blunt characterizes the German edition as the most important of the incunabula herbals in a number of ways: first, it was the first incunabulum on a scientific subject published in the vernacular; second, it was a folio-size edition, with large woodcut illustrations that allowed for the inclusion of more details; third, 65 out of the 379 illustrations were not copies of earlier

woodcuts but appear to have been drawn through direct observation of actual plants; and fourth, the work is provided with indexes. *Hortus Sanitatis* (Mainz, 1491) by Jacob Meydenbach was focused not only on plants but also included sections on fish, birds and other animals, and is a folio-size edition with more than one thousand (mostly small) woodcuts. However, the text was partly drawn from *Der Gart der Gesundheit*, as well as the majority of its 530 illustrations. The most characteristic among the illustrations in *Hortus Sanitatis*, taken from *Der Gart der Gesundheit*, is one supposedly depicting the plant ‘narcissus,’ charming but far from naturalistic: the flowers were depicted as human figures, supported by stems with leaves that do not resemble those of the actual plant at all (fig. 8A.1). According to Minelli, the illustration expresses the Platonic idea that plants and animals derive from man.⁴ *Der Gart der Gesundheit* was the last of the herbals that dealt with Old World species only.

Alongside these herbals proper, there were works that focused on various aspects of the natural world, of which plants were only a part. Hildegarde von Bingen’s (1098-1179) *Physica* (c. 1150, first edition Strasbourg 1533) is worthy of note in that it is the earliest work on natural history in Germany and the first book of encyclopedic scope written by a woman.⁵ Hildegarde, born into a noble family, became a nun in a Benedictine convent and later an Abbess. She acquired medical knowledge through hands-on experience. The book is composed of nine sections, of which the first and the longest section is dedicated to the description of over 200 plants and their medicinal properties. The other sections describe the four elements, trees, stones, fish, birds, mammals, reptiles, and metals, some of which are also considered in terms of their medical use.

Bartholomaeus Anglicus’ *De Proprietatibus Rerum* (c. 1230, first printed edition Basel 1470-72), written as an aid to Bible study, was another work of encyclopedic scope. Of the nineteen Books that compose the work, the seventeenth was dedicated to plants and trees. The 144 species treated in the book are arranged in loose alphabetical order, but indexes and pagination were lacking. The content was based on ancient and

⁴ Minelli 1995, 13.

⁵ Anderson 1977, 51.

medieval precedents including the works by Dioscorides, Pliny the Elder, and Isidore de Seville.

Conrad von Meigenberg's *Buch der Natur* (c. 1349-51, first edition Augsburg 1475) is an encyclopedia in eight books. It was written in the German dialect of the Bavarian region, for the purpose of advancing the education of women and common people not learned in Latin. The eight books treat the following subjects: Book I on mankind, Book II on Heaven and the planets, Book III on zoology, Book IV on trees, Book V on plants describing a total of 89 herbs and vegetables, Book VI on stones, Book VII on metals, and Book VIII on water with a section on monsters. The first printed edition of 1475 contains a number of woodcuts, among which was an illustration of plants, depicting diverse species including a violet, a lily of the valley, and a buttercup. This illustration is considered the first botanical representation of plants in terms of its realism (fig. 8A.2).⁶ One of the plants, probably a campanula, is shown, not planted on the ground like the other plants, but in a one-handed ceramic vase ornamented with scroll motifs. The same representation appears also in the 1482 edition. This appears to be an early manifestation of the interest in the ornamental property of flowers and in the display of cut flowers, which become more explicit from the turn of the seventeenth century.

The Renaissance herbals differ from their medieval precedents in a number of ways: first, in their interest in the botanical and the horticultural aspects than in the medicinal properties of plants; second, for their attempt for classification and systematization; third, their inclusion of newly introduced species from the Americas and the East.⁷ Plants came to be considered, not only as food or medicine, but also and primarily as objects of scientific study. In Italy, the interest in plants from a botanical perspective had already become apparent in the last of the manuscript herbals.

⁶ Anderson 1977, 75; Blunt and Raphael 1979, 113.

⁷ Species unknown in Europe were brought home by the Portuguese, and the Italians experimented with acclimatization techniques for the new crop plants, especially in Northern Italy. Cf. De Koning in Minelli 1995, 18. Crop plants introduced from the Americas included maize (*Zea mays*), sweet potato (*Ipomea batatas*), potato (*Solanum tuberosum*), bean (*Phaseolus vulgaris*), pineapple (*Ananas comosus*), sunflower (*Helianthus tuberosus*) and red and green peppers (*Capsicum*). Some of these plants started to be grown in aristocratic gardens.

Manuscript herbals that include realistic and beautifully executed illustrations appear from the turn of the fifteenth century.⁸ An outstanding example is the *Carrara Herbal* (1390-1400), the Italian translation of a treatise of medical botany (c. 800) by the Arab physician Serapion the Younger (fig. 8A.3-4). It was made for Francesco di Carrara, the last lord of Carrara. Jacopo Filippino, a Paduan monk, was responsible for the text. Another example of such a manuscript herbal is the *Liber de simplicibus* (1410), treating 450 domestic and 111 foreign plants (fig. 8A.5). The work was commissioned by a doctor named Niccolo Roccabonella (1415-1458) in Conegliano in the Veneto. Roccabonella also practiced in the Dalmatian port city of Zara/Zadar where he treated German and Serbo-Croat patients. The work is also referred to as the herbal of Benedetto Rinio, so-called from its subsequent owner. The plant names were in Greek, Latin and Arabic, to which later Italian, German and Serbo-Croat synonyms were added. Whereas the illustrations in the *Carrara Herbal* and others had been made on parchment, in the *Liber de simplicibus*, the 440 illustrated plates by Andrea Amadio were done with gouache on the newly available medium of white paper.

Parallel to the medieval and Renaissance herbals, there were agricultural treatises that discussed plants in the section on plants and trees to be grown in a seigneurial estate. The works by Pietro de' Crescenzi (*Opus ruralium commodorum*, Augsburg, 1471; *Il libro della agricoltura*, Venice, 1495), Agostino Gallo (*Le venti giornate dell'agricoltura et de' piaceri della villa*, Venice, 1572), and Marco Bussato (*Giardino di agricoltura*, Venice, 1593), focused on the management of a seigneurial estate, were based on the ancient Roman agricultural treatises by Cato, Varro, Columella, and Palladius. The first Renaissance anthology of the works of the four ancient Roman agricultural writers, the *Scriptores rei rusticae*, had been published in Venice in 1472. The medieval and Renaissance agricultural treatises were a revival of an ancient tradition rather than an innovative attempt for the understanding of plants.

From the first decades of the sixteenth century, there started to appear treatises focusing on the study of plants from a purely scientific perspective. Certainly, these

⁸ Cf. Pavord 2005, 127-132.

works were conscious of their ancient precedents – the plant treatises by Theophrastus and Dioscorides. However, they were new in their emphasis on the direct observation of the plants, and not entirely reliant on the interpretation of the ancient texts. This became apparent first through the illustrations accompanying the descriptive text. In the Renaissance herbals, the depiction of the plants – the details of their flowers, stems, leaves and the roots – became radically realistic in comparison to the woodcuts in the medieval herbals. The development in the art of engraving and the publication of large editions also made possible the creation of realistic illustrations and the inclusion of details. Folio-size editions of herbals appeared, which were luxury books to be consulted in the study, and which allowed for more details. But smaller editions were also issued, for the convenience of carrying them along as field guides. It may be worthy of note and even suggestive that the first Renaissance herbals were published in the cultural centers north of the Alps, in southern Germany and Switzerland.

It is commonly considered that the new type of herbal focusing on the botanical aspect of plants started with *Herbarum vivae icones (Living portraits of plants)* (Strasbourg, 1530) by Otto Brunfels (Mainz, 1488-Bern, 1538) (figs. 8.1-3).⁹ Brunfels studied theology and medicine, became a doctor in medicine, and served as the town physician of Bern. The *Herbarum vivae icones* was composed of three parts: Part I (1530), Part II (1531, reprinted in 1536) and Part III (1536). A German edition *Contrafayt Kreüterbuch* was published from 1532. The text was a compilation of earlier works, with no systematic order in the arrangement of the plants. The lack of systematic arrangement gave rise to difficulties when one tried to match the text with the woodcut illustrations, which constituted the novelty of the work. The woodcuts are remarkable for their realism, and had been erroneously attributed to Albrecht Dürer or Hans Burgkmair the Younger. But the preparatory watercolor drawings by Hans Weiditz (1500-1536) discovered in 1930 have demonstrated that Weiditz was the author of the illustrations that were drawn from nature (fig. 8A.6).¹⁰

⁹ Anderson 1977; Blunt and Raphael 1979; Minelli 1995, 20.

¹⁰ 77 watercolor drawings by Weiditz, executed in 1529, were discovered at the Bern Botanical Institute in 1930.

The *Kreuter Buch* (Strasbourg 1539) by Hieronymus Bock (1492-1554), a work on German plants written in German, shows improvement in the text, as the descriptions were based on direct observation. Anderson and Blunt both characterize Bock's work as a prototype of descriptive botany (phytography).¹¹ The story of how Bock studied the nature of the fern reveals his consistent method of direct observation. Having noticed brown dots on the underside of the fern leaves in the field, he brought them home and laid them on a cloth to discover their true nature. Bock's herbal was illustrated from the second edition (Strasbourg 1546) onwards, and subsequently a Latin translation was published (Strasbourg 1552).

De Historia Stirpium (Basel 1542) by Leonhart Fuchs (Wemdingen, Bavaria, 1501-Tübingen, 1566) was published out of the need to provide accurate knowledge on plants, in a situation where botanical ignorance was largely predominant among medical men. Fuchs, who had a Masters of Arts in Classics and Philosophy and a Doctor of medicine, became professor of medicine at Ingolstadt and Tübingen. But Fuchs was also a field botanist, and his herbal was innovative in its systematic arrangement and apparatus. Plants were arranged in the order of the Greek alphabet, and four indexes were supplied: first, Greek; second, Latin; third, apothecaries' and herbalist's names for the plants; and fourth, German. However, the strength of the work lay, like many other herbals, in the illustrations. The folio edition is provided with 509 full-page woodcuts of plants. Included was a full-length portrait of the author (fig. 8.6), as well as bust portraits of the three artists responsible for the illustrations – Albrecht Meyer, who drew the plants from nature; Heinrich Füllmaurer, who transferred the drawing to the wood blocks; and Veit Rodolph Speckle, who did the engraving (fig. 8.7). Noteworthy is the earliest illustrations of new species introduced from the Americas: the maize (*Zea mays*),¹² labeled 'Turcicum Frumentum/Türkisch Korn' (Turkish corn), and the pumpkin (*cucurbita*). The work includes descriptions of more than a hundred plants never mentioned before, and provides a record of the plants introduced in Germany from

¹¹ Anderson 1977, 132; Blunt and Raphael 1979, 129.

¹² The description of the maize had already been included in Hieronymus Bock's *Kreüter Buch* (Strasbourg 1539, unillustrated edition).

elsewhere.¹³ The folio edition was too expensive and heavy to be carried on field excursions in the countryside, but small pocket-size editions were issued: an octavo with four illustrations to a page and no text (Basel, 1545) and a duodecimo with a single illustration to a page (Lyons, 1549). These were illustrated with freshly cut blocks, and served as convenient field guides.

De materia medica by Pedanius Dioscorides (c. 40-90 A.D.) remained the authoritative text on plants from antiquity until the sixteenth century (fig. 8.8-9).¹⁴ Dioscorides, a contemporary of Pliny the Elder, was a physician, botanist and pharmacologist in Rome during the reigns of Nero and Vespasian. Although the work was originally written in Greek (*Peri Hyles Iatrikes*), it is better known by its Latin title, *De materia medica*. It provided a summary of the plant species then known. Pietro Andrea Matthioli (Siena, 1501-Trento, 1577), among others, published the commentaries on Dioscorides in Italian, *Di Pedacio Dioscoride Anazarbeo libri cinque della historia & materia medicinale* (Venice 1544, unillustrated), and an enlarged edition in Latin *Commentarii in sex libros Pedacii Dioscoridi* (Venice 1554, with 562 woodcut illustrations). Both Italian and Latin editions were reissued in several illustrated editions (fig. 8.10). The artists responsible for the large woodcuts were Giorgio Liberale da Udine and Wolfgang Meyerpeck (fig. 8.11).

Matthioli studied at Venice and Padua, and went into medicine following his father. After practicing in Siena, he went to Rome. From 1527 to 1555, he was physician in northern Italy, in Valle Anania, near Trento, and from 1555 to 1568 in Gorizia.

¹³ Anderson 1977, 146.

¹⁴ Ogier Ghiselin de Busbecq (1521-1592), ambassador of the Holy Roman Emperor Ferdinand to the Sublime Porte (and who also introduced the tulip to Europe), came across a manuscript of Dioscorides in the possession of the son of Hamon, former physician to Sultan Suleiman the Magnificent. But he could not afford the price of 100 ducats proposed by the owner for this manuscript. Busbecq had a shipful of Greek manuscripts, more than 240 volumes according to his estimate, which were to be sent to Vienna via Venice, but the manuscript of Dioscorides was not among them. Cf. Fourth Letter of Ogier Ghiselin de Busbecq, Busbecq 1968, 242-243. The manuscript that Busbecq came across is considered to have been the *Juliana Anicia Codex*, an illuminated manuscript of Dioscorides' *De Materia Medica*, created around 515 for Juliana Anicia, daughter of the Western Roman Emperor Anicius. The Holy Roman Emperor Ferdinand I eventually purchased this manuscript. It is currently held by the Österreichische Nationalbibliothek in Vienna as Codex Vindobonensis Med. Gr. 1. Cf. Blunt and Raphael 1979, 16; Anderson 1977, 10. Minelli states that since 1516 it has been in the Imperial collection, but the evidence for this date remains obscure. Cf. De Koning in Minelli 1995, 12.

Anderson and Blunt both describe Matthioli in his later years as an authoritative figure, especially after he became court physician at the Imperial court in Vienna and Prague.¹⁵ Their evaluation in terms of Matthioli's contribution to the advancement of botanical knowledge remains extremely circumspect.¹⁶ However, Findlen argues the significant role played by Matthioli's edition of Dioscorides' *De materia medica* in the reform of the medical curriculum in Italian universities.¹⁷ The traditional teaching of medicine exalted theory over practice and allowed for little room for empirical components such as anatomical dissections, botanical demonstrations, and chemical experiments. It was clear that practical knowledge was essential for a physician, but in reality, even in the second half of the sixteenth century, not all physicians were ideally equipped in that sense. The publication of Matthioli's commented edition of *De materia medica* was a key turning point in the introduction of natural history to the medical curriculum of Italian universities in the sixteenth century.¹⁸

Amidst the growing demand for the practical training of physicians, in particular the ability to recognize the materials out of which medicinal compounds were made, Matthioli's commented edition of Dioscorides became the standard textbook for botanical lectures and demonstrations. The appearance of the first edition in 1544, followed by numerous editions, was a timely response to the imminent need of qualified medical

¹⁵ Anderson 1977, 164-168; Blunt and Raphael 1979, 136. Stories have been told of his intolerance of any criticism directed towards his work, and of the botanists who incurred unfavorable consequences as a result of challenging Matthioli's views. Amatus Lusitanus (Castel Branco, 1511-Thessaloniki, 1586), a Portuguese physician, Luigi Anguillara (Anguillara Sabazia, 1512- Ferrara, 1570), an Italian botanist and first prefect of the Botanical garden at Padua, and Conrad Gesner (Zürich, 1516 – 1565), a Swiss physician and naturalist, are among those who were in disfavor with Matthioli.

¹⁶ According to Anderson and Blunt, it is not clear the extent to which Matthioli contributed new findings to the knowledge of plants. Most likely he did not keep a systematic herbarium, and identification errors in his work are considered to have resulted from his artist reconstituting plants by soaking in water the dried specimens. Cf. Anderson 1977, 168; Blunt and Raphael 1979, 136.

¹⁷ Findlen 1994, 248-256.

¹⁸ Cf. Findlen 1994, 248-256. Gaspare Gabrieli, the first professor of simples at the University of Ferrara, in a lecture of November 3, 1543, summarized the need to revive the study of natural history as an academic discipline: "In my opinion, this attitude derives solely from the belief that the part of medicine dealing with knowledge of plants does not concern them. They leave the entire study of this branch [of medicine] to chemists, apothecaries, and wise-women. Thus at present the entire medicine of herbs is in the hands of the unlearned, the foolish, and the superstitious wise-women. Not surprisingly, infinite errors occur from this incompetence." (From Felice Gioielli, "Gaspare Gabrieli. Primo lettore dei semplici nello Studio di Ferrara (1543)," *Atti e memorie. Deputazione provinciale ferrarese di storia patria*, ser. 3, 10 (1970): 5-74, cited in Findlen 1994, 251.)

practitioners in sixteenth century Italy. At the universities of Bologna, Pisa, and Padua, Ulisse Aldrovandi, Luca Ghini, and Gabriele Fallopi, as professors of natural history, lectured on Matthioli's *De materia medica*. Their teaching provided the impetus for a reform in the medical curriculum, where theory still tended to be considered superior to empirical knowledge.

The introduction of botany as practical knowledge in the training of physicians also concerned the broader issue of the establishment of the profession within the hierarchy of medical and paramedical professionals. A category of physician introduced in this period was the *Protomedicato*, which became the new elite of the medical profession.¹⁹ Only a few prominent physicians were appointed, often personally by the ruler, to the *protomedicato*. The appointee was responsible for overseeing all aspects of medical practice, and evaluating the activities of the physicians and apothecaries impartially. For this purpose, the position maintained autonomy from the colleges of physicians and the guilds of the apothecaries. Physicians trained in both theory and practice would have the authority to supervise the apothecaries who made the medicaments and to control the intervention of unlearned practitioners such as wise women from all aspects of medicine.²⁰ Humanistic study of ancient texts provided a persuasive argument in favor of the integration of botany as an essential component of the medical curriculum, by interpreting it as a revival of an intellectual tradition formed by Theophrastus, Dioscorides, Galen and Avicenna.²¹

Herbals were still considered manuals of herbs and medicinal simples; they were not treatises or encyclopedias of botany in the modern sense. A significant number of herbals still contained non-scientific knowledge. One of them is Leonhard Thurneisser's *Historia sive descriptio plantarum omnium* (Berlin 1578), a work described by Anderson as an astrological herbal.²² Astrological herbalism refers to the practice of using medicinal plants in relation to astrology. The medicinal use of plants is explained according to astrological governance: herbs used for curing men should be gathered when

¹⁹ Findlen 1994, 263-266.

²⁰ Findlen 1994, 251.

²¹ Findlen 249-251.

²² Cf. Anderson 1977, 182-186.

the sun is in Sagittarius, Aquarius or Leo; those for curing women should be gathered when the sun is in Virgo, Taurus or Cancer. The *Phytognomonica* (Naples 1588) by the Neapolitan Giambattista Porta (1535-1615) is another herbal worthy of mention for its unique approach. Porta founded the scientific academy, the *Accademia Secretorum Naturae*, to which any person applying for membership had to demonstrate a new discovery in the natural sciences. Porta joined the Accademia dei Lincei in 1610, the scientific academy in Rome founded by Federico Cesi in 1603. Porta's herbal, the *Phytognomonica*, was based on the simple theory of the formal similarity of the ailing parts of the body and the plants that had the healing property. He maintained that the forms of plants revealed the purposes for which they were to be used.²³ Peaches, citrons, and bulbous roots could be remedies for heart troubles and diseases because of their formal resemblance to a heart. The kernels of walnuts, resembling the brain, cured the ills related to the brain. Pinecones, thistles, catkins, lily bulbs, which exhibited overlapping scales could be used to cure scaly conditions of the skin.

Such herbals were not entirely inconceivable in an age when there was a strong interest in non-scientific arts such as astrology and alchemy. Science as we understand it in the modern sense coexisted, intersected, or overlapped with non-scientific arts that bordered with magic, superstition and occultism in the Renaissance. There was more interest in the latter than the modern man would imagine. The astrologer John Dee (1527-1608) enjoyed the patronage of Queen Elizabeth I. Francesco de' Medici was interested in alchemy, and the Holy Roman Emperor Rudolf II sponsored many alchemists in his court at Prague. As astrology was an important factor in the pictorial arts of the Renaissance,²⁴ it is understandable that plant study would also have been affected by it. Scientific investigation and non-scientific practices coexisted in the sixteenth century.

²³ Cf. Anderson 1977, 197-198.

²⁴ For astrology and cosmology in Medici art, see Cox-Rearick 1984.

APPENDIX 3

Botanical gardens in sixteenth-century Italy

Through the Middle Ages and well into the sixteenth century, the study of plants was considered the realm of medicine and therefore an essential part of a physician's training. The main goal of plant study was the acquisition of the working knowledge of simples, that is the ability to apply the plants' medicinal and pharmacological properties in actual medical practice. Botany as a scientific discipline as we see it today only started taking shape during the course of the sixteenth century. In discussing botanical studies in sixteenth-century Europe, we must mention the names of three Flemish scholars who contributed greatly to the advancement of the study of plants: Rembert Dodoens (Rembertus Dodonaeus), Charles de L'Ecluse (Carolus Clusius), and Matthias de L'Obel (Matthaeus Lobelius). Dodoens, L'Ecluse, and L'Obel are noteworthy, not only for their scientific approach, but also in that they exchanged information and formed a scholarly network through correspondence and publication. Dodoens and L'Obel became physicians, and L'Ecluse a naturalist, but all three shared a background in medicine; their formation included at least a period of study with a physician, if not medical training in the case of L'Ecluse.

Rembert Dodoens (Malines, 1517-Leiden, 1585) studied medicine at Leuven and graduated with a degree in 1535. After travels in Italy, Germany and France, he served as municipal physician in Malines from 1548 to 1574, court physician to Emperors Maximilian II and Rudolf II from 1574 to 1580, and professor of medicine at Leiden.¹ He popularized the latest developments in botany through the publication of a herbal in Dutch, *Cruydeboeck* (1554), which contained descriptions of more than one thousand plants and seven hundred woodcut illustrations (fig. 8.18).

Charles de L'Ecluse (Arras, 1526-Leiden, 1609) studied law, Greek and Latin at Leuven (fig. 8.19). After travels in Germany and France, he went to Montpellier to study

¹ For a concise summary of the careers and contributions of the three Flemish botanists Dodoens, L'Ecluse, and L'Obel, see De Koning in Minelli 1995, 24-25.

with the physician and naturalist Guillaume Rondelet in 1551.² From 1574 to 1578, he was in Vienna at the imperial court. From 1593 to 1609, he held the professorship of botany at the University of Leiden. During this period, he supervised the planning of the botanical garden. He created a separate area for bulbs, where tulips and other bulb plants introduced via Turkey were planted. In his *Rariorum aliquot stirpium per Hispanias observatarum Historia*, a study of the flora of the Iberian peninsula, L'Ecluse described many American, and East and West Indian plants. He was also the first to write extensively about fungi,³ and to cultivate the potato successfully in Europe.

Matthias de L'Obel (Lille, 1538-London, 1616) also studied medicine with Rondelet at Montpellier. L'Obel was physician to William the Silent, Prince of Orange, after which he moved to England to serve as physician and botanist to James I of England. With Pierre Pena, L'Obel published *Stirpium Adversaria Nova* (London, 1571), in which he made a conscious effort for a natural classification of plants.

Although the majority of the professional men who were engaged in plant study were trained in medicine and made their living through their practice as physicians, among them were those who started to consider plant study as their primary occupation. While scholars based in the cultural centers north of the Alps contributed greatly to the development of natural history in the Renaissance, a similar current is also observed in northern and central Italy. Scientific interest in the natural world developed on both sides of the Alps, and most likely there were exchanges and influences in both directions. Arber and De Koning in fact emphasize the Italian initiative in the establishment of botany as a scientific discipline.⁴ Italy provided a favorable cultural climate for the discipline, given the revival of Greco-Roman tradition of herbals through the publication of Mattioli's commented edition of Dioscorides, and the recognition of natural history as an aristocratic pursuit. Patrons such as the Medici expressed a strong interest in natural

² Guillaume Rondelet (Montpellier, 1507-Réalmon, 1566) was a physician and professor of anatomy at the University of Montpellier, as well as a naturalist. He published *De piscibus marinis* (1555-1556), a study of marine animals.

³ *Fungorum Brevis Historia* in *Opera Omnia* (1601).

⁴ Arber 1953, 92-103; de Koning in Minelli 1995, 23.

history. Plants and animals, along with antique sculptures and art works, were enthusiastically collected.

In the cultural centers of northern and central Italy – Milan, Venice, Florence, and Bologna – there appeared professionals who started to focus on plant study as their primary occupation, Luca Ghini, Luigi Anguillara, and Andrea Cesalpino among them. Andrea Cesalpino (Arezzo, 1525-Naples, 1603), second director of the Giardino dei semplici of Pisa, was also responsible for the teaching of natural history at the university of Pisa. Cesalpino's *De plantis libri XVI* (1583), unlike many cinquecento herbals, does not include any illustrations, but the work is important in its attempt to establish a theoretical framework for the study of plants. In the first of the sixteen books, Cesalpino proposed a classification system with the creation of several disciplines within botany: morphology, taxonomy, physiology, and anatomy, each with its own terminology and field. Considering the fruit to be the most important part of the plant, he made it the basis of the system of the plant kingdom. The remaining fifteen books were devoted to the classification and the descriptions of the plants.

It was also in Italy that the first botanical gardens in Europe were created. De Koning mentions university gardens for apothecaries already existing in Prague and Cologne in the fourteenth century, and gardens with plants that were created even earlier in Hamburg or Tübingen.⁵ However, it was in sixteenth-century Italy that, amidst the rising interest in the scientific study of plants among academic professionals and the passion for plant collecting among the affluent class, botanical gardens were created under the patronage of rulers or the sponsorship of city-states. A marked consideration for architectural design is also what differentiated the Italian botanical gardens from the medieval plant gardens.

The first botanical garden in Italy was created at the University of Pisa in 1544, under the patronage of Cosimo I de' Medici.⁶ At the time of its creation, it was not called a botanical garden, but a 'giardino dei semplici,' a garden of simples. Luca Ghini (1490-1556) became its first director. Ghini had studied philosophy and medicine at Bologna

⁵ De Koning in Minelli 1995, 28.

⁶ For the botanical garden at Pisa, see Garbari, Tongiorgi Tomasi and Tosi 1991.

graduating in 1527, taught medicine and medicinal simples at Bologna from 1528, and practiced medicine in Fano. At Pisa, before the directorship of the Garden, Ghini first held the chair of medicinal simples, ‘de simplicibus medicinalis,’⁷ as the lectureship on plants was so referred to at the time. It was in fact Ghini who was the primary impetus for the creation of the garden of simples at Pisa. He convinced Cosimo I of the necessity of such a garden, arguing that theoretical knowledge would be of no avail if not complemented by the direct study of live specimens.⁸ In 1544, the Garden of simples was created. In 1563, it was relocated to a second location, and in 1592 to a third location, where it remains today (fig. 8A.7). Andrea Cesalpino, one of Ghini’s disciples, became the second director, and Giuseppe Casabona (1535-1595), a scholar of Flemish origin, the third director. Cosimo I had sought to attract renowned scholars such as Leonhart Fuchs to teach at Pisa, but Fuchs had declined for religious reasons. Cosimo I wished to have a botanical garden also in Florence, where one was created soon afterwards in 1545. Niccolò Tribolo, who had designed the garden of the Medici villa at Castello, was commissioned to produce the design of the *giardino dei semplici* in Florence.

The second garden of simples in Italy was created in Padua in 1545, sponsored by the Venetian Republic.⁹ It was affiliated with the University of Padua, the university of the Venetian Republic and the second oldest university in Italy after Bologna. The first prefect was Luigi Anguillara (Anguillara, 1512-Ferrara, 1570), another of Ghini’s disciples. Pisa and Padua have always disputed for primacy in the creation of the botanical garden, but Padua’s is the world’s oldest academic botanical garden that is still in its original location. The third garden of simples in Italy was created in Bologna in 1568, with the initiative of the naturalist Ulisse Aldrovandi. Subsequently, gardens of simples were created in Leiden in 1577, with Charles de L’Ecluse as director, and in Montpellier (famous for its school of medicine) in 1593 under Henri IV, with Pierre Richer de Belleval (1564-1632) as director. After the turn of the seventeenth century,

⁷ Garbari, Tongiorgi Tomasi and Tosi 1991, 29.

⁸ Tongiorgi Tomasi 2002, 31-32.

⁹ On June 29, 1545, the Venetian Senate sanctioned a decree for the authorization of the creation of a Giardino dei semplici at Padova. Cf. Azzi Visentini 1984, 9.

similar gardens were created in Oxford (1621), Paris (1626), and Messina in Sicily (1639).

The botanical gardens were not called ‘botanical’ when they were first created. In sixteenth-century Italy, instead of “Giardino botanico” or ‘Orto botanico’ as they are called now, they were referred to as the ‘Giardino dei semplici’ or ‘Orto di semplici.’ One might think that the naming may have been related to the establishment of botany as a scientific discipline, as it was in the course of the sixteenth century that the study of plants became independent from medicine. Maps representing the Garden at Padua continue to label it ‘Giardino dei semplici’ or ‘Orto di semplici’ up till the eighteenth century; only in the nineteenth century does it start being referred to as ‘orto botanico.’¹⁰ This relatively late use of the word ‘botanical’ indicates that the notion of the botanical would have been a fairly modern one. According to the Oxford English Dictionary, common use of the word botany dates from the beginning of the eighteenth century, and its adjective, botanical, from the mid eighteenth century. The naming is also suggestive of the kinds of plants that were included in the garden. The Renaissance botanical garden started out with medicinal plants as the core, and ornamental plants that were introduced in Europe in the sixteenth century and became popular horticultural species from the turn of the seventeenth century, were incorporated into it only later.

The original purpose of creating a botanical garden within a university was twofold: first, the cultivation of medicinal plants to be used in the actual practice of medicine, and second, the training of medical students in identifying those plants. In the Middle Ages, medicinal plants were grown in the cloister gardens of monasteries and convents, or in the gardens of private villas and palaces. That the first botanical gardens were created in Italy may have had to do with the Italian garden tradition. Both in theory and practice, since the late fifteenth century in Italy, gardens had been an established feature of a seigneurial estate, with a characteristic systematic arrangement. Gardens of private villas and palaces were organized according to a tripartite scheme – the

¹⁰ Cf. Dal Piaz and Bonati in Minelli 1995, 32-54. The map of G. dall’Abaco (1568), Girolamo Porro (1591), Francesco Bacin (1767) label the garden ‘orto de semplici.’ The map by Giovanni Valle engraved by Giovanni Volpato (1784), however, labels it ‘orto botanico.’

compartment beds (*orto*), the orchard (*frutteto*), and the grove (*bosco*) – as Lazzaro has demonstrated in her study on Italian Renaissance gardens.¹¹ The layout of the garden of simples would most likely have developed from that of the traditional compartment beds, where flowers and herbs were planted. In the newly created garden of simples, one may recognize the compartment beds component of the Italian garden that had become an independent garden space in its own right. Hervé Brunon, in his essay on the compartment garden in the Villa Medici on the Pincio in Rome, mentions that there was no clear boundary between the compartment garden of the villa and the botanical garden.¹² Azzi Visentini characterized the *giardino dei semplici* as an independent garden space that is not subjected to a casino or a palace building, and interpreted it within the framework of Italian Renaissance gardens.¹³

The Orto di semplici at Padua is a typical example that illustrates the connection of the botanical garden to the Italian garden tradition. Three characteristic features illustrate that connection: the circular plan, the arrangement of plants in the compartments, and the *Lex hortorum* on the portal.

The first point of connection of the Orto di semplici of Padova to the Italian garden tradition is its circular plan. The original layout of the garden in 1545 remains unknown, as there is no certain information on its architect, or any surviving designs or drawings.¹⁴ Girolamo Porro's *Horto de i semplici di Padova* (Venezia 1591) includes the earliest surviving plan of the Orto di semplici of Padua. The plan shows a circular space at the center, referred to as the *hortus sphaericus* (circular garden) (fig. 8A.8). The circle was partitioned into quadrants by means of two axial paths intersecting at the center of the circle. Each quadrant contained a square and a segmental space along the circumference. Plants were systematically arranged in these partitions of geometric form, according to their classification and nature. The circular plan is considered to have been due to the irregular shape of the plot rented from the Benedictine monks for the creation

¹¹ Lazzaro 1990, 20-21.

¹² Brunon 1999, 71.

¹³ Azzi Visentini 1984, 69-104.

¹⁴ Dal Piaz and Bonati in Minelli 1995, 33.

of the garden.¹⁵ The site had been chosen for its proximity to the canal, which served as the boundary as well as the source of irrigation. That it was referred to as *hortus sphaericus*, with emphasis on its circular form, would have been an indication of its unusual design.

But once it had been decided upon that the garden was to be circular, the design would have been inspired by prototypes of circular design in the history of Italian architecture and landscape architecture. The predilection for geometric forms was a prominent feature of the architectural design of antique inspiration in the Renaissance. Azzi Visentini notes the particular importance of the combination of the circle with the square within or without.¹⁶ An important prototype for the circular form may have been the so-called *Teatro marittimo* in Hadrian's villa, known in the Renaissance through Pirro Ligorio's excavations. The plan of the *Teatro marittimo* is essentially a square enclosed within a circle.¹⁷

Another remarkable feature of the Orto di semplici at Padua, related to the circular plan, is that the intersecting paths were oriented, albeit with some deviation, to the cardinal points. In the 1591 plan, the four gates are labeled respectively Tramontana (north), Levante (east), Ostro (south), and Ponente (west). Such an orientation may have been based on ancient prototypes like the Pantheon or the Octagonal Hall of Nero's Domus Aurea; the latter had a perfect solar orientation. The Villa Medici at Poggio a Caiano (1480) by Antonio da Sangallo was designed as a cubic block with a perfect orientation to the cardinal points. A roughly contemporary example in the Venetian sphere would be Palladio's Villa Almerico-Capra (1566), also oriented to the points of the compass, and influenced by the Pantheon.

Also according to the 1591 plan, the wall defining the outer circle was lined with espaliers of laurel trees of higher height, and the wall defining the inner circle was lined with those of lower height. In between the two circles was a turfed space. Within the

¹⁵ Dal Piaz and Bonati in Minelli 1995, 45.

¹⁶ Azzi Visentini 1984, 89.

¹⁷ MacDonald and Pinto 1995, 81-83.

inner circle, the eight segmental spaces were planted with trees and shrubs.¹⁸ In each of the four square compartments, a tree was planted at the center. The square compartments are labeled ‘spaldo’ (originally meaning ‘glacis’) and partitioned into small units according to an elaborate pattern. The view of the garden in Jacopo Filippo Tomasini’s *Gymnasium Patavium* (1654) is suggestive of the plantings (fig. 8A.9). The partitions in the ‘spaldi’ were all numbered down to the single unit: the ‘primo spaldo’ the square compartment in the northwest quadrant had 141 units; the ‘secondo spaldo’ in the northeast quadrant had 125 units; the ‘spaldo terzo’ in the southeast quadrant had 121 units; and the ‘spaldo quarto’ in the southwest quadrant had 117 units; the total was 504 units. These 504 units appear to have been planted with different species of medicinal plants. In 1591, there were about 1200 species of plants in the garden. In 1642, there were 1602 species; in 1644, 1647 species; and in 1662, 2272 species.¹⁹

As we see in the use of ‘spaldo,’ a term normally used for describing fortification architecture, to designate the square compartments of the garden of simples, we may note the frequent borrowing of architectural terms in the discourse on gardens and garden structures in Renaissance Italy. Raffaello Borghini’s *Il Riposo* (1584) contains a detailed description of a *ragnaia* (artificial bird thicket, a planted space for catching birds), which, in the author’s use of architectural terms to describe its elaborate form and design, can be clearly seen as understood in relation to stone architecture.²⁰ The *ragnaia* in Borghini’s

¹⁸ Labeled: Pyracanta, Sambuco, Myrica, Plane, Ziziphus lotus, Erica alborea.

¹⁹ Azzi Visentini 1984, 122.

²⁰ Cf. Borghini 1584, 129-131. Nel mezo della sommita, con grande artificio piantato, in forma quadra verdeggia il boschetto, il quale de pari lunghezza per ogni parte braccia 72 occupando, in ventiotto ordini di piante egualmente distanti e compartito, che di 28 in ogn’ordine facendo il numero, contengono in tutto 784 piante, fra le quali si comprendono quattro ordini di pilastri murati, e coperti di Ellera, che in cambio di Allori e di lecci le latora delle due strade principali, che in croce il boschetto dividono adornando (percioche venendo a piombo sopra le mura che fanno due vie sotteranee, come appresso dira, non vi si sarrebbon potute le piante abbarbicare) vanno il componimento degli altri arbucelli seguitando. E sono le piante di maniera distinte, & ordinate che da ciascuna delle prime quattro vedute, fuor che dove s’innalzano i pilastri, si veggono sempre l’uno dopo l’altro un leccio, & un alloro seguitare; i quali a tale ufficio sono stati eletti, perche d’ogni stagione, essendo di verdi foglie vestiti, e quasi sempre di coccole pieni, allettano gli uccelli, e piu che altre piante porgono a quelli soave, e grato ricetto. Le due vie maestre da pilastri contenute, e che hanno sotto di loro due a tre vie sotteranee in volta della medesima larghezza, e lunghezza, dividono il boschetto in quattro parti: e ciascuna d’esse da due altre viette divisa viene in se stessa a formare quattro quadri, talmente che tutto il boschetto in sedici quadri eguali e distinto: e per tutto dove dette vie s’incrocicchiano insieme, si forma uno spatio quadro, il quale essendo di sopra a modo di gelosia

work is described as a square structure, divided by the main intersecting paths into four compartments, each subdivided into four parts by small intersecting paths. In each compartment, trees are planted in regular rows, their foliage forming a bower. At the four corners are also trees, higher than the other trees, in the guise of the corner towers of a fortification.

Olivier de Serres's *Le theatre d'agriculture et menage des champs* (1605) includes a section on the design of the garden of simples. It contains two elaborate designs, one circular (fig. 8A.10) and the other square (fig. 8A.11). Both are presented as three-dimensional structures, with a plan showing the horizontal layout, and the perspectival view showing the vertical extension. The one with the circular design is evocative of the Mausoleum of Augustus or the Mausoleum of Hadrian, with concentric layers of diminishing size. The author Olivier de Serres compares it to famous architecture from antiquity – the Tower of Babel, the Pharos of Alexandria, and the Tour Magnes in Nîmes.²¹ The path leading to the summit of the structure, which is referred to as a mountain (*Montaignete*), takes a counter-clockwise direction, in the manner of antique structures with spiraling paths, such as Trajan's Column. The other structure with the square design is similar to a stepped pyramid, the four sides oriented to the cardinal points. One ascends to the upper levels by means of stairs at the diagonals. The Olivier de Serres compares the circulation system to that of a theater.²² The structure was to be hollow within, so as to serve as an orangerie in the colder months. It is clear from these examples that the design of gardens and garden structures were perceived in relation to architecture. Whether in the reference to precedents, the borrowing of ornamental motifs and structural principles, or the creation of a particular spatial effect, one can say that there was a conscious cross reference between architecture and garden design.

di verdi rami, e di frondo coperto, concede all'uccellatore nell'andare attorno nascosta ritirata, & a gli altri; che sotto star vi volessero fresco diporto. Nelli quattro angoli poi del boschetto si veggono con bella proportione a guisa di torrioni, innalzarsi quattro bertesche di lecci, e d'allori, che sopravanzando di quattro braccia l'altre piante, e corrisponendo d'altezza a gli alberi, che coprono, e nascondono il casino del toccatoio, fanno vago componimento, e dilettevole a rimirare.

²¹ Olivier de Serres 1605, 612.

²² Olivier de Serres 1605, 612.

The second point of connection of the Paduan garden of simples to the Italian garden tradition concerns the arrangement of the plants within the compartments. Azzi Visentini makes the connection of the space of the garden of simples with the memory theater theory.²³ The connection between gardens and the art of memory may appear to be unexpected to some, as in modern scholarship, the art of memory and plants in the Renaissance have been studied separately. When historians of Italian gardens cite Agostino Del Riccio's "Del giardino di un re" in his *Agricoltura sperimentale*, or Giovanni Battista della Porta's *Phytognomonica*, rarely are their other works mentioned or taken into consideration. However, the herbals and the treatises relevant to gardens cannot be interpreted within a clear-cut scheme of plant and garden treatises, if we recall that these authors have also written works on memory. Del Riccio has produced a memory treatise, *Arte della memoria locale* (1595), and della Porta has published *Ars reminiscendi* (Naples 1602). The art of memory was the method of classifying knowledge and storing items in one's mind according to a rational order so as to ensure efficient access to them. Memory and gardens would have been far more interrelated in the minds of the intellectuals of the age, especially in the case of gardens that required the art of memory, such as the garden of medicinal simples. If the above authors writing on plants and gardens had also written works on memory, their thinking on memory would naturally have extended to and influenced the thinking in their other areas of expertise. The orderly arrangement of the memorized images, words, or concepts in the mind and the orderly arrangement of the plantings, such as the tripartite arrangement of herbs, fruit trees, and shrubs, as well as the layout of the different species in the partitioned units within the compartments in the garden would have been closely related after all. The commonality between the two arrangements was the creating of order among disparate items so as to avoid confusion. As in the art of architectural memory, in which passages or ideas that one needed to memorize were mentally stored in architectural spaces such as rooms arranged in sequence, so the memorization of the location and its content

²³ Azzi Visentini 1984, 85-87. For the study of the art of memory from antiquity to the Renaissance, see Yates 1966 and Carruthers 1990.

according to an easily evocable order would have facilitated the identification of the plant species.

In the creation of the garden of simples, this mental order would have been visualized as an image and projected onto the ground in the form of compartments and partitions, each containing different species of plants. Giulio Camillo's Memory Theater, studied by Frances Yates, appears to be a typical example of a mental order incarnated as an architectural structure.²⁴ Giulio Camillo (Friuli 1480-Milan 1544) was an Italian intellectual, who for a while held a professorship in Bologna, but spent the greater part of his time on the construction of his Memory Theater. The structure was realized as a three-dimensional wooden model. Yates' plan of Giulio Camillo's Memory Theater shows a semicircular plan with seven radiating sections separated by gangways. Each compartment contains images of the planetary gods and allegorical figures from classical mythology. A Viglius Zuichemus, in a letter to Erasmus, mentions that the structure was an amphitheater, that it was marked with many images and full of little boxes with various orders and grades.²⁵

A number of other images incarnating the memory system also bear a resemblance to the circular layout of the Orto dei semplici of Padua, for example, *The Heaven* or *The Potter's Wheel* from the *Triginta Sigilli* (1583) by Giordano Bruno.²⁶ The images of memory as paradise or memory as hell, in a 16th century treatise on memory,²⁷ resemble the mountains with spiraling or concentric design created in Italian Renaissance gardens. The mountain at the Villa Medici in Rome, the labyrinths created in the villas around Florence, or the pictorial depictions of them in the garden paintings of Lodovico Pozzoserrato are evocative of these images of mountains in the memory treatises. The connection between the design of the garden of simples and the architectural mnemonic

²⁴ On the memory theater of Giulio Camillo, see Yates 1966, 129-159. Yates 1966, 130, n.4; between pages 144 and 145 is inserted the figure of reproduced theater plan.

²⁵ Yates 1966, 131; 144.

²⁶ Cited in Yates 1966, 321, pls. 14a: The Heaven and 14b: The Potter's Wheel, both from Giordano Bruno, *Triginta Sigilli*, London, 1548, 248 and 250. Both show a scheme of a square enclosed within a circle.

²⁷ Cosmas Rossellius, *Thesaurus Artificiose Memoriae*, Venice, 1579. Cited in Yates 1966, 122; 128, pls. 7a: Hell as Artificial Memory and 7b: Paradise as Artificial Memory.

seems obvious. The garden of simples can be situated, not only within the tradition of Italian garden design, but also within the classical tradition of the art of memory.

The Orto di semplici at Padua was intended to be more than just a garden for plants in yet another way. Girolamo Porro's description mentions projects that were yet to be realized. Facilities that were to be part of the garden included foundries and distilleries, as well as cabinets of curiosities containing samples of minerals, stones, jewels, soil, fish, marine animals, salts, sponges, corals, and birds.²⁸ Far more than just a garden of medicinal plants, the idea appears to have been a large-scale, ambitious one: to create a museum of natural history, for the enjoyment and education of the cultured class. Moreover, the entire complex is referred to as a theater, where a microcosm representing the macrocosm of the real world of nature is represented.

The third point of connection of the Paduan garden of simples to the Italian garden tradition is the *Lex Hortorum*, the stone inscription on the tympanum of the rusticated portal at the end of the bridge spanning the canal. The sixteenth-century stone bridge was demolished in the nineteenth century, but the fragment bearing the inscription has recently been recovered. The inscription reads:

TRIUMVIRI LITTERARII

- I. PORTAM HANC DECUMANAM NE PULSATO ANTE DIEM
MARCI EVANGELISITAE NEC ANTE HORAM XXII
- II. PER DECUMANAM INGRESSUS EXTRA DECUMANUM NE
DECLINATO
- III. IN VIRIDARIO SCAPUM NE CONFRINGITO NEVE FLOREM
DECERPITO NE SEMEN FRUCTUMVE SUSTOLLITO RADICEM
NE EFFODITO
- IV. STIRPEM PUSILLAM SUCCRESCENTEMQU NE ATTRE CTATO
NEVE AREOLAS CONCVLCATO TRANSILITOVE
- V. VIRIDARII INJURIA NON AFFICIUNTOR
- VI. NIHIL INVITO PRAEFECTO ATTENTATO
- VII. QUI SECUS FAXIT AERE CARCERE EXSILIO MULTATOR.²⁹

²⁸ Dal Piaz and Bonati in Minelli 1995, 42-43.

²⁹ Cf. Dal Piaz and Bonati in Minelli 1995, 48. 1. Do not knock at this main gate before the day of Mark the Apostle and then not before the XXII hour. 2. Anyone entering through the main gate should not wander from the main avenue. 3. Do not break stems, pick flowers, collect fruit or seeds, or pull up roots in the Garden. 4. Do not touch young shoots, and do not stand or leap over flower beds. 5. The gardens are to be

This inscription can be interpreted within the tradition of the *Lex hortorum*, a classicizing invention of the Renaissance to have Latin inscriptions in the garden laying down the rules for its use.³⁰ The *Lex Hortorum* of Roman pleasure gardens usually stated that free access to the garden would be granted to anybody abiding by those rules. They emphasized the enjoyment of the aesthetic and cultural aspects of the garden, and the generous intent of the owner towards his cultured friends. The rules of the Orto di semplici at Padua differ from the Roman *Lex hortorum* in the inclusion of punitive measures in the case of violation, which are laid out in concrete manner. The rules were concerned more about the protection of the plants, while no mention is made of the enrichment of the mind of the cultured visitor. The Roman *Lex hortorum* was also concerned about the protection of the plants in the garden, but it was based on the assumption of the common sense and general goodwill of the visitors. In letter it stated that the garden was open to anybody who would be interested to visit, but in reality the visitors must have been those of a certain rank – aristocrats, merchants and intellectuals. The assumption would have been to admit only those who were able to afford the appropriate physical appearance befitting the high-end social atmosphere. Garden prints by Stefano della Bella or Giovanni Battista Falda show men and women in handsome attire strolling and socializing in the garden. Moreover, instead of celebrating the owner of the garden, in this case the prefect of the garden is cited as the authority. This indicates the emergence of a new type of garden, more akin to the public gardens of the nineteenth century than to the private gardens of the aristocracy or the merchant class, on whose generosity and cultural munificence depended the accessibility and enjoyment of the garden. In its formal aspect, the Latin inscription on the portal of classical design of the Orto di semplici at Padua can be considered as part of the tradition of the Italian pleasure garden, but in content it indicates the emergence of the concept of a garden of a more public character.

respected. 6. Nothing must be done against the will of the Prefect. 7. Any contravention of these rules will be punished with fines, imprisonment or exile.

³⁰ Cf. Coffin 1991, 245. The *Lex hortorum* is found at the Villa Giulia, the Villa Borghese, the Villa Carafa on the Quirinal, the garden court in the Della Valle palace. Azzi Visentini 1984.

ILLUSTRATIONS



Fig. 1.1 Villa Giulia, semicircular portico (photo: author).



Fig. 1.2 Palazzo Altemps, loggia of the piano nobile (photo: author).

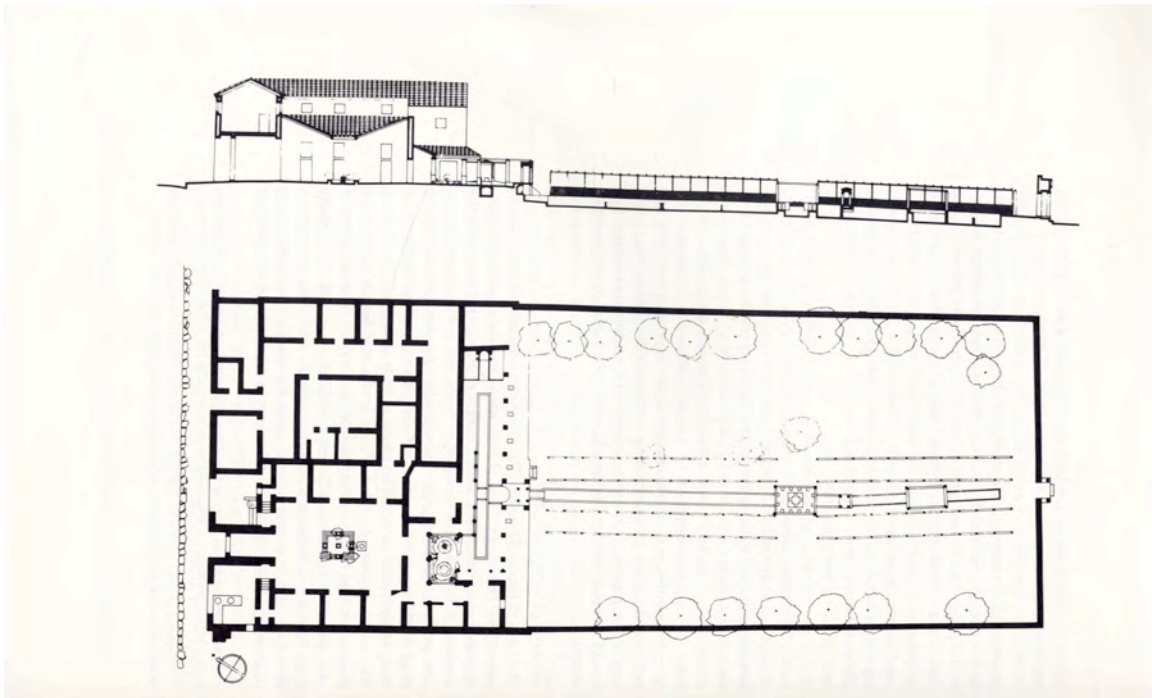


Fig. 2.1 House of Octavius Quartio, Pompeii, plan (Richardson 1988, 338, fig. 50).

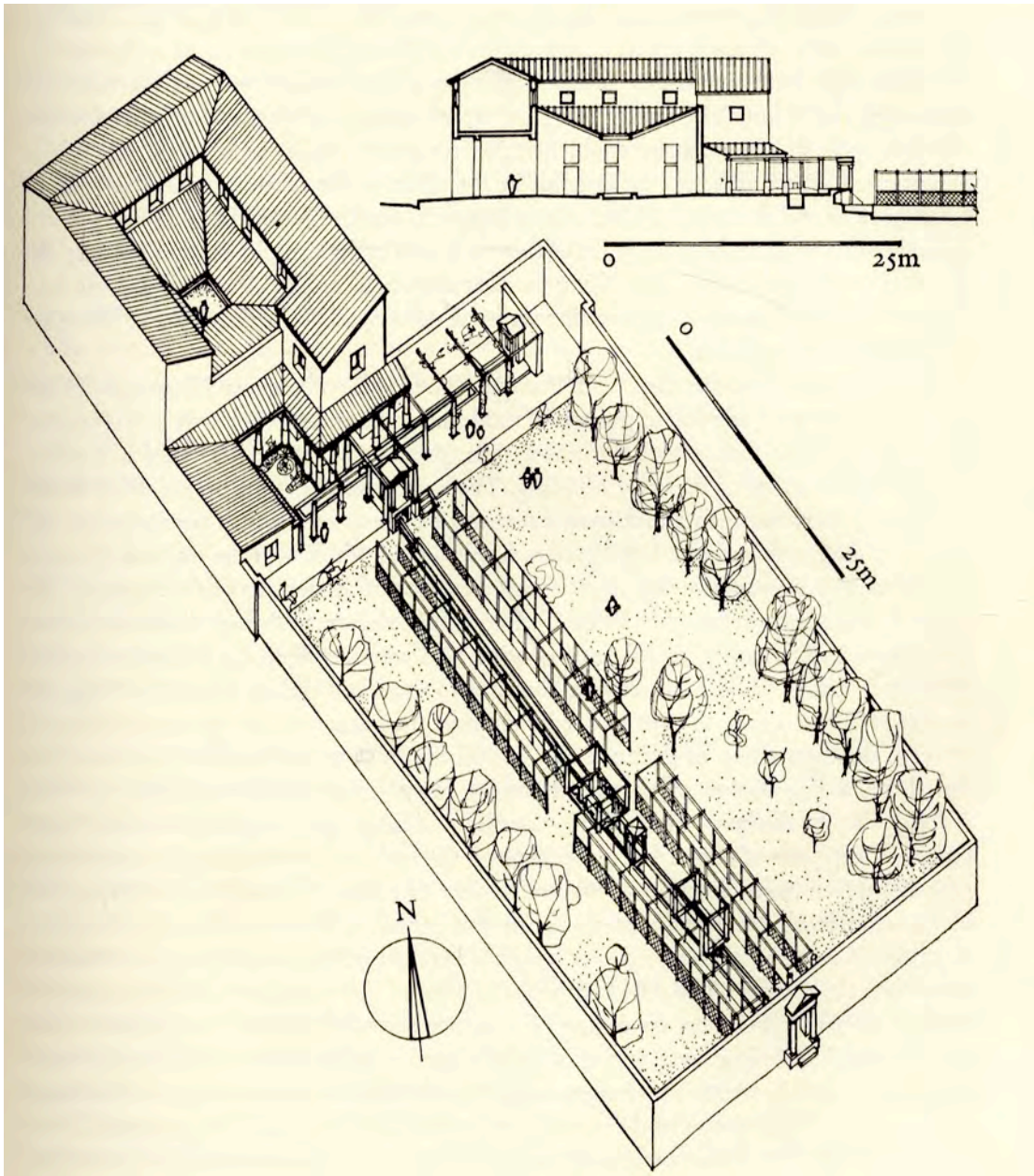


Fig. 2.2 House of Octavius Quartio, Pompeii, section and view (Boethius/Ward-Perkins 1970, 315, fig. 121).



Fig. 2.3 House of Octavius Quartio, Pompeii, view of the terrace garden (photo: Rabun Taylor).



Fig. 2.4 House of Octavius Quartio, Pompeii, axial view of the lower garden (photo: Rabun Taylor).

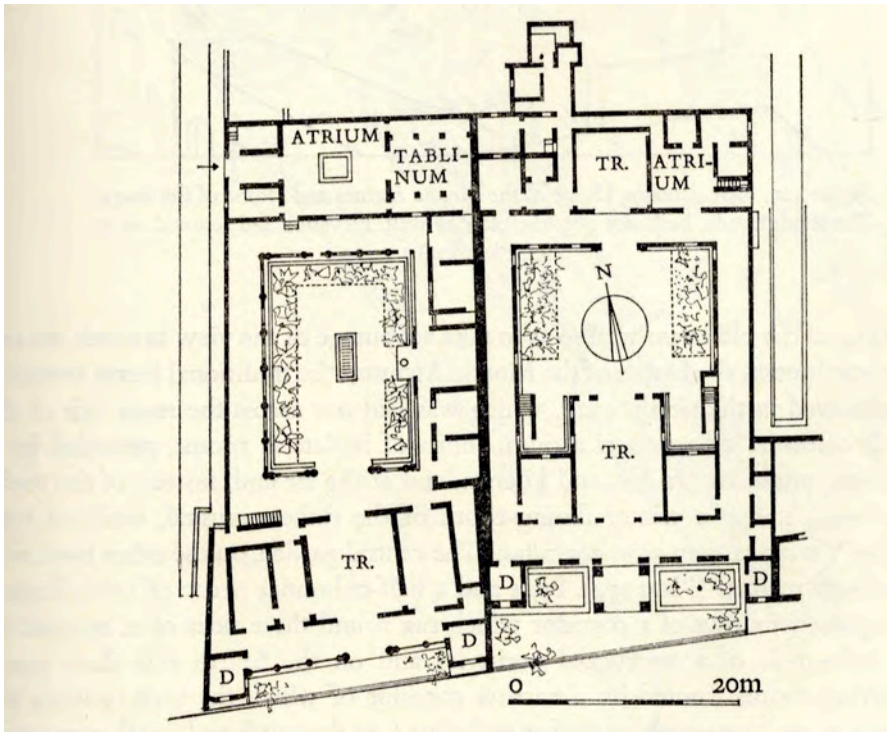


Fig. 2.5 House of the Stags (IV, 2), right, and House of the Mosaic Atrium (IV, 1-2), left, Herculaneum, plans (Boethius/Ward-Perkins 1970, 313, fig. 119).



Fig. 2.6 House of the Stags, Herculaneum, view of the pergola from the north (Jashemski 1993, fig. 292).



Fig. 2.7 House of the Stags, Herculaneum, view of the pergola from the south (photo: John Clarke, DASE).



Fig. 2.8 Hadrian's Villa, Tivoli, Canopus Canal (photo: author).



Fig. 2.9 House of the Vettii, Pompeii, Yellow Oecus (Guzzo 1998, 42, DASE Rabun Taylor Collection).



Fig. 2.10 Boscoreale Villa, Cubiculum M, looking towards the north wall (Mazzoleni 2004, 79, DASE Rabun Taylor Collection).

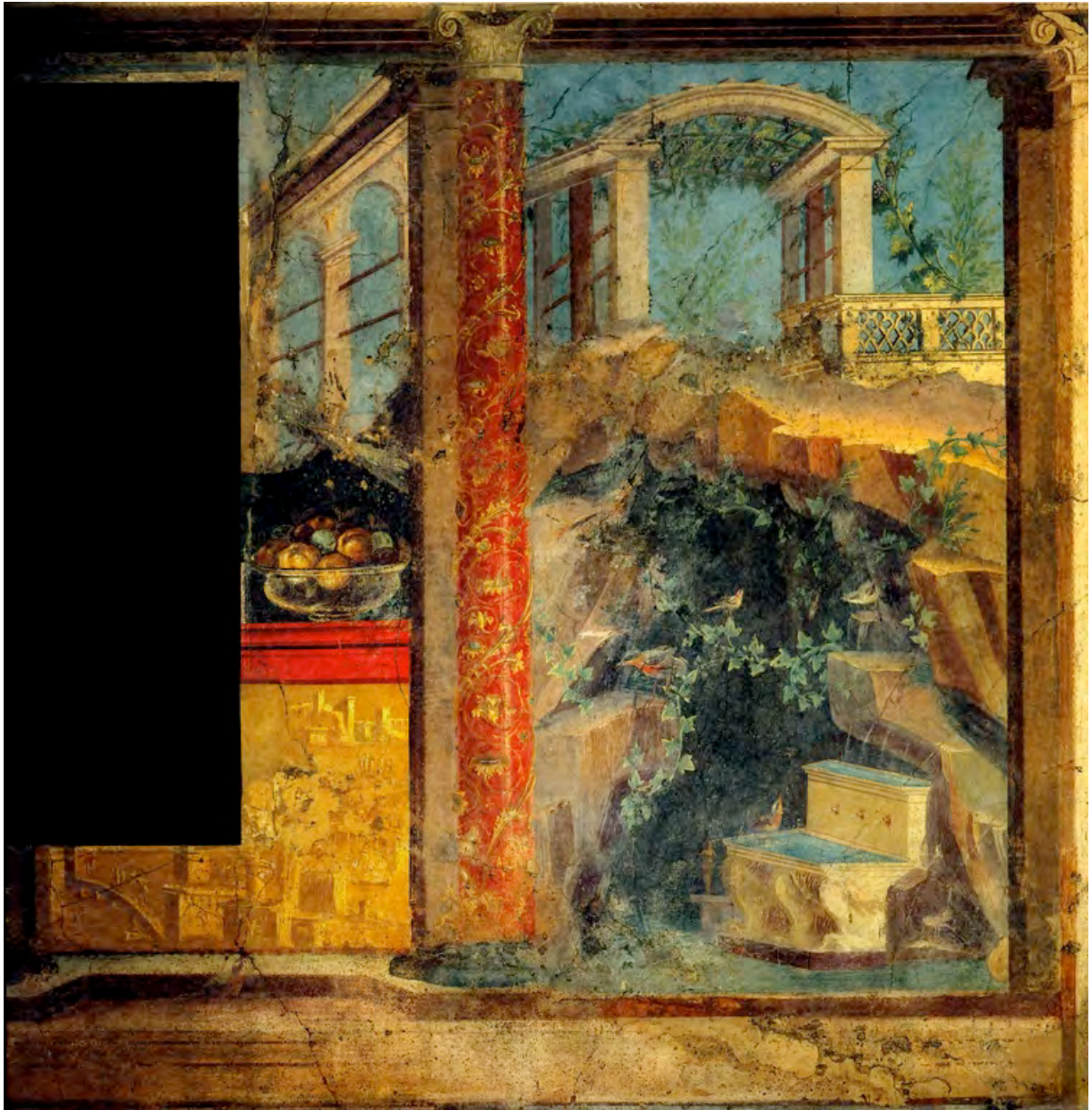


Fig. 2.11 Boscoreale Villa, Cubiculum M, north wall, right panel (Guillaud 1990, 247, DASE Rabun Taylor Collection).



Fig. 2.12 Villa of the Mysteries, Pompeii, Cubiculum 16, Alcoves A (left) and B (right) (Mazzoleni 2004, 104, DASE Rabun Taylor Collection).



Fig. 2.13 Oplontis Villa, Cubiculum 11 (Mazzoleni 2004, 127, DASE Rabun Taylor Collection).

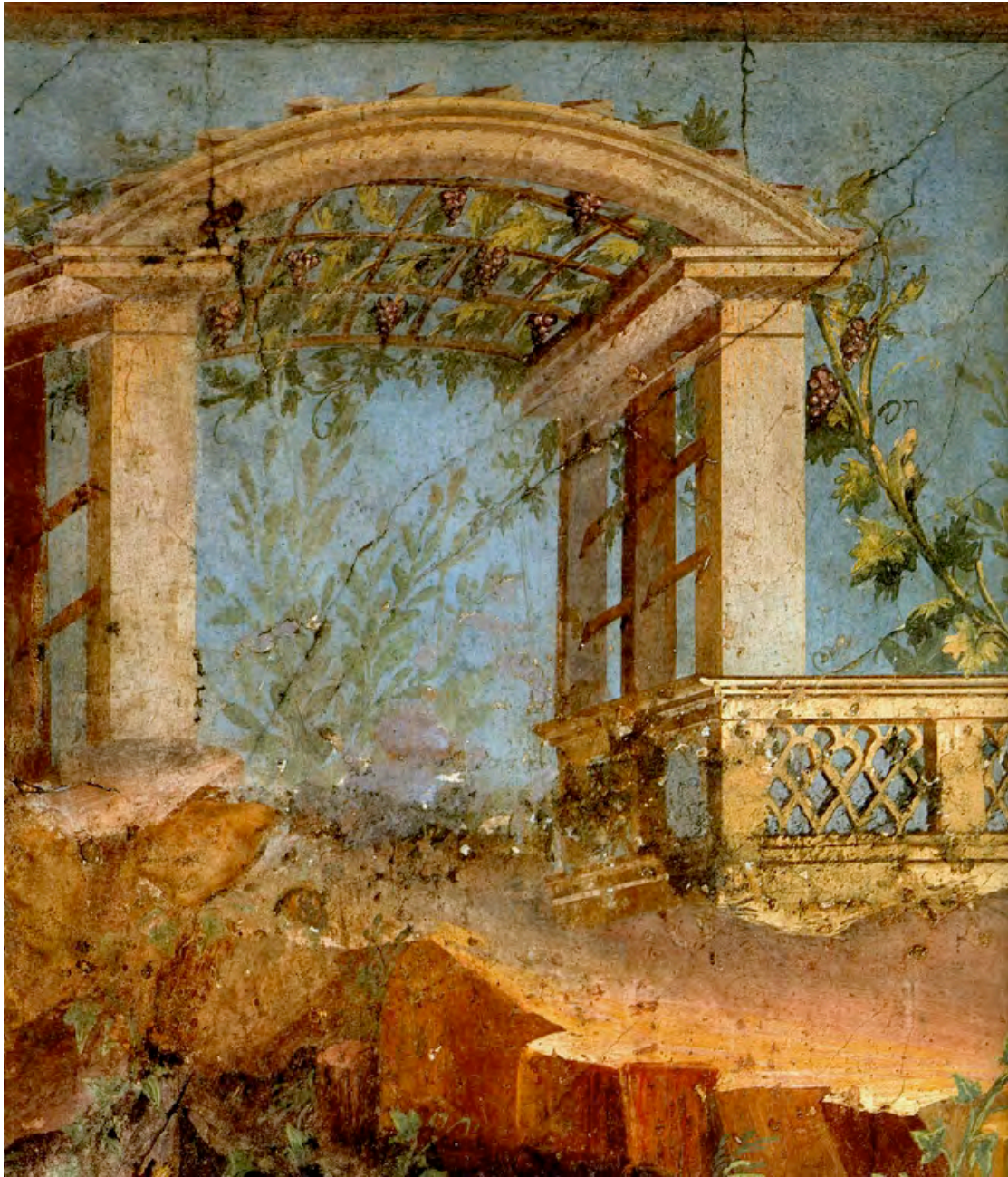


Fig. 2.14 Boscoreale Villa, Cubiculum M, north wall, right panel, detail (Mazzoleni 2004, 90, DASE Rabun Taylor Collection).



Fig. 2.15 Nile Mosaic of Palestrina (Motta 1993, 41, DASE Rabun Taylor Collection).

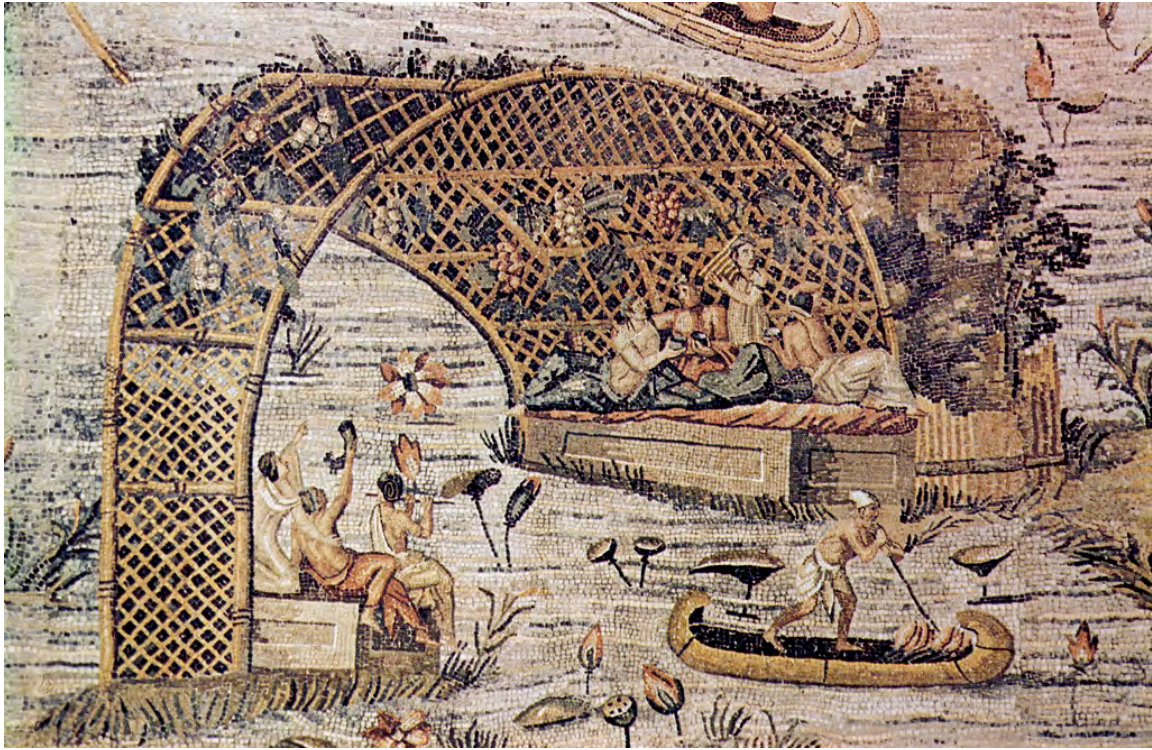


Fig. 2.16 Nile Mosaic from Palestrina, section 19 with pergola (Dalmaso and Vighi, 1975, 207a, DASE Rabun Taylor Collection).

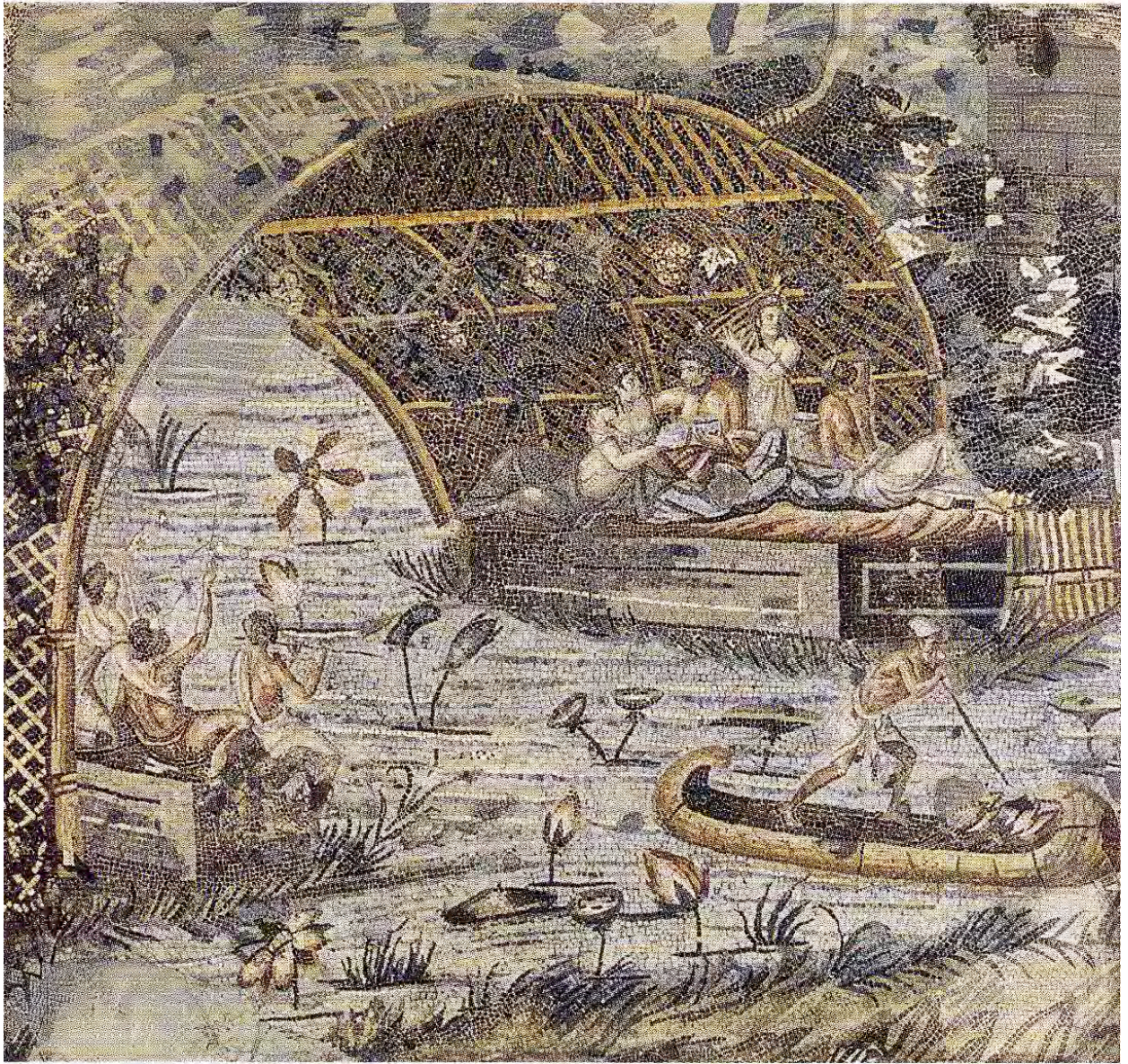


Fig. 2.17 Nile Mosaic from Palestrina, section 19, Berlin piece. Berlin, Pergamonmuseum, inv. Mos. 3 (Whitehouse 2001, 124).



Fig. 2.18 Nile Mosaic from Palestrina, section 19, Dal Pozzo watercolor copy, Windsor drawing. Windsor, RL 19219 (Whitehouse 2001, 125).



Fig. 2.19 Santa Costanza, Annular vault of the ambulatory, section IX with vintage scene (photo: author).



Fig. 2.20 Columbarium of Pomponius Hylas, interior (from Campana 1840).



Fig. 2.21 Francisco de Hollanda, drawing of the interior of Santa Costanza (Escorial 28-I-20, f.22) (Amadio 1986, 29, cat.no.6).



Fig. 2.22 Francisco de Hollanda, drawing of Santa Costanza cupola and sarcophagus (Escorial 28-I-20, f. 27) (Amadio 1986, 32, cat.no.7).

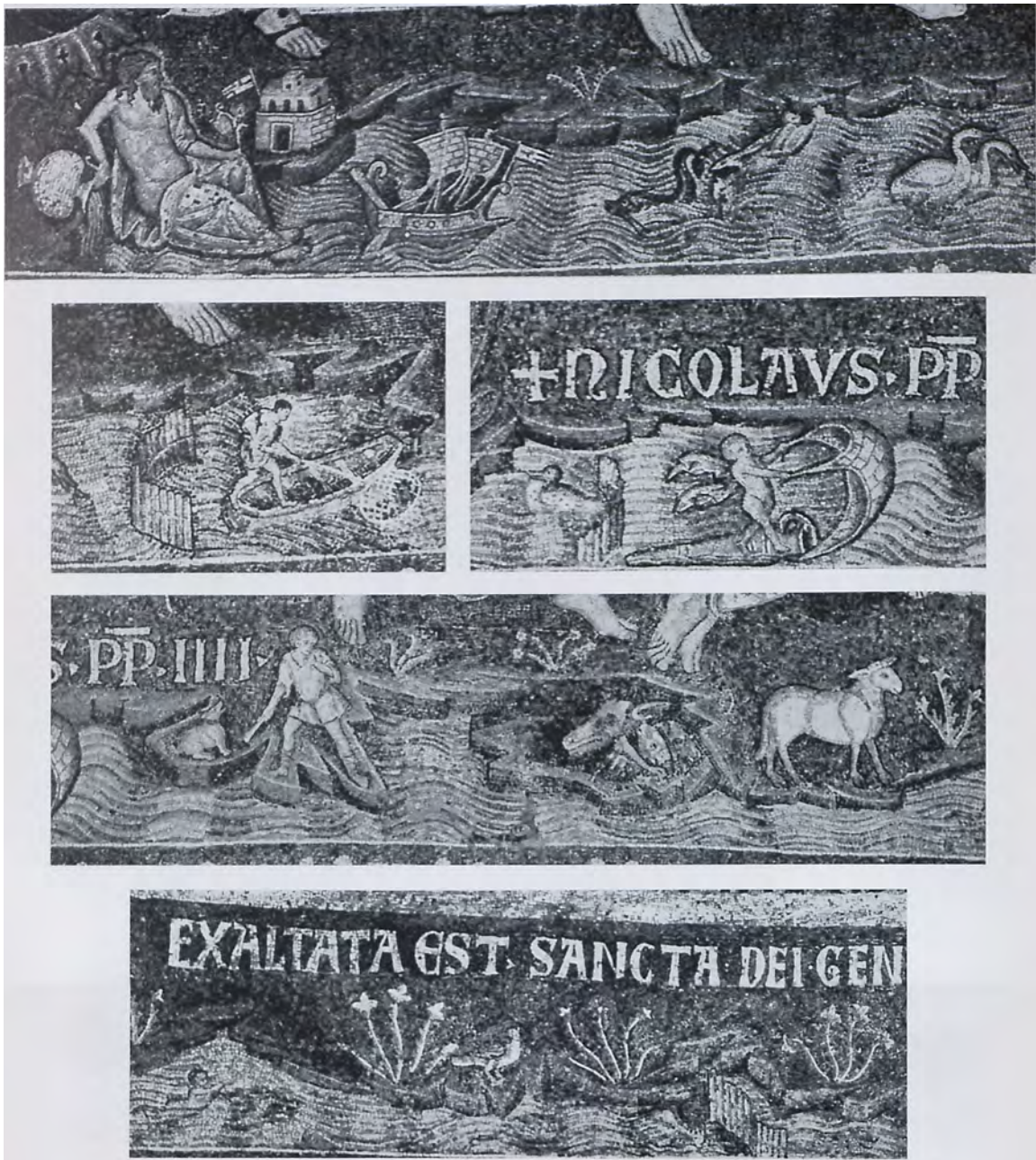


Fig. 2.23 Santa Maria Maggiore, mosaic of the apse, detail with fishing putti (Karpp 1966, pl. 171).



Fig. 2.24 Pietro Santi Bartoli, cupola decoration of Santa Costanza, after Francisco de Hollanda (Glasgow University Library n.64, f.81) (Amadio 1986, 55, cat.no.27).



Fig. 2.25 Pietro Santi Bartoli, cupola decoration of Santa Costanza, after Francisco de Hollanda (Windsor Eton College, The Braddley Codex CV 105.49) (Amadio 1986, 56, cat.no.28).

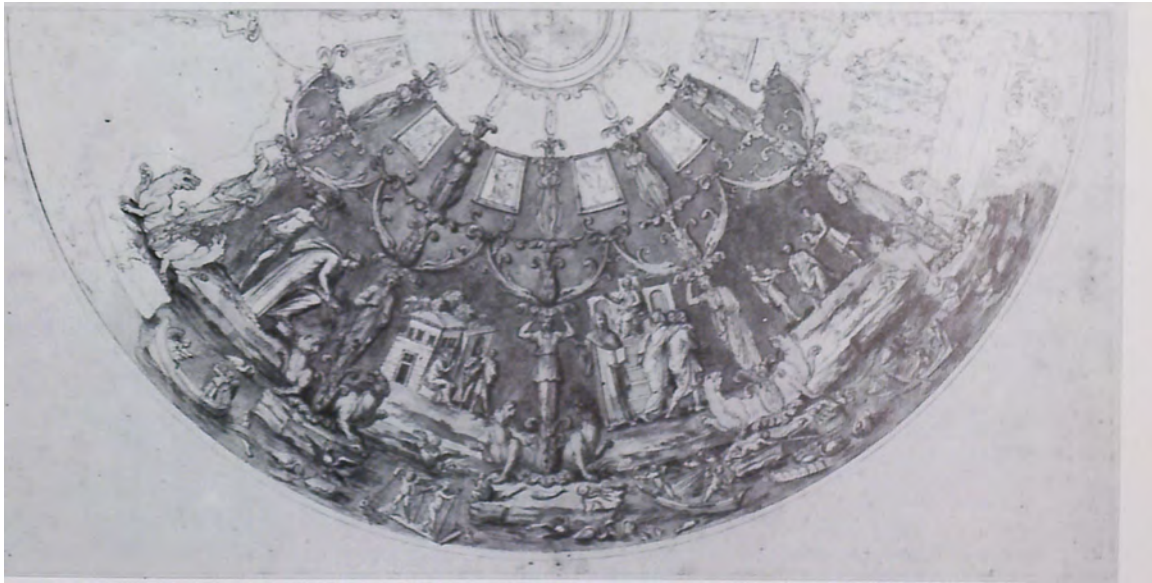


Fig. 2.26 Pietro Santi Bartoli, cupola decoration of Santa Costanza, after Francisco de Hollanda (Windsor Castle, A22, f.9567) (Amadio 1986, 57, cat.no.29).

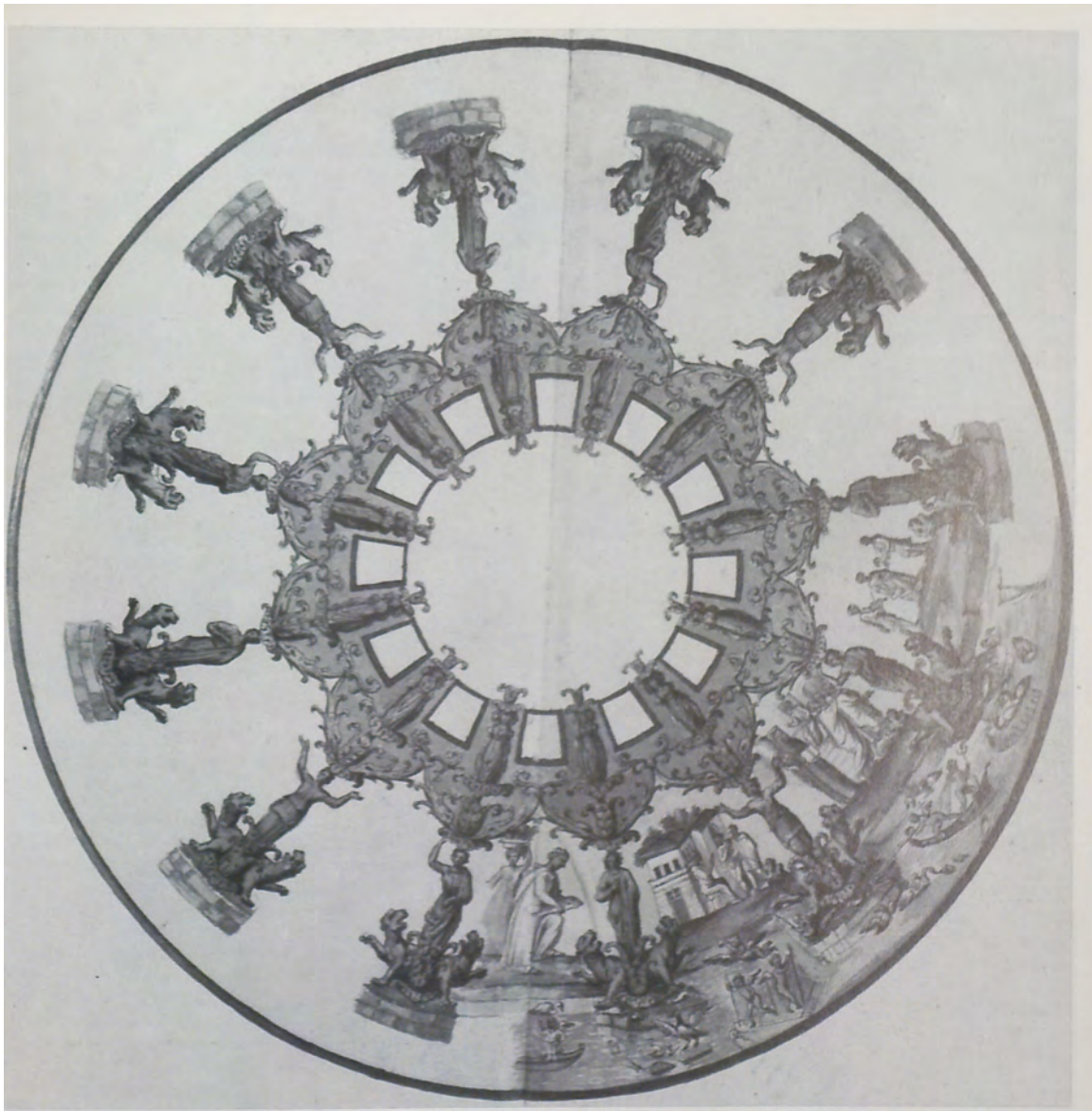


Fig. 2.27 Pietro Santi Bartoli, cupola decoration of Santa Costanza, after Francisco de Hollanda (Glasgow University Library n.65, f. 83) (Amadio 1986, 59, cat.no.30).



Fig. 2.28 The Brescia Casket, back side, Museo Civico dell'Eta Cristiana, Brescia (Crippa 1998, 173, DASE).



Fig. 2.29 Aquileia, Basilica, floor mosaic (Spier 2007, 120, fig. 87, DASE).



Fig. 2.30 Jonah scenes in the Catacomb of Calixtus (Wilpert 1903, pl.47).

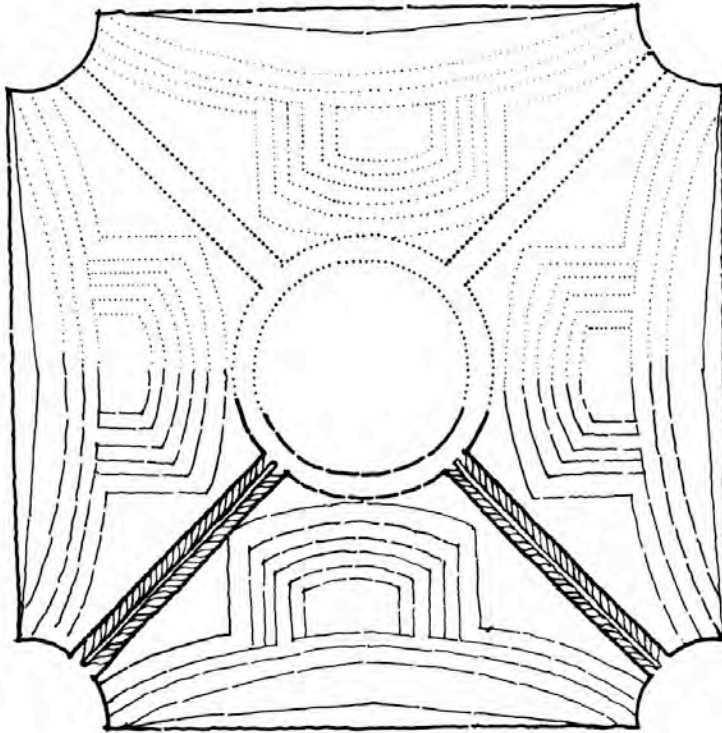


Fig. 2.31 William Tronzo, decorative system of the Via Latina Catacomb cubiculum B (Tronzo 1986, fig. 39).

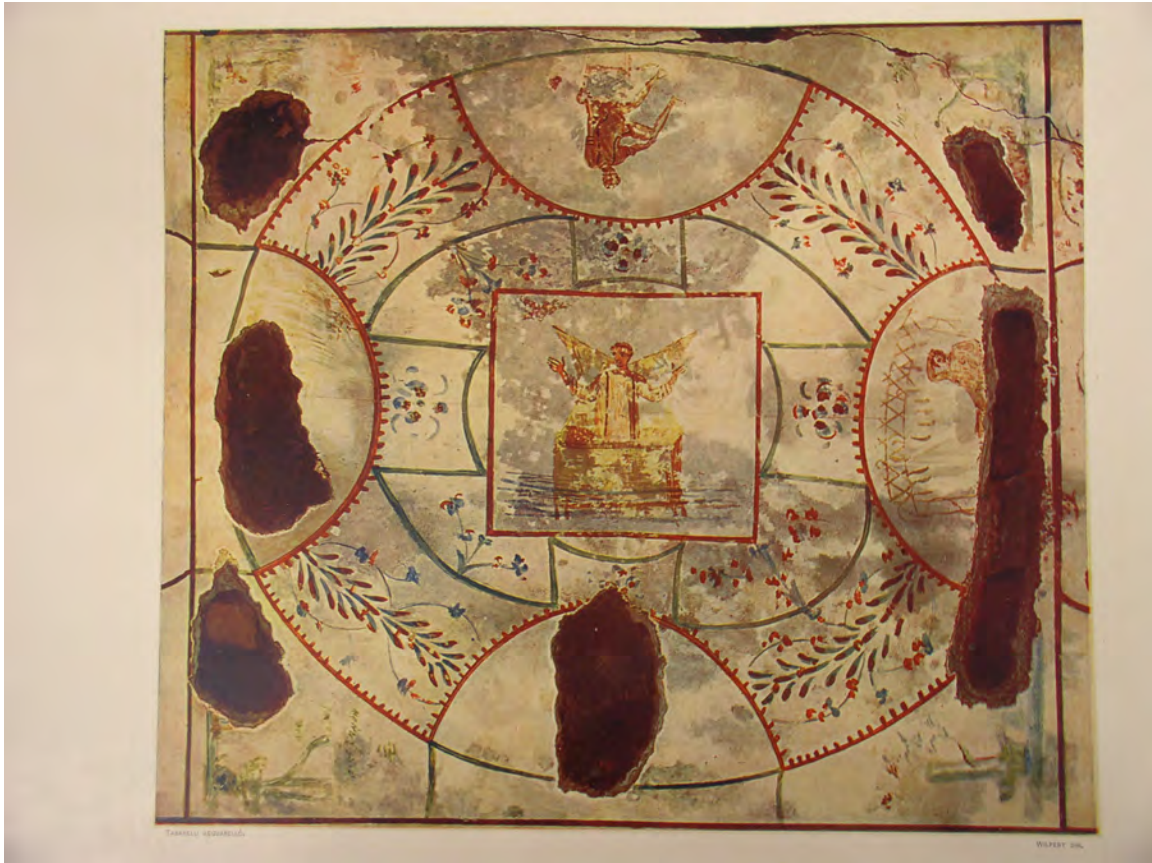


Fig. 2.32 Catacomb of Domitilla, vault decoration type 1: square at the center and semicircles on the four sides (Wilpert 1903, pl.56).



Fig. 2.33 Catacomb of Petrus and Marcellinus, vault decoration type 1: circle at the center and semicircles at the four sides (Wilpert 1903, pl.100).



Fig. 2.34 Catacomb of Calixtus, vault decoration type 2: circle at the center and four radiating diagonal bands (Wilpert 1903, pl.38).



Fig. 2.35 Catacomb of Priscilla, vault decoration type 2: circle at the center and four radiating diagonal bands (Wilpert 1903, pl.42).



Fig. 2.36 Catacomb of Petrus and Marcellinus, vault decoration with scenes on the sides and at the diagonals (Wilpert 1903, pl. 61).

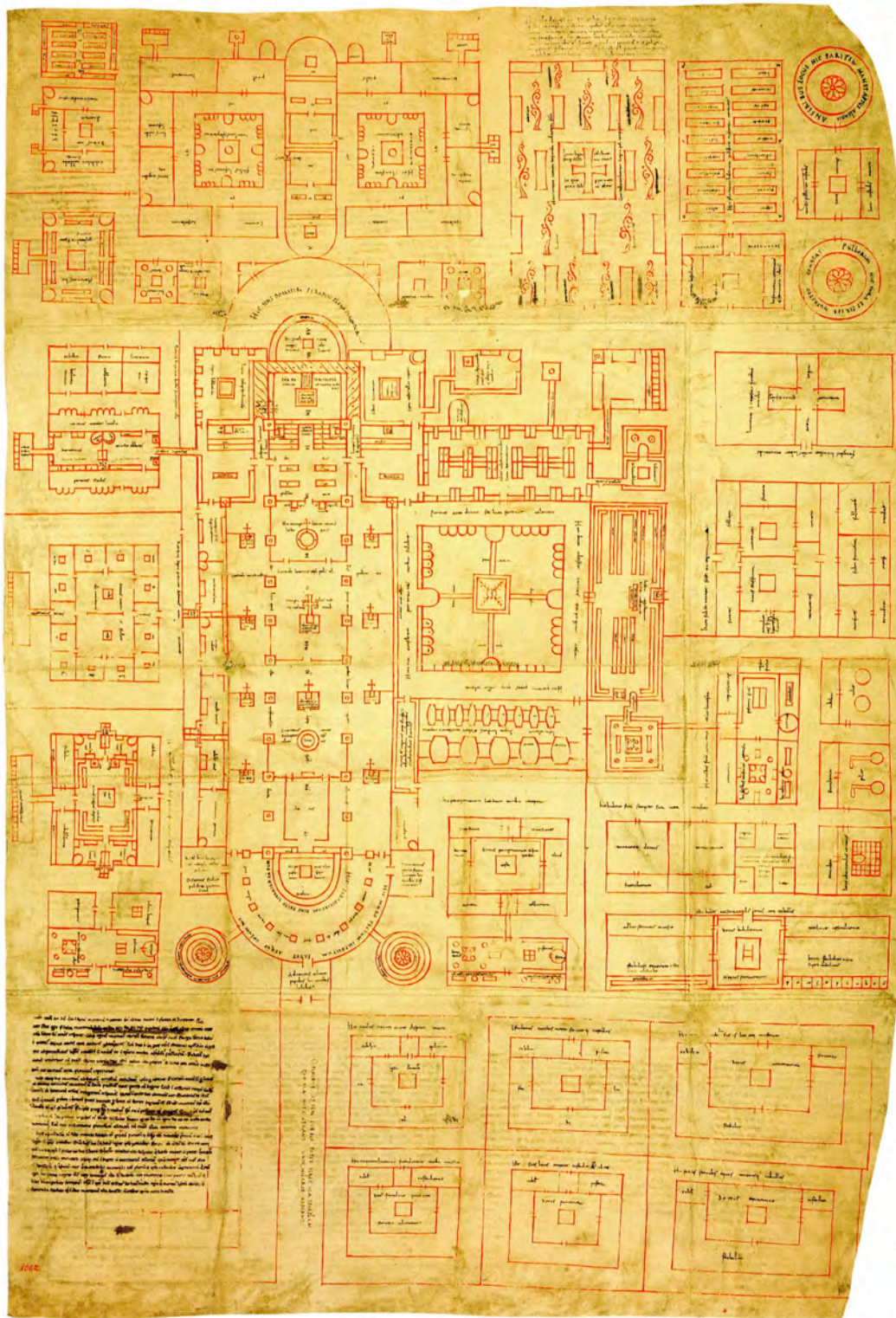


Fig. 3.1 St. Gall Monastery, plan (ca. 820), Sankt Gallen Stiftsbibliothek (from Horn and Born 1979).

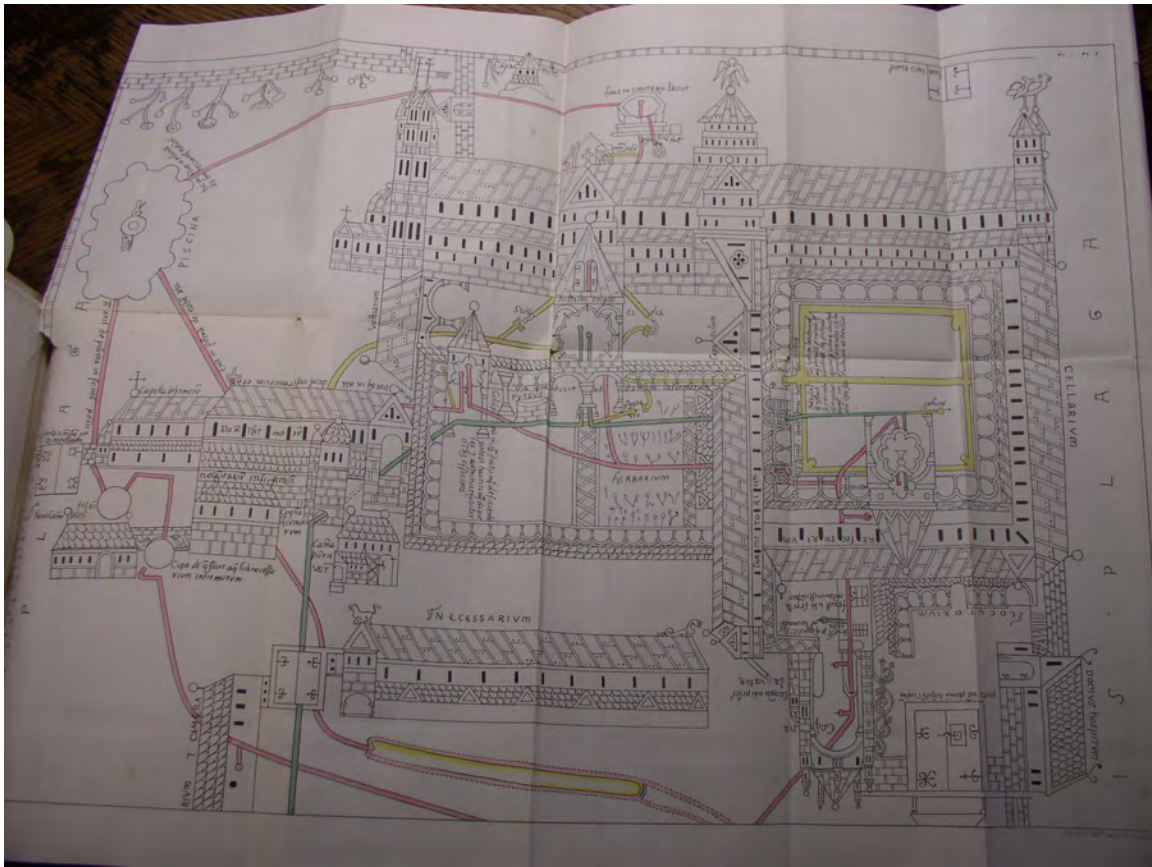


Fig. 3.2 Plan of the Christ Church Priory at Canterbury by Prior Wibert (1165), reproduction by Willis (from Willis 1869, photo: author).



Fig. 3.3 Boccaccio, *Decamerone* (1492), titlepage by De Gregori (Fabiani Giannetto 2008, 129, fig. 45).



Fig. 3.4 Illustration from a manuscript of Boccaccio's *Decamerone*, Bibliothèque de l'Arsenal, Paris, ms 5070, fol. 168r (c.1440) (Campitelli 2009, 21, fig. 8).



Fig. 3.5 Ambrogio Lorenzetti, *The Effects of Good Government on the Countryside*, detail with a farm building with pergola on the upper left, Palazzo Pubblico, Siena (1338-1340), fresco (Lessing Art Resource, Artstor).



Fig. 3.6 Limbourg Brothers, *Très Riches Heures du Duc de Berry*, The Month of April, miniature (Lessing Art Resource, Artstor).



Fig. 3.7 Limbourg Brothers, *Très Riches Heures du Duc de Berry*, The Month of June, miniature (Lessing Art Resource, Artstor).



Fig. 3.8 Palazzo Schifanoia, Ferrara, Hall of the Months, Labors of the Month of March, fresco (Scala Archives, Artstor).



Fig. 3.9 Pieter Bruegel the Younger, *Spring*, private collection (Van Sprang 1996, 101).



Fig. 3.10 Pieter van Heyden after Pieter Brughel the Elder, *Spring* (1570), National Gallery of Art, Washington (Clayton 1990, 44, fig. 27).

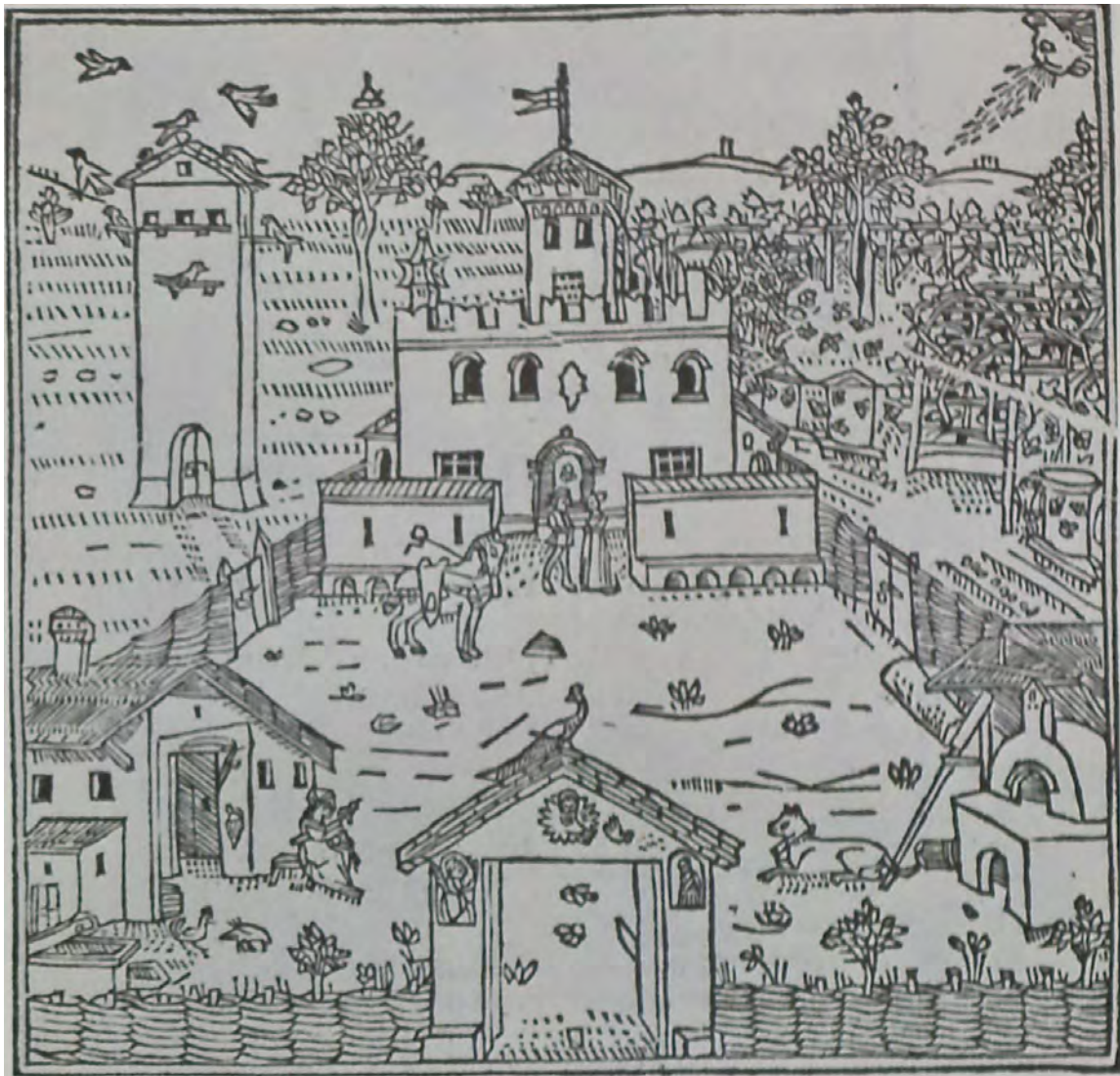


Fig. 3.11 Woodcut showing an Italian farmstead from Crescenzi 1495 edition (© Dumbarton Oaks Research Library and Collection, Rare Book Collection, Washington DC).



Fig. 3.12 Woodcut showing a typical garden with a pergola from Crescenzi 1495 edition (© Dumbarton Oaks Research Library and Collection, Rare Book Collection, Washington DC).



Fig. 3.13 Illustration from a French manuscript of Crescenzi (15th C.) (Landsberg 2003, 19).



Fig. 3.14 *Hypnerotomachia Poliphili*, woodcut illustration of a scene with Poliphilus and the nymph bearing a torch (before the encounter) (Colonna 1999, 142).



Fig. 3.15 *Hypnerotomachia Poliphili*, woodcut illustration of a scene with Poliphilus and the nymph bearing a torch (after the encounter) (Colonna 1999, 149).

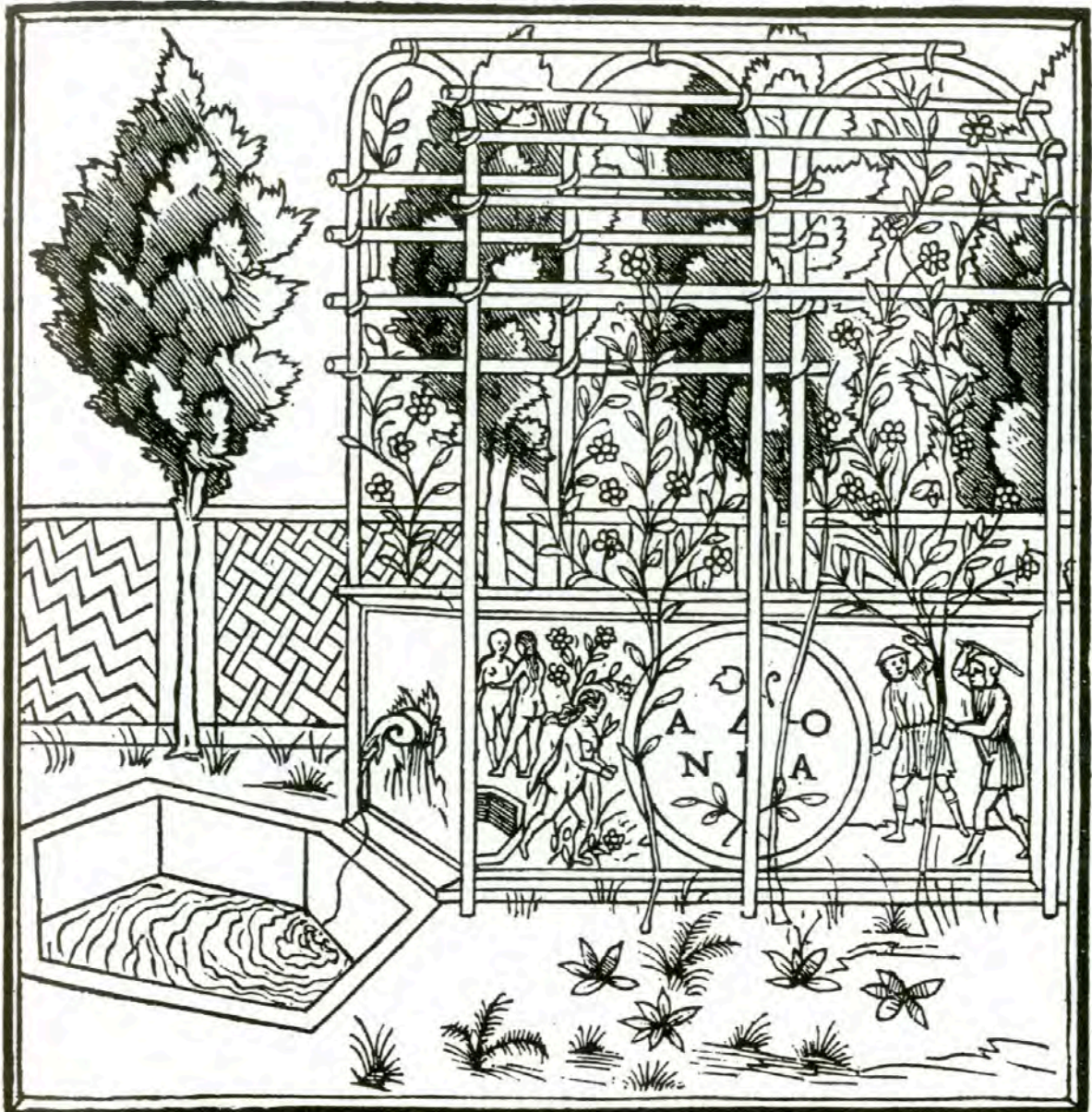


Fig. 3.16 *Hypnerotomachia Poliphili*, woodcut illustration of the Adonia (Colonna 1999, 373).

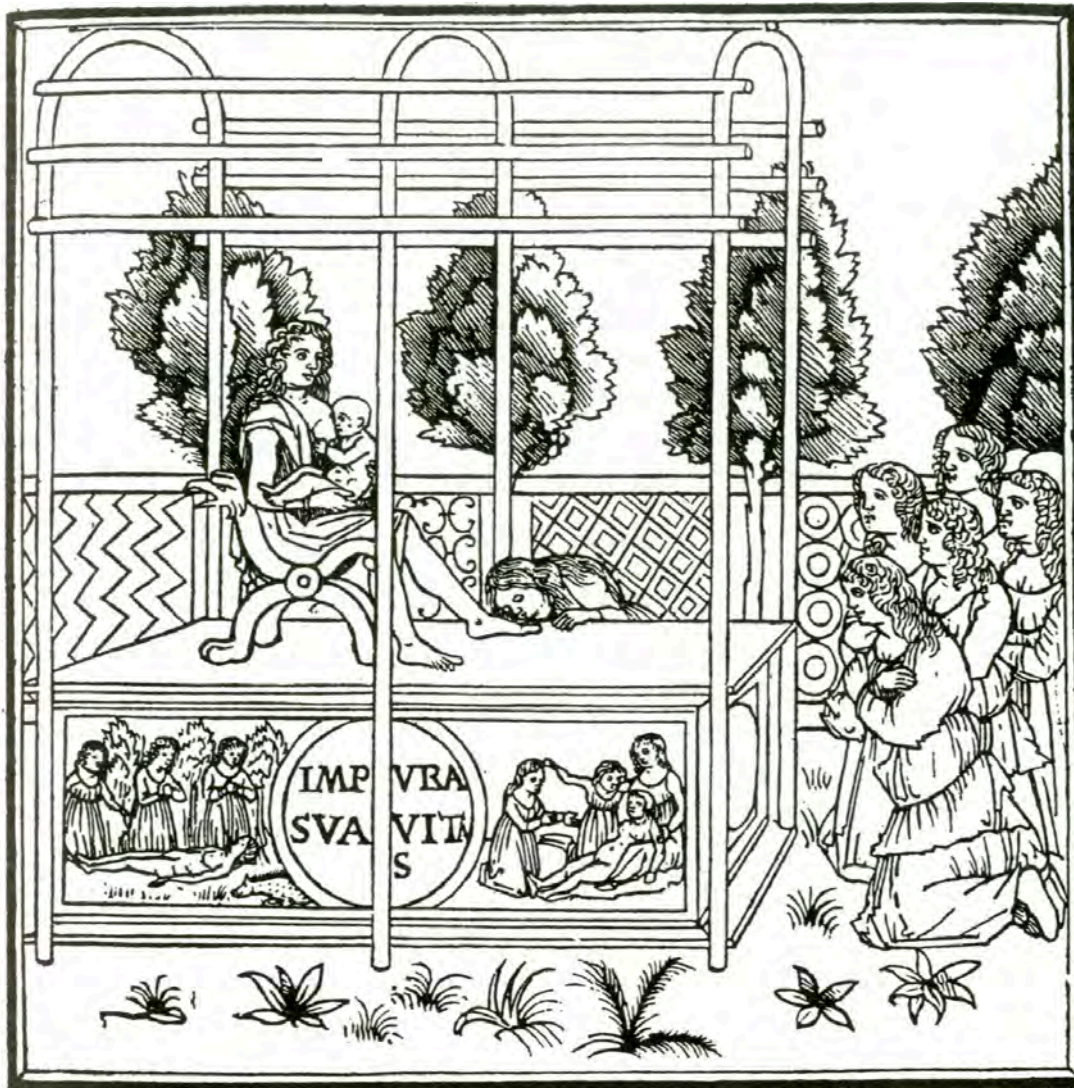


Fig. 3.17 *Hypnerotomachia Poliphili*, woodcut illustration of the Adonia with Venus and child (Colonna 1999, 375).

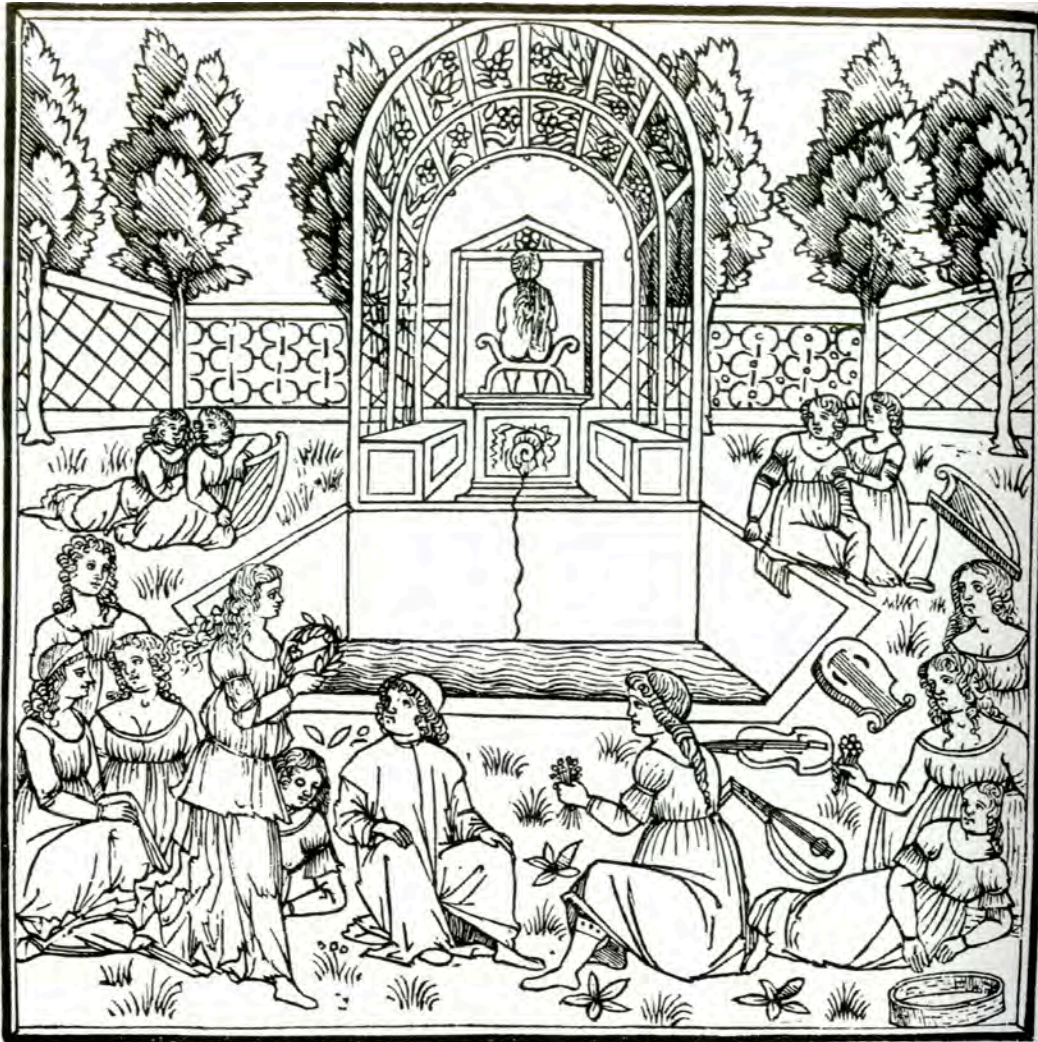


Fig. 3.18 *Hypnerotomachia Poliphili*, woodcut illustration of the Adonia with music-making nymphs in the foreground (Colonna 1999, 378).

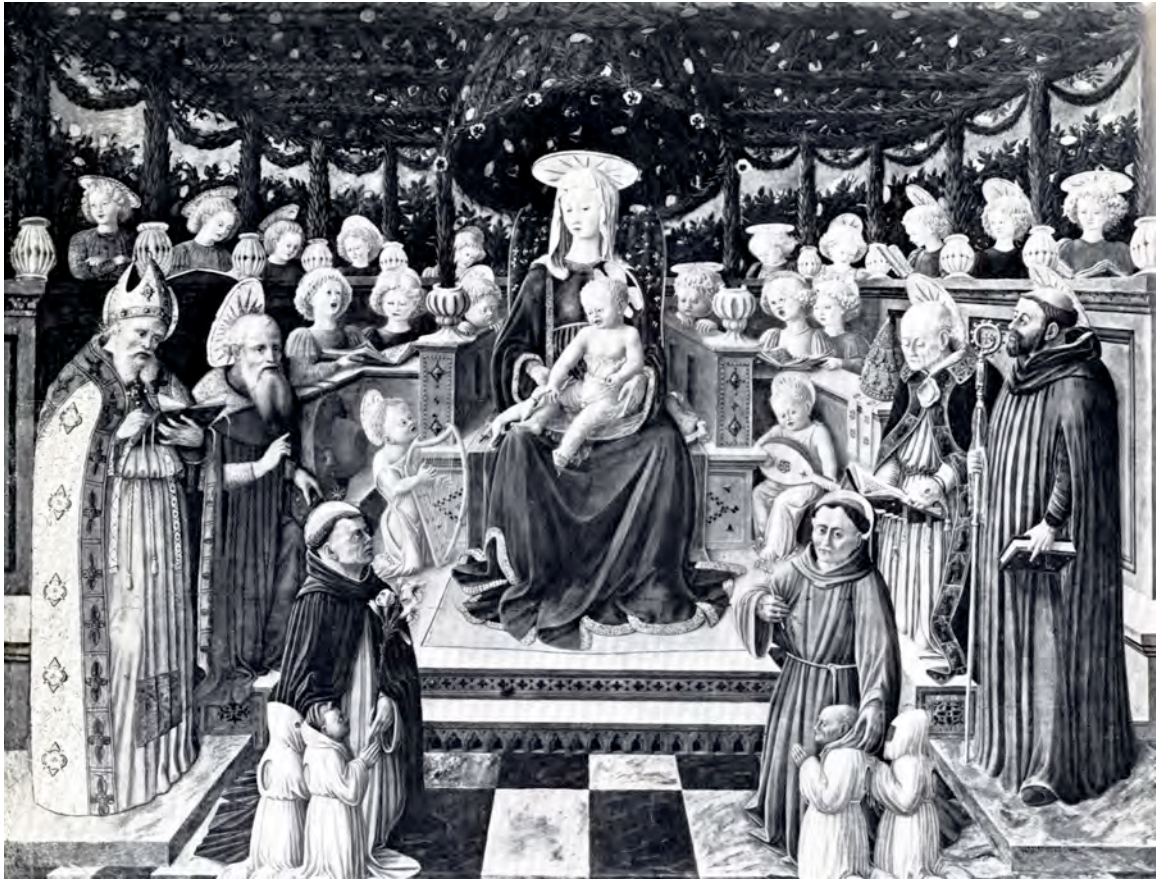


Fig. 3.19 Giovanni Boccati, *Madonna of the pergola* (1446) (Zampetti 1971, fig. 4).



Fig. 3.20 Giovanni Boccati, *Enthroned Madonna* (1450-1460) (Zampetti 1971, fig. 112).



Fig. 3.21 Giovanni Boccati, *Madonna of the Orchestra* (ca. 1463) (Zampetti 1971, fig. 59).



Fig. 3.22 Stefano da Verona, *Madonna and Child with St. Catherine in a Rose Garden* (Swift/Edwards 2001, 25).



Fig. 3.23 Stefan Lochner, *Madonna in the Rose Arbor* (ca. 1435-1440) (Lessing Art Resource, Artstor).

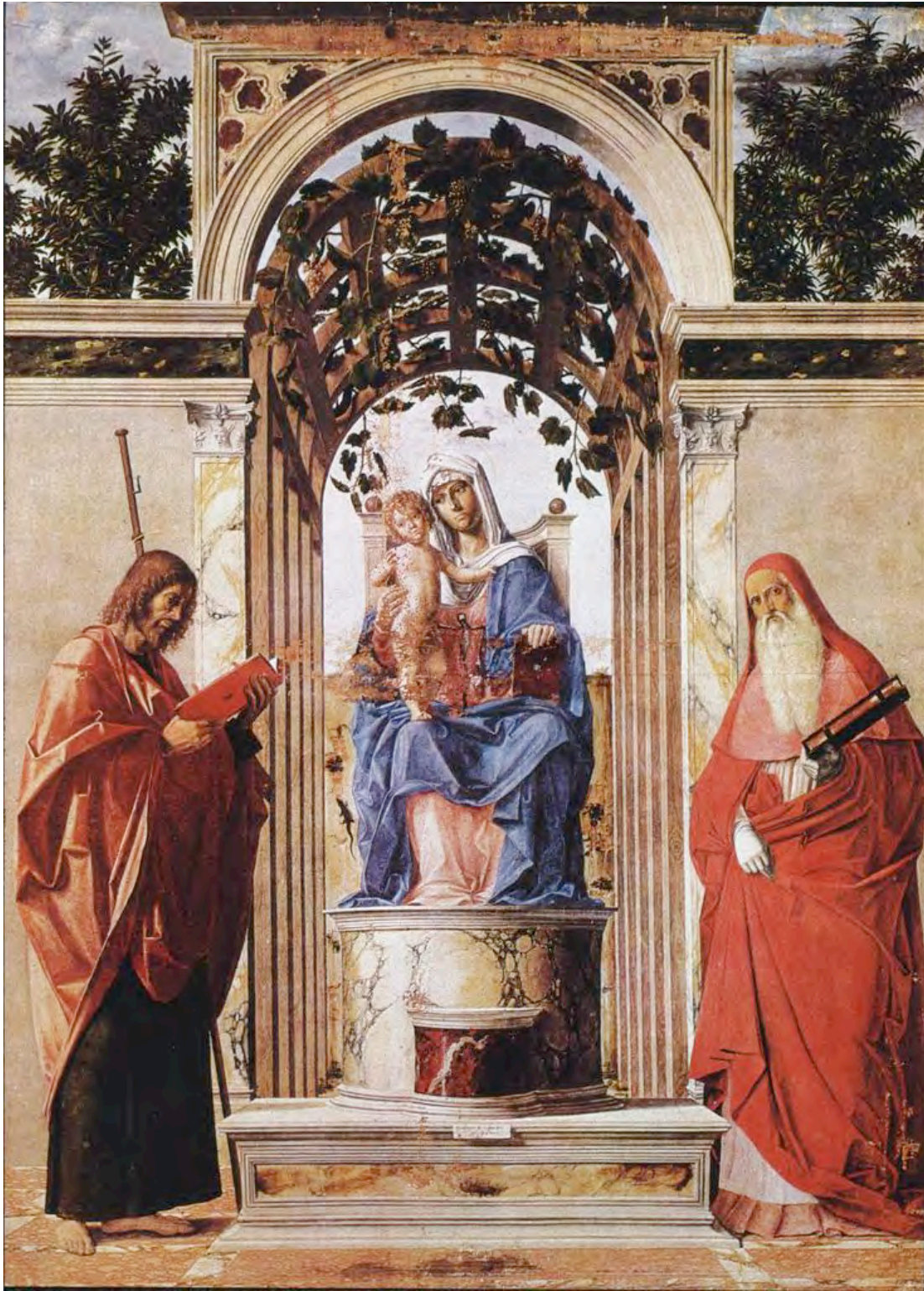


Fig. 3.24 Cima da Conegliano, *Madonna of the Vine Arbor* (1489) (Artstor).



Fig. 3.25 Cima da Conegliano, *Madonna and Child with Musical Angels and Saints* (ca. 1496-99) (Scala Archives, Artstor).



Fig. 3.26 Cima da Conegliano, *Madonna under the Orange Tree* (ca. 1496-98) (Scala Archives, Artstor).



Fig. 3.27 Cima da Conegliano, *Virgin and Child with Saint John the Baptist and Saint Mary Magdelene* (c. 1511-13) (RMN=Réunion des Musées Nationaux, Artstor).



Fig. 3.28 Andrea Mantegna, *Madonna of the Victory* (1496), Louvre, Paris (Lessing Art Resource, Artstor).

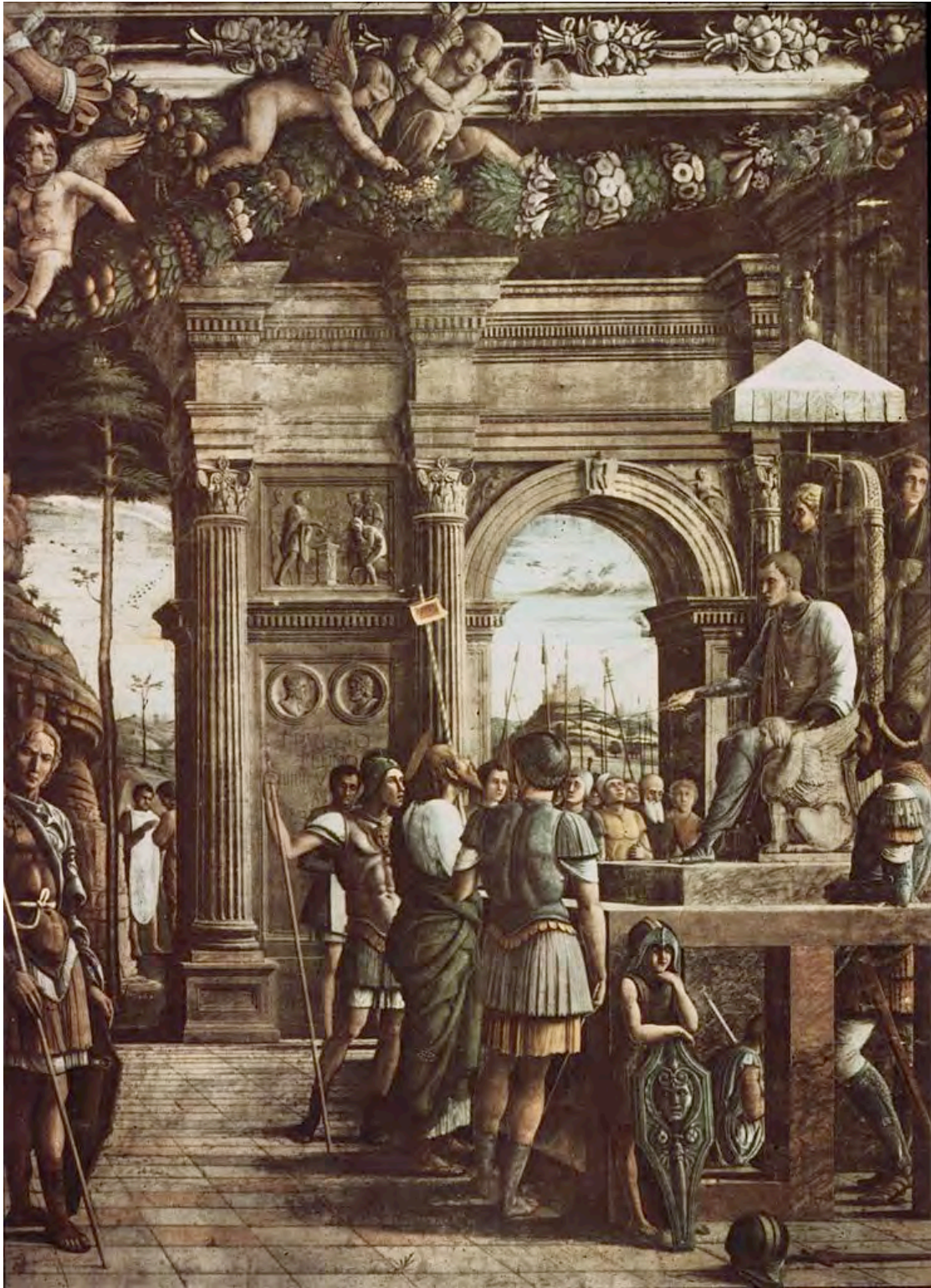


Fig. 3.29 Andrea Mantegna, *The Story of St. James*, St. James before Herod Agrippa, Ovetari Chapel (ca. 1455-1456), Church of the Eremitani, Padua (Artstor).



Fig. 3.30 Andrea Mantegna, *The San Zeno Altarpiece*, San Zeno, Verona (Scala Archives, Artstor).

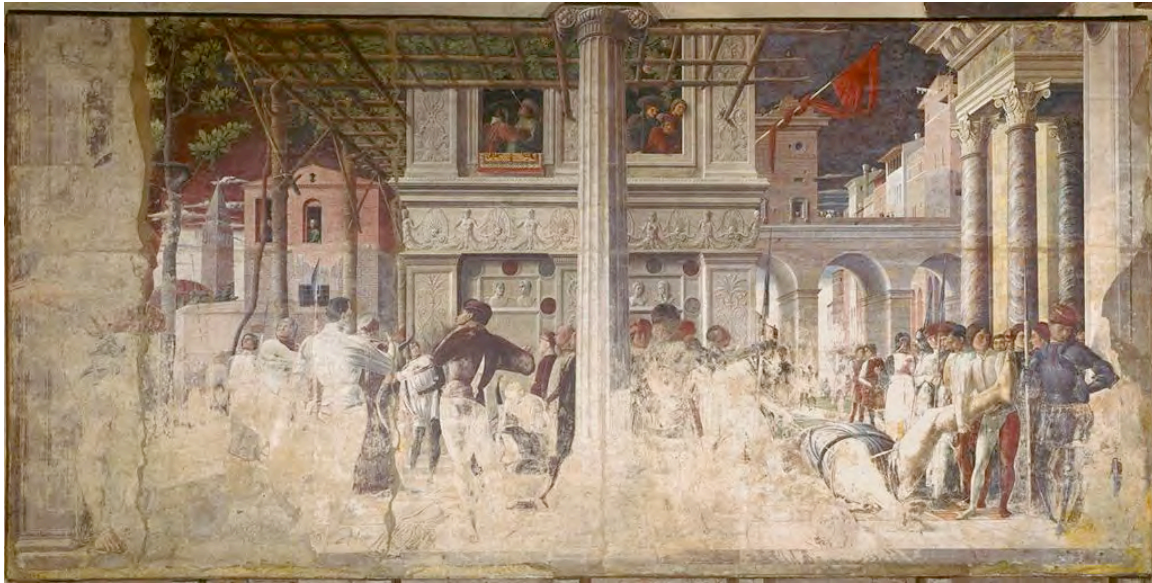


Fig. 3.31 Andrea Mantegna, *The Story of St. Christopher*, the martyrdom of St. Christopher, Ovetari Chapel, Church of the Eremitani, Padua (Scala Archives, Artstor).



Fig. 3.32 Andrea Mantegna, *Minerva expelling the Vices out of the Garden of Virtue* (1499-1502), Louvre, Paris (Lessing Art Resource, Artstor).



Fig. 3.33 Lucas Cranach the Elder, *Madonna of the Vine Arbor* (ca. 1500) (Swift/Edwards 2001, 20).



Fig. 3.34 Jacopo del Sellaio, *The Banquet of Ahasuerus* (ca. 1490) (Dami 1925, pl. XII, SOA VRC Mirka Beneš Collection).

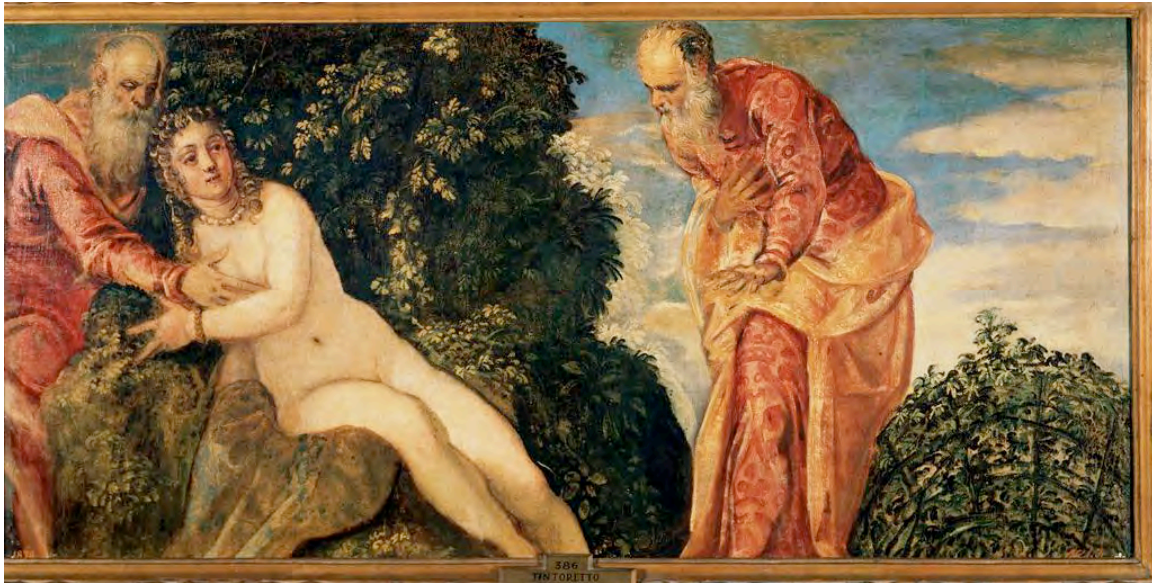


Fig. 3.35 Jacopo Tintoretto, *Susanna and the Elders* (ca. 1555), Prado, Madrid (Lessing Art Resource, Artstor).



Fig. 3.36 Jacopo Tintoretto, *Susanna and the Elders* (ca. 1555), Kunsthistorisches Museum, Vienna (Lessing Art Resource, Artstor).



Fig. 3.37 Jacopo Tintoretto, *Susanna and the Elders* (ca. 1575), National Gallery of Art, Washington, D.C. (Artstor).



Fig. 3.38 Jacopo Tintoretto, *The Miracle of the Slave* (ca. 1548), Gallerie dell'Accademia, Venice (Scala Archives, Artstor).



Fig. 3.39 Jacopo Bertozzi, Room of Ariosto (1563), ceiling fresco, Palazzo del Giardino, Parma (photo: author).



Fig. 3.40 Jacopo de' Barbari, Map of Venice (1514), bottom left corner, detail with the Giudecca (Harry Ransom Center, The University of Texas at Austin).



Fig. 3.41 Jacopo de' Barbari, Map of Venice (1514), bottom center, detail with San Giorgio Maggiore (Harry Ransom Center, The University of Texas at Austin).

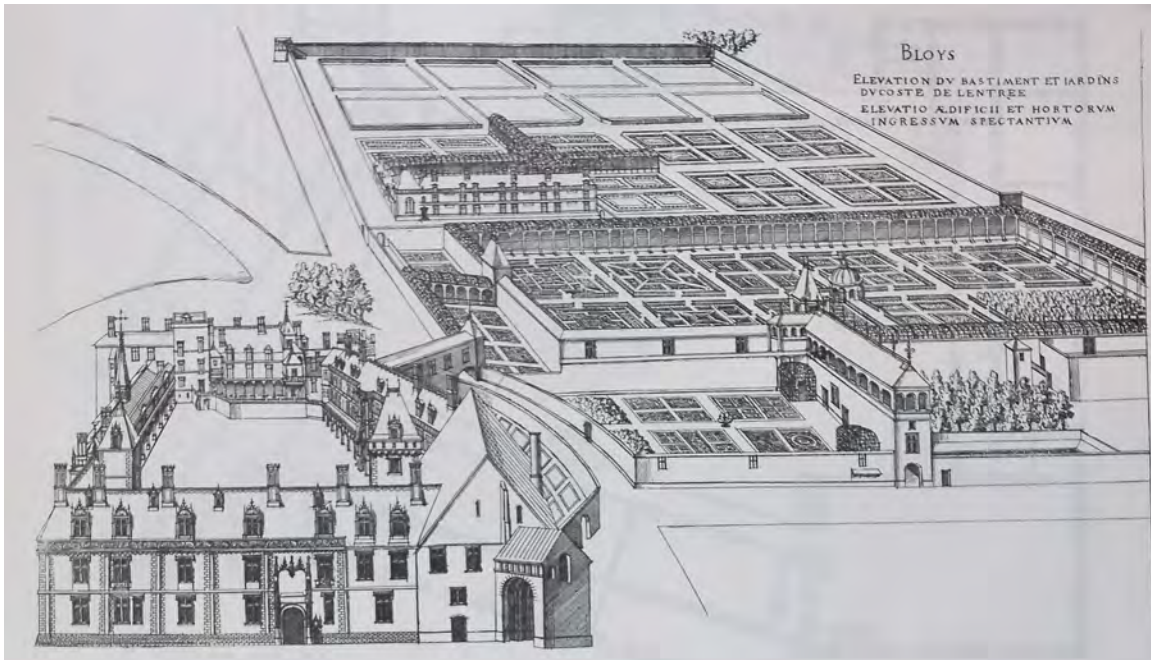


Fig. 3.42 Jacques Androuet Du Cerceau, Blois, general view (1579), etching (from Du Cerceau reprint 1972).

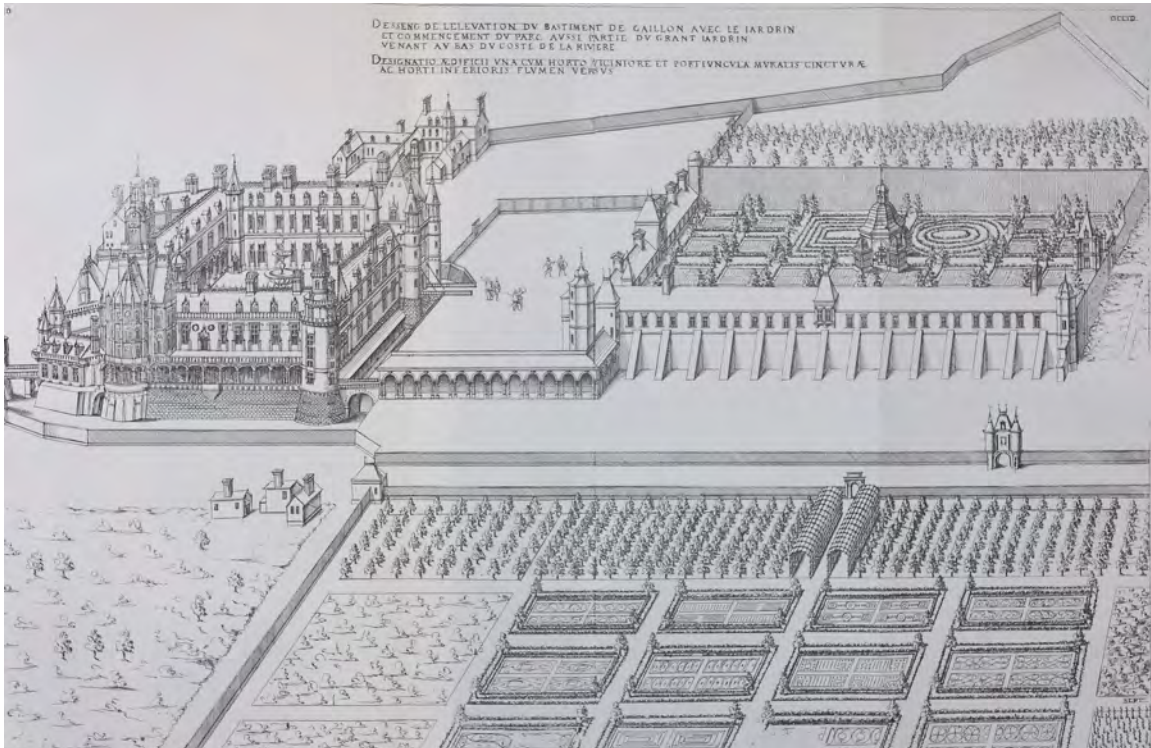


Fig. 3.43 Jacques Androuet Du Cerceau, Gaillon, general view (1576), etching (from Du Cerceau reprint 1972).

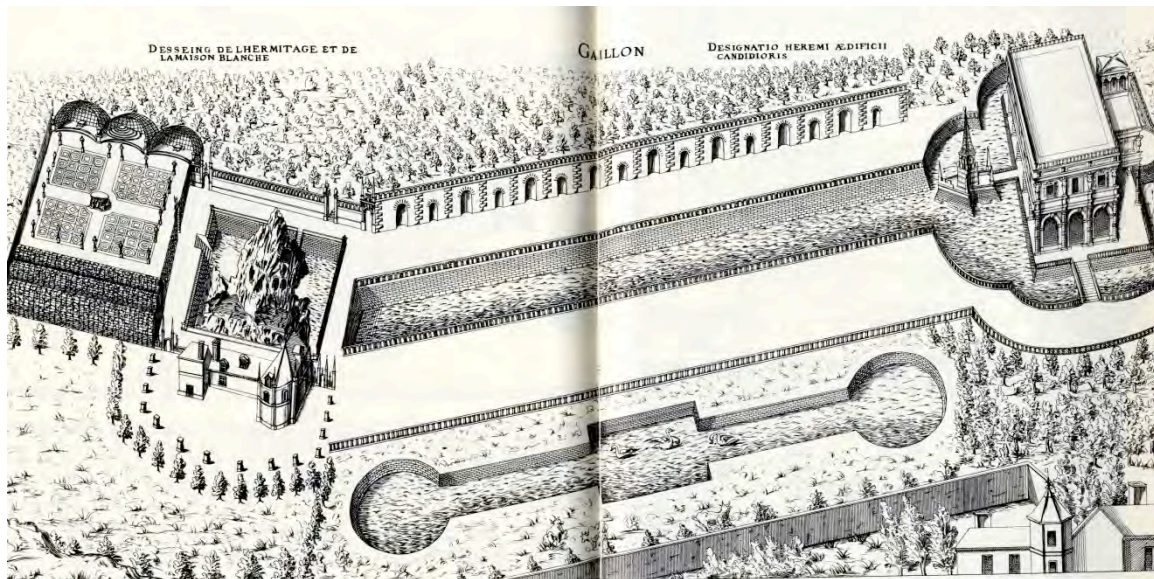


Fig. 3.44 Jacques Androuet Du Cerceau, Gaillon, Lydieu (1576), etching (Thomson 1988, 158-159).

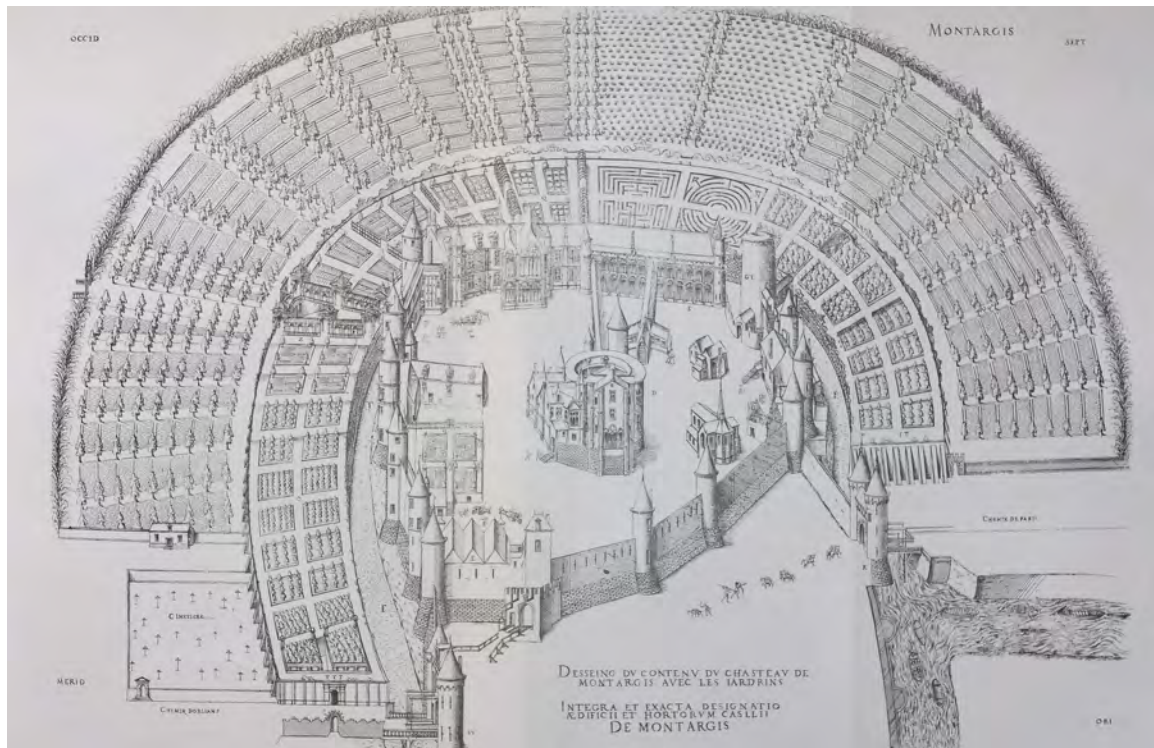


Fig. 3.45 Jacques Androuet Du Cerceau, Montargis, general view (1576), etching (from Du Cerceau reprint 1972).

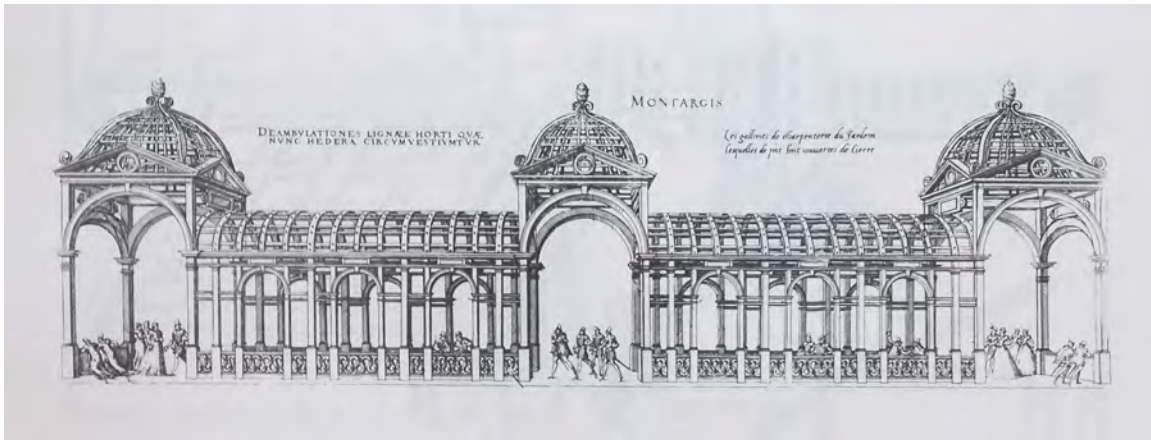


Fig. 3.46 Jacques Androuet Du Cerceau, Montargis, Pergola Gallery (1576), etching (from Du Cerceau reprint 1972).

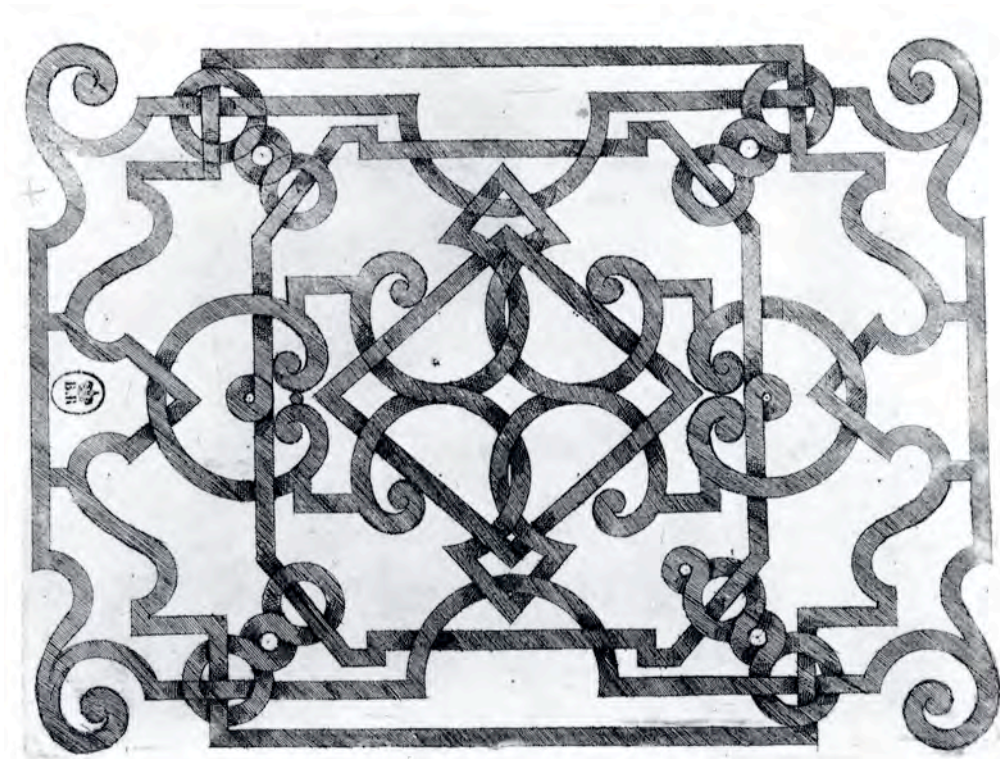


Fig. 3.47 Jacques Androuet Du Cerceau, model for marquetrie (ca. 1570), Paris, Bibliothèque Nationale (Gruber 1994, 73).



Fig. 3.48 Giusto Utens, *Villa Medici at Il Trebbio* (1598/99), Museo di Firenze com'era, Florence (Scala Archives, Artstor).



Fig. 3.49 Giusto Utens, *Villa Medici at Cafaggiolo* (1598/99), Museo di Firenze com'era, Florence (Scala Archives, Artstor).



Fig. 3.50 Giusto Utens, *Villa Medici at Ambrogiana* (1598/99), Museo di Firenze com'era, Florence (Scala Archives, Artstor).

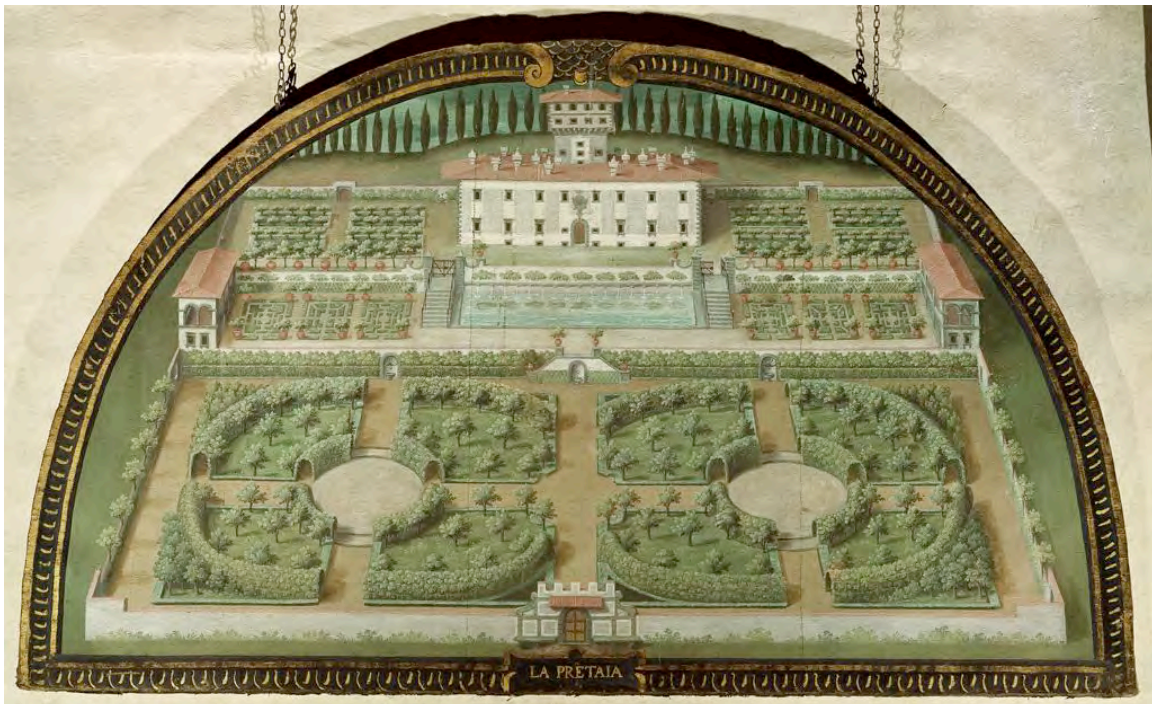


Fig. 3.51 Giusto Utens, *Villa Medici at La Petraia* (1598/99), Museo di Firenze com'era, Florence (Scala Archives, Artstor).

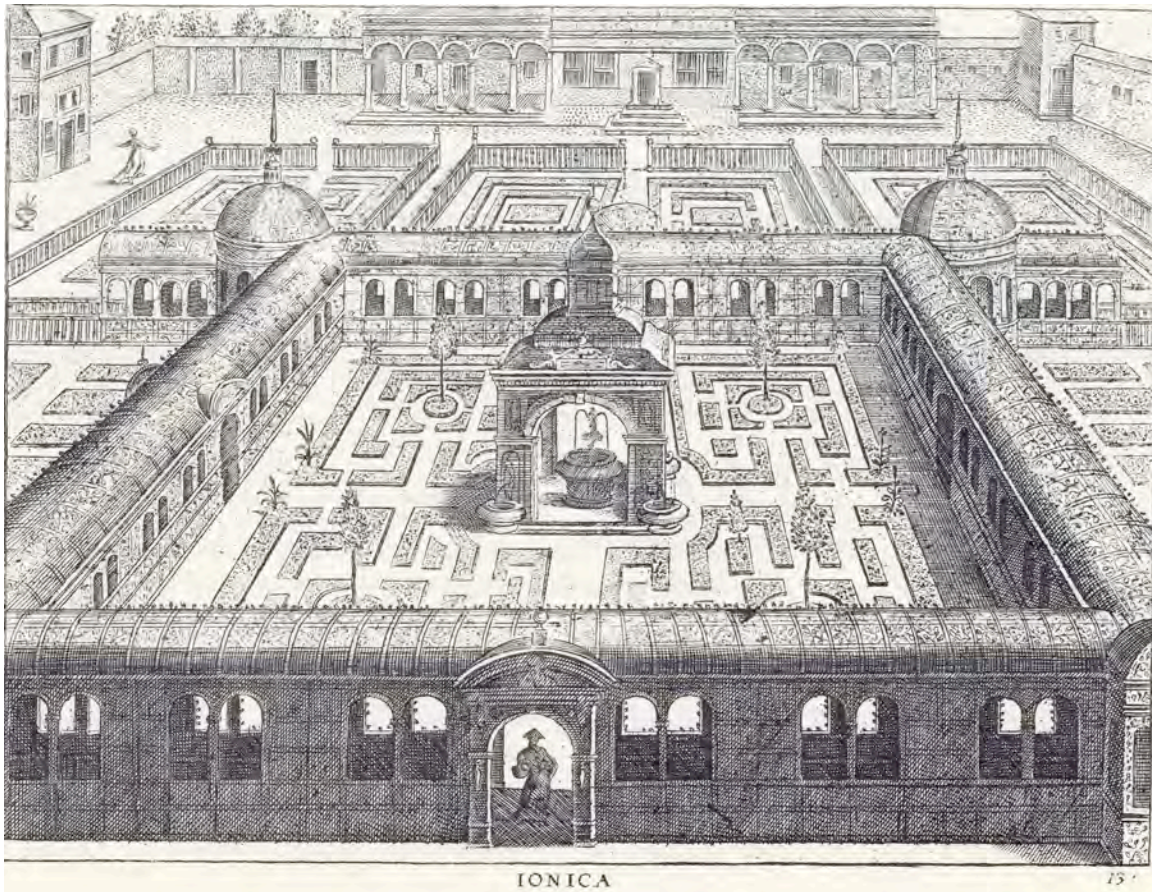


Fig. 3.52 Hans Vredeman de Vries, *Hortorum Viridariorumque Formae*, Ionica 13 (from Vredeman de Vries reprint 1980).



Fig. 3.53 Johannes Sadeler I, *La Primavera* (Castle with Pleasure Garden), after Hans Bol, 1580, engraving, Blanton Museum of Art, The University of Texas at Austin, Leo Steinberg Collection, 2002 (Blanton Museum of Art, The University of Texas at Austin).



Fig. 3.54 David Vinckboons, *Venetian Party in a Chateau Garden* (ca. 1602), National Gallery of Art, Washington D.C. (Clayton 1990, 48, fig. 29).

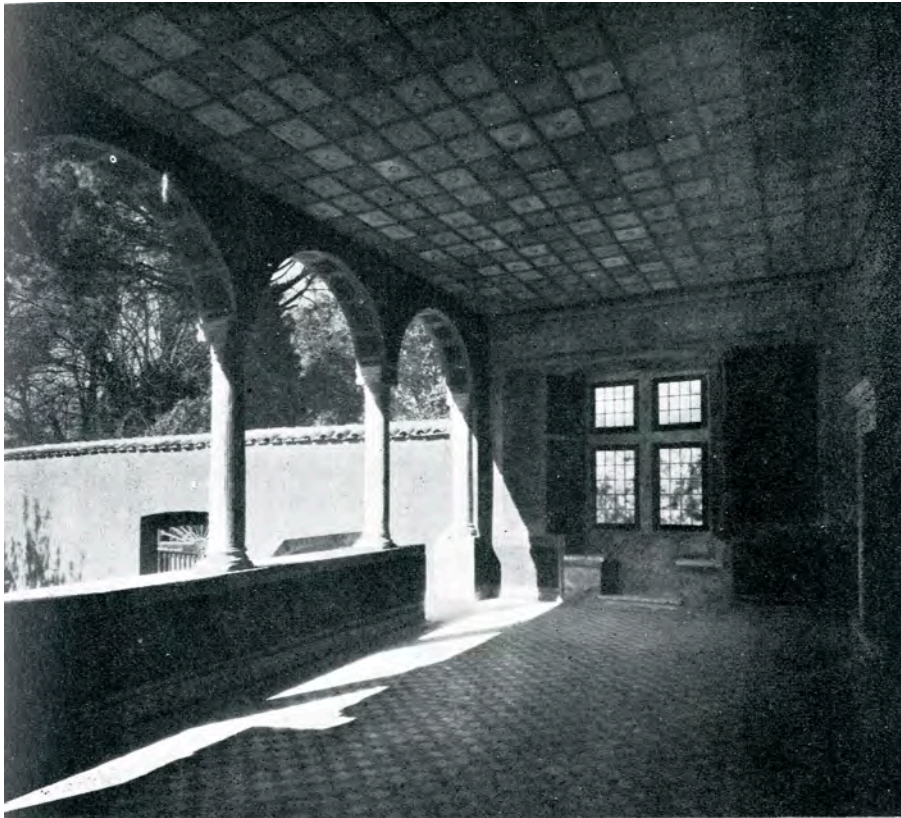


Fig. 4.1 House of Cardinal Bessarion, view of the loggia (Tomei 1977, fig. 50).



Fig. 4.2 Casa dei Cavalieri di Rodi, Rome (photo: author).



Fig. 4.3 Fresco fragment from the Casa dei Castellini da Castiglione (Fagiolo/Giusti 1996, 22, fig. 6).

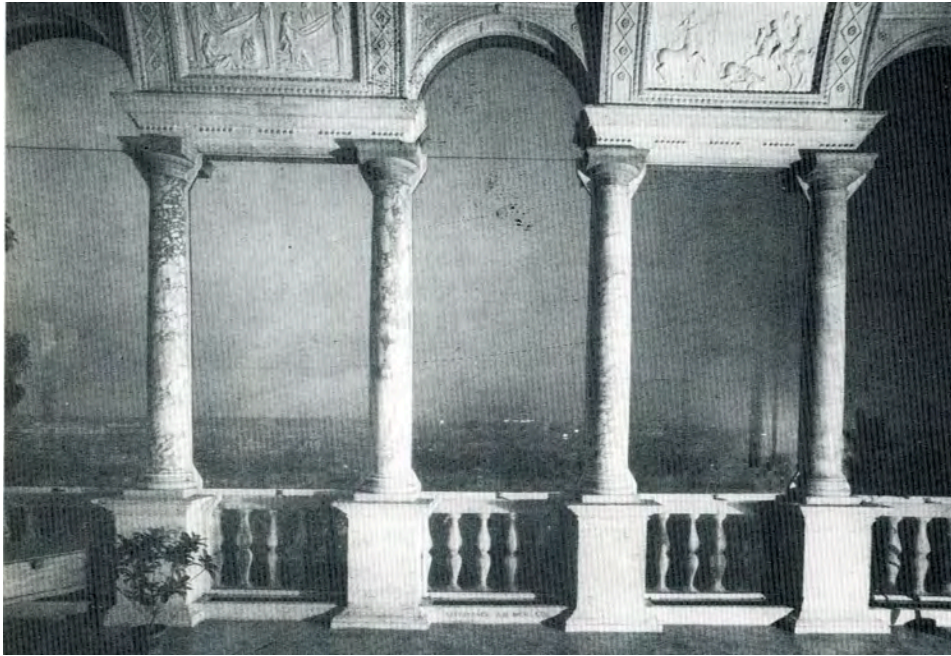


Fig. 4.4 Villa Baldassare Turini (Villa Lante al Gianicolo), view from the loggia (Lilius 1981, vol. 2, tav. 21a.)



Fig. 4.5 Palazzo Farnese, exterior, southwest façade (Ecole Française de Rome/Uginet 1980 Planches, 76a).



Fig. 4.6 Raphael and Giovanni da Udine, *Santa Cecilia*, 1515, Bologna, Pinacoteca Nazionale (Dacos/Furlan 1987, 14).



Fig. 4.7 Raphael and Giovanni da Udine, *The Miraculous Draught of Fish*, ca. 1515, Victoria and Albert Museum, London (Dacos/Furlan 1987, 18).

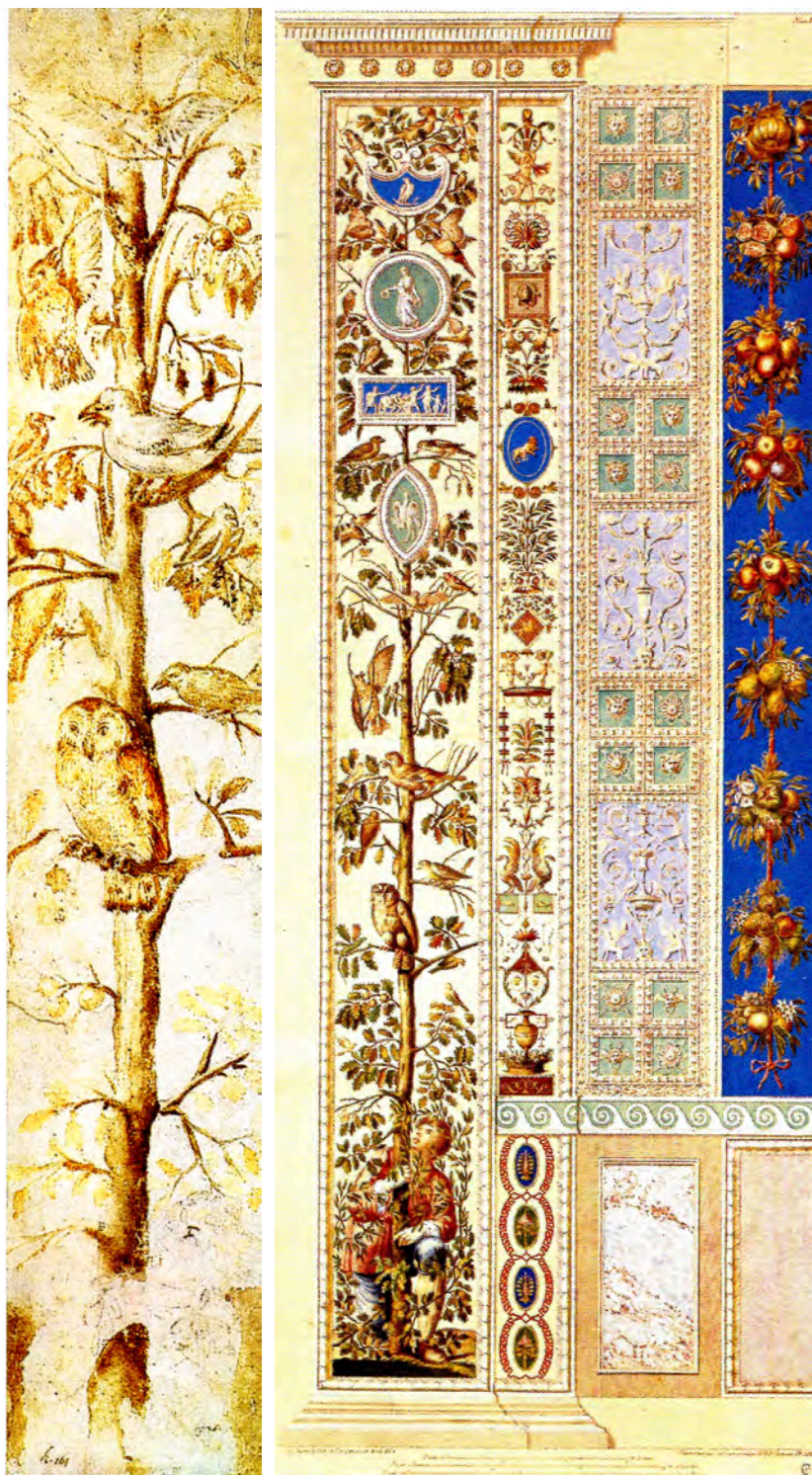


Fig. 4.8 Giovanni da Udine's preparatory drawing for Pilaster VII in the Loggia of Raphael (left, Dacos/Furlan 1987, 69) and Giovanni Volpato's drawing (1772) of Pilaster VII (right, Gilet 2007, 137).



Fig. 4.9 La Farnesina, Loggia of Cupid and Psyche, view of the vault (Frommel 2003, 62-63).



Fig. 4.10 La Farnesina, Loggia of Cupid and Psyche, view from the loggia towards the garden (Frommel 2003, 60-61).



Fig. 4.11 Loggia of Cupid and Psyche, detail of the festoons by Giovanni da Udine (Dacos/Furlan 1987, 27).

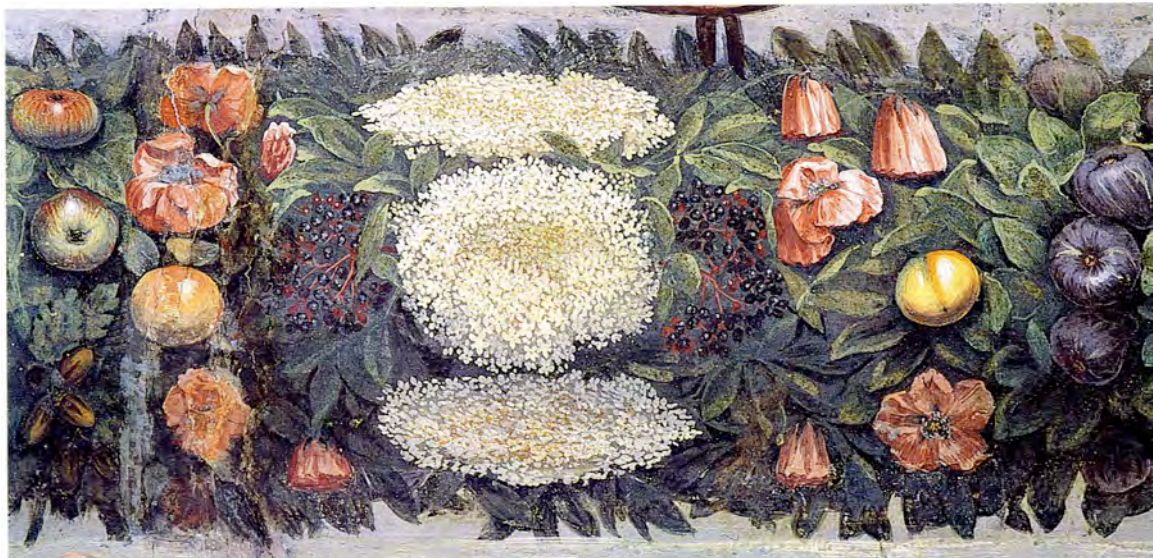


Fig. 4.12 Loggia of Cupid and Psyche, detail of the festoons by Giovanni da Udine (Dacos/Furlan 1987, 27).



Fig. 4.13 Loggia of Cupid and Psyche, detail of the festoons by Giovanni da Udine (Dacos/Furlan 1987, 28).



Fig. 4.14 Loggetta of cardinal Bibbiena, exterior, from the Cortile del Maresciallo (Redig de Campos 1967, fig. 48).



Fig. 4.15 Loggetta of Cardinal Bibbiena, general view (Artstor).

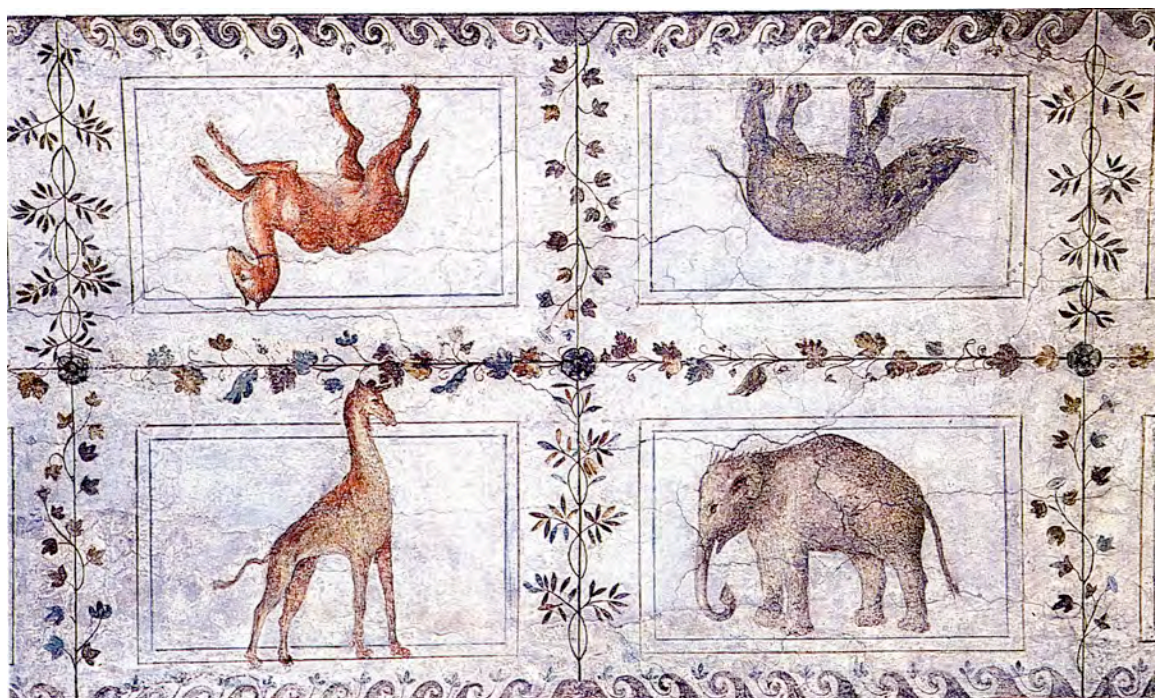


Fig. 4.16 Loggetta of Cardinal Bibbiena, detail of ceiling decoration, stylized pergola with animals by Giovanni da Udine (Dacos/Furlan 1987, 45).



Fig. 4.17 Loggetta of Cardinal Bibbiena, grotesque composition by Giovanni da Udine (Scala Archives, Artstor).

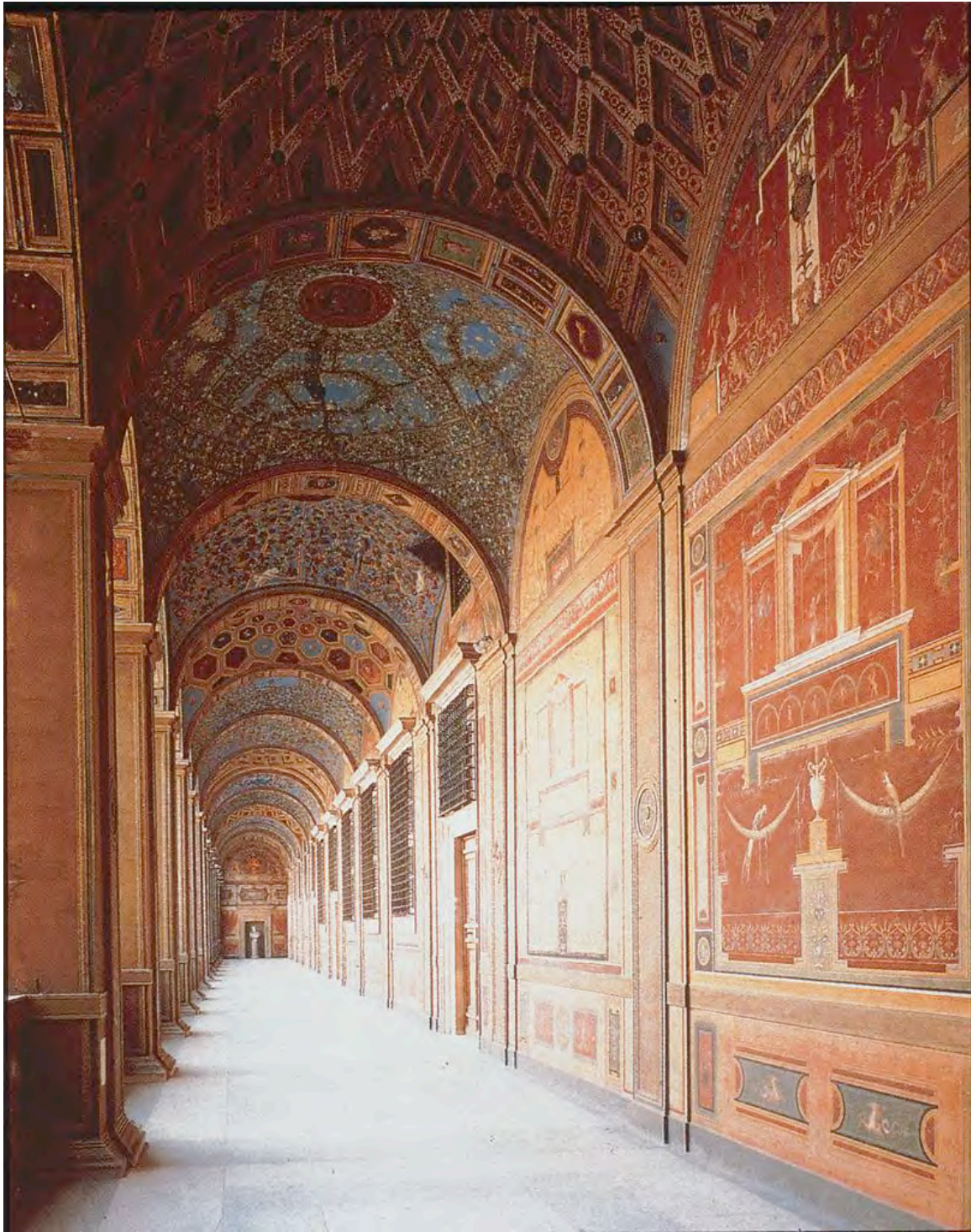


Fig. 4.18 First Loggia of Leo X, view from the north end (Artstor).

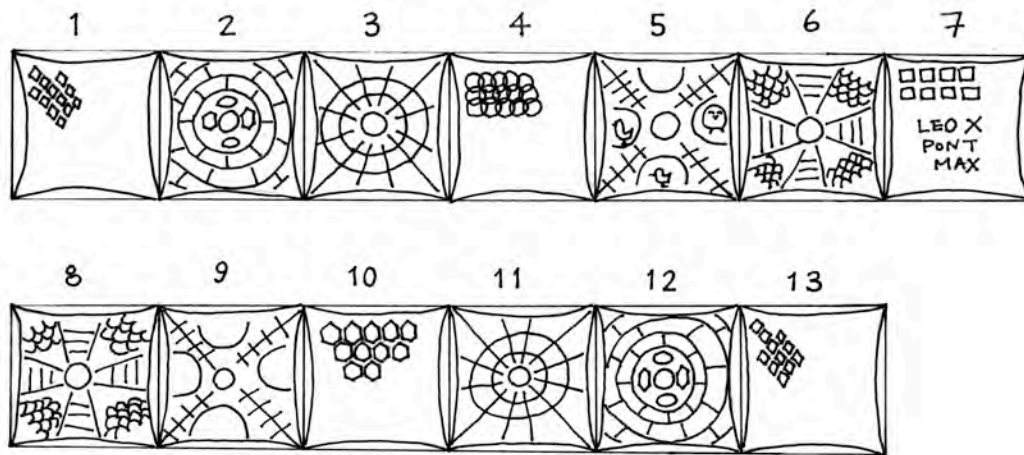


Fig. 4.19 First Loggia of Leo X, decorative scheme of the vaults (author).



Fig. 4.20 First Loggia of Leo X, Vault II (Photo Vatican Museums).



Fig. 4.21 First Loggia of Leo X, Vault V (Photo Vatican Museums).



Fig. 4.22 First Loggia of Leo X, Vault IX, Vatican Palace (Photo Vatican Museums).



Fig. 4.23 First Loggia of Leo X, vault decoration with vine pergola (Dacos/Furlan 1987, 103).



Fig. 4.24 First Loggia of Leo X, vault decoration with pergola and jasmine (Dacos/Furlan 1987, 107).



Fig. 4.25 First Loggia of Leo X, vault decoration with pergola and melangoli (Dacos/Furlan 1987, 105).



Fig. 4.26 Ancient Roman relief with acanthus scrolls, Uffizi, Florence (Dacos/Furlan 1987, 71).



Fig. 4.27 Giovanni da Udine, Pilaster IX in the Loggia of Raphael (Dacos/Furlan 1987, 70).



Fig. 4.28 Tabularium, Rome, interior (photo: author).



Fig. 4.29 Stufetta of Cardinal Riario, Palazzo della Cancelleria, decoration of the vault (Museo Nazionale di Castel Sant'Angelo 1984, 27, fig. 20).



Fig. 4.30 Jacques Androuet Du Cerceau, a plate from *Fragments d'architectures antiques d'après Thiry*, Orléans (1550), etching (Guillaume 2010, 119, fig. 146).

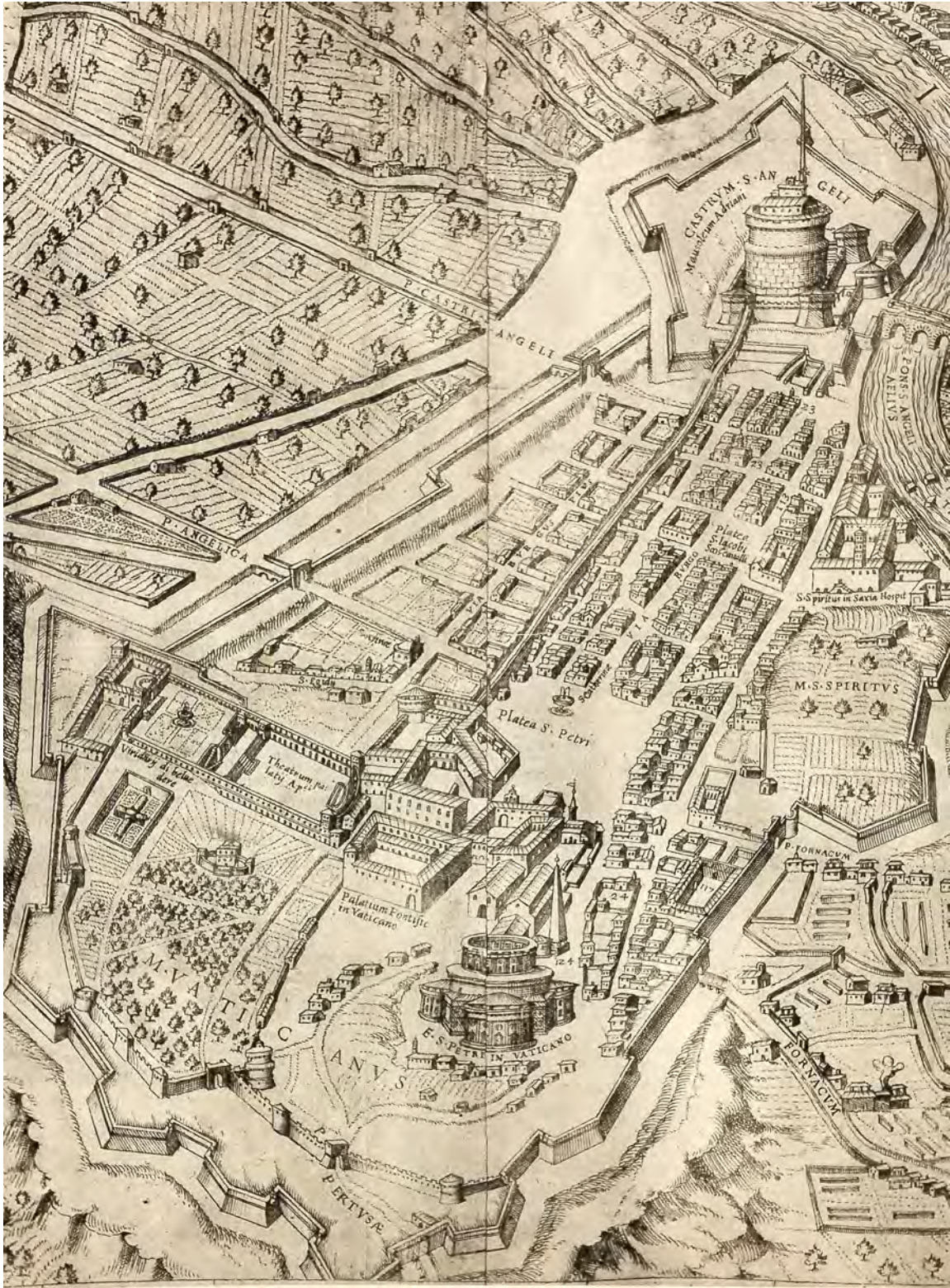


Fig. 5.2 Mario Cartaro, Map of Rome, detail with the Vatican area (1576) (Frutaz 1962, vol. II, CXXVI 5, tav. 243).



Fig. 5.3 Stefano Duperac/ Antonio Lafrery, Map of Rome, detail with the Vatican area (1577) (Frutaz 1962, vol. II, CXXVII 4, tav. 251).

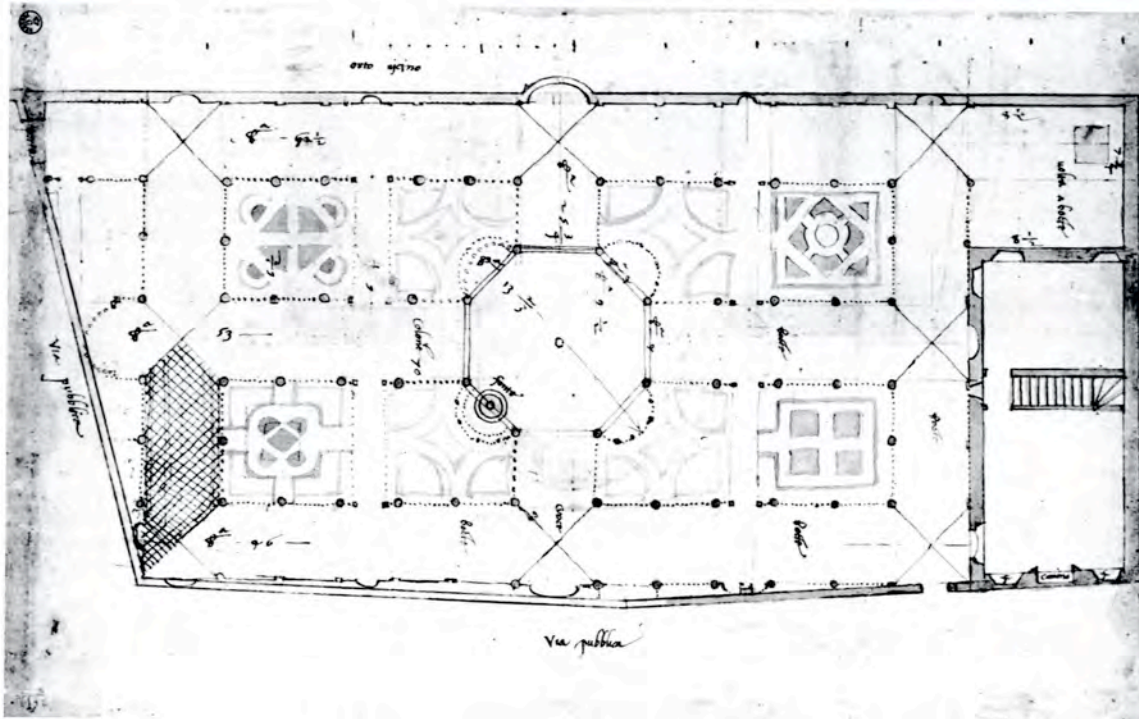


Fig. 5.4 Baldassare Peruzzi, plan for a garden with a pergola, drawing (Uffizi 580A) (Coffin 1991, 127, fig. 108).



Fig. 5.5 Giovanni Antonio Dosio, Map of Rome, detail with the Vatican area and Castel Sant'Angelo (top right), the Tiber River, the pergola, and the Villa Giulia (bottom left) (1561) (Frutaz 1962, vol. II, CXVII tav. 229).

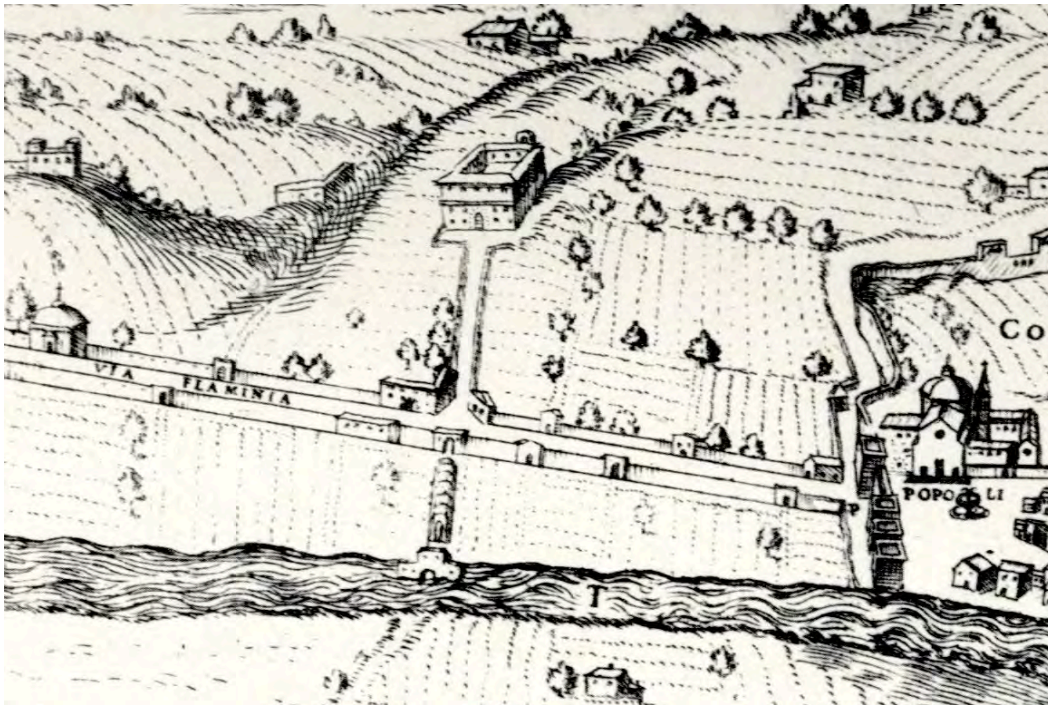


Fig. 5.6 Mario Cartaro, Map of Rome (piccola), detail with the Tiber River, the pergola, the Via Flaminia and the Fontana Pubblica, and the Villa Giulia (1575) (Frutaz 1962, vol. II, CXXV, tav. 237).



Fig. 5.7 Villa Farnese at Caprarola, Room of the Farnese Hours, the Entry into Paris in 1540 of Charles V and François I^{er} and Charles V accompanied by Cardinal Alessandro Farnese, fresco by Taddeo Zuccari (Faldi 1981, 139).

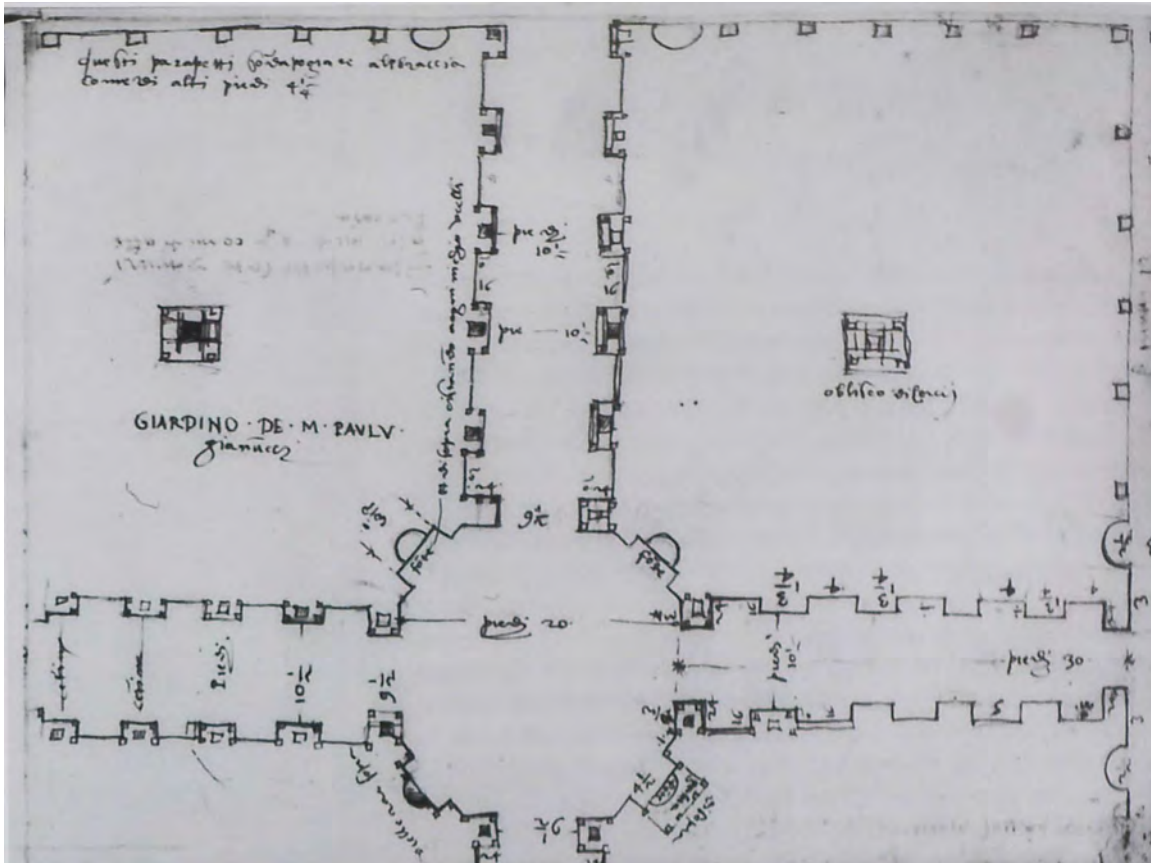


Fig. 5.8 Giovanni Colonna da Tivoli, Plan of a pergola for the Ghinucci garden (1554), BAV Vat.Lat.7721 fol. 15r (S. Frommel 2005, 84, fig. 8).

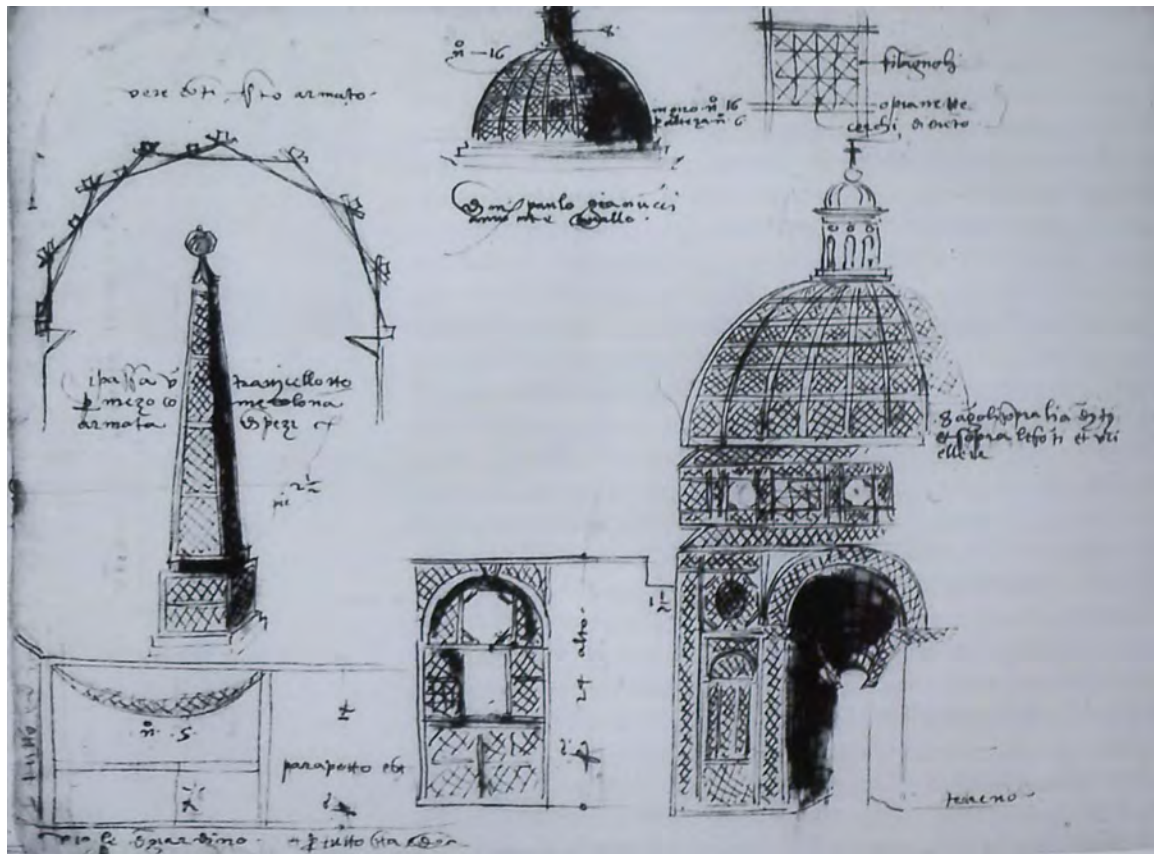


Fig. 5.9 Giovanni Colonna da Tivoli, Details of the pergola for the Ghinucci garden (1554), BAV Vat.Lat.7721 fol. 15v (S. Frommel 2005, 84, fig. 9).

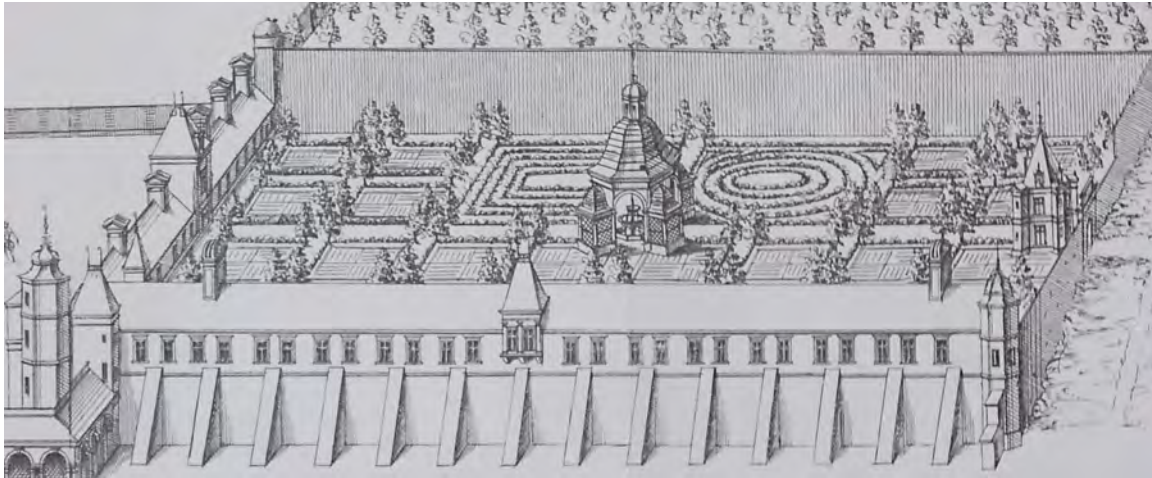


Fig. 5.11 Jacques Androuet Du Cerceau, Gaillon, detail with the parterre garden (1576), etching (from Du Cerceau reprint 1972).

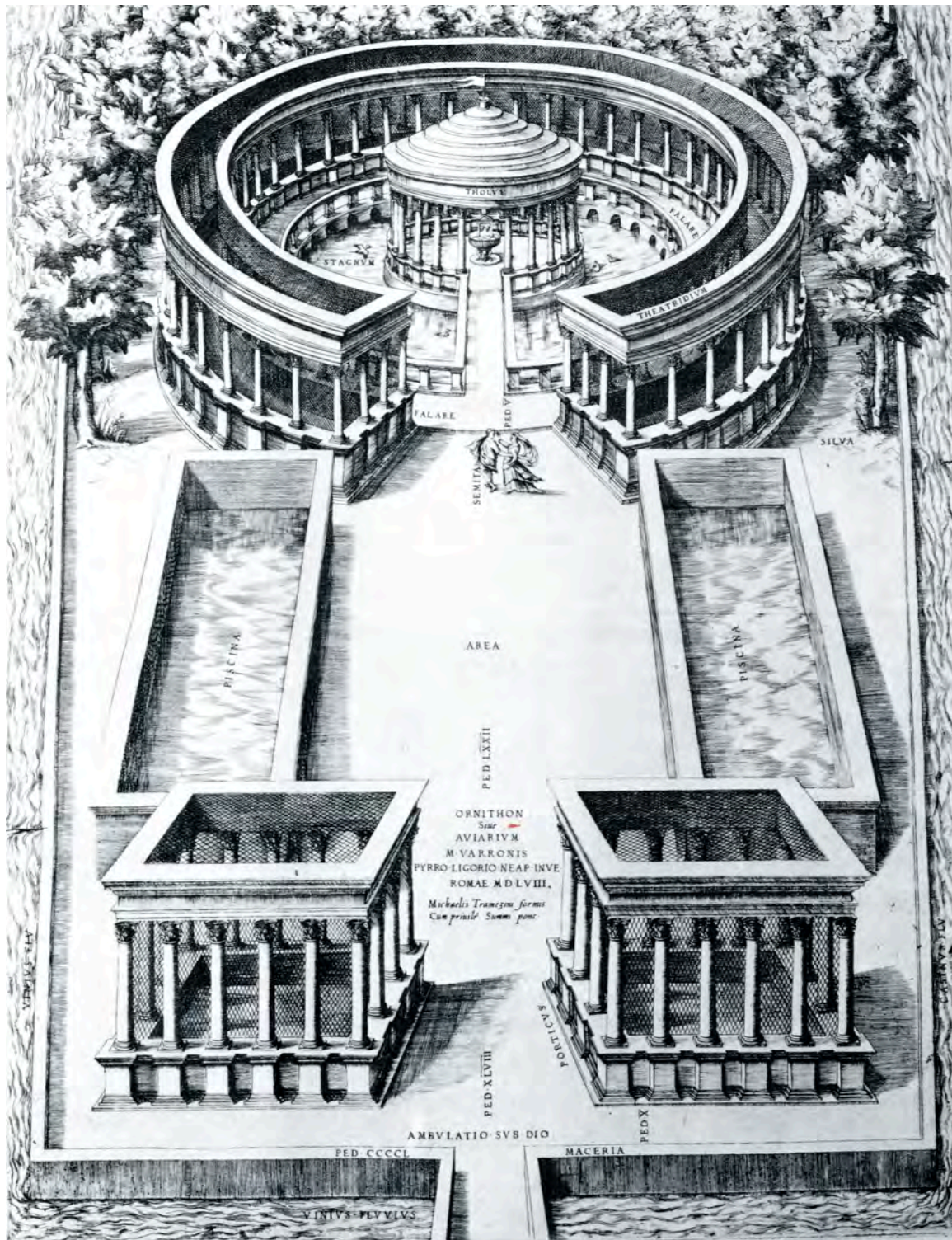


Fig. 5.12 Varro's Aviary, engraving after Pirro Ligorio (Coffin 1979, 350, fig. 231).



Fig. 5.13 Girolamo Muziano, fresco depicting the Quirinal Garden (ca. 1568), Salone, Villa d'Este at Tivoli (photo: author).



Fig. 5.14 Raffaellino da Reggio, fresco depicting the Quirinal Garden (1574-1576), Palazzina Gambarà, Villa Lante at Bagnaia (photo: author).

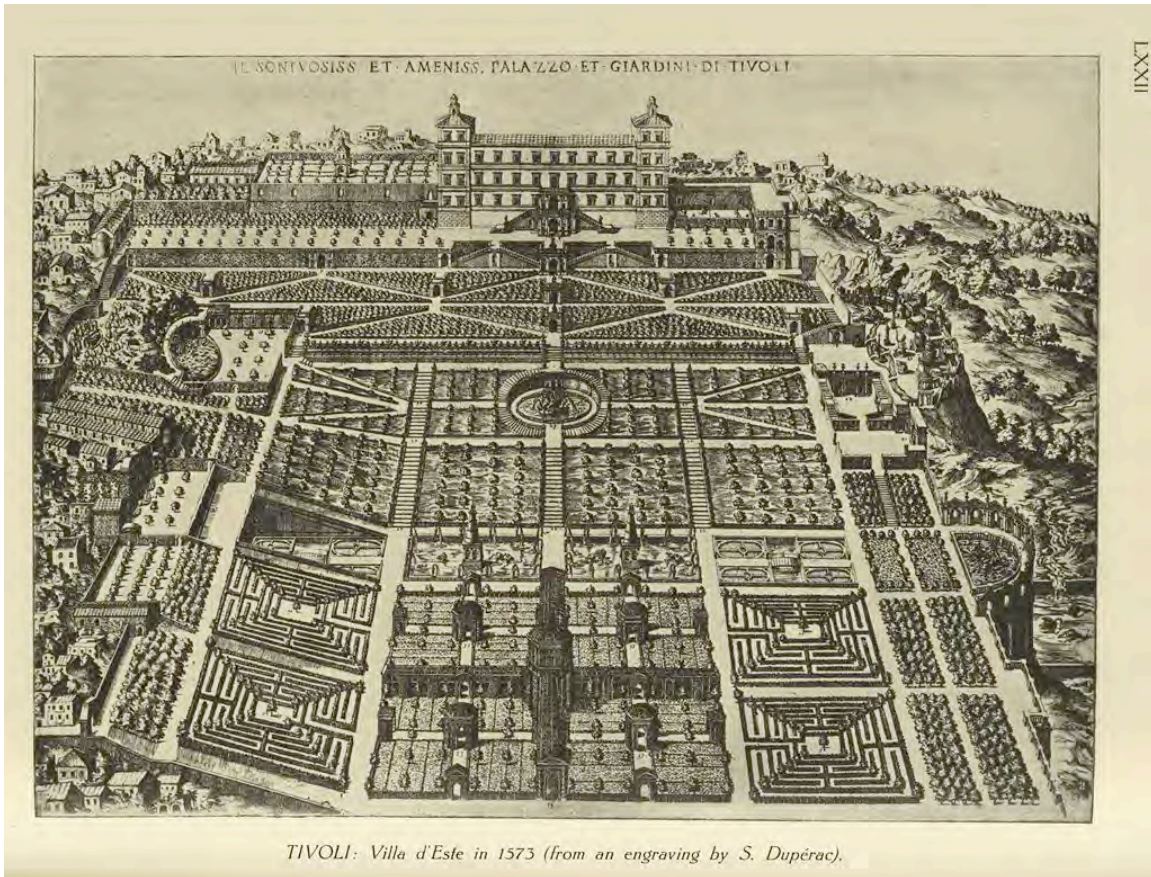


Fig. 5.15 Stefano Dupérac, Villa d'Este at Tivoli (1573), engraving (Dami 1925, pl. LXXII, SOA VRC Mirka Beneš Collection).

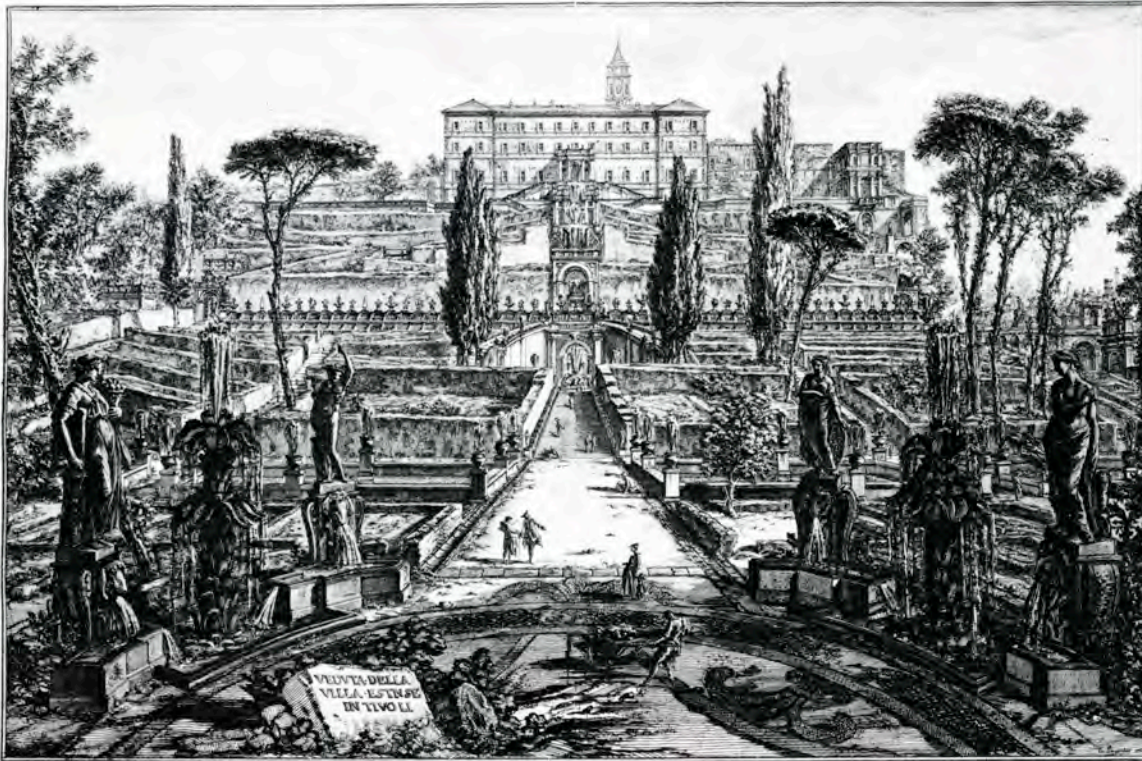


Fig. 5.16 Giovanni Battista Piranesi, *Villa d'Este at Tivoli* (1773), etching (Clayton 1990, 109, fig. 70).



Fig. 5.17 Girolamo Muziano, fresco depicting the garden of the Villa d'Este at Tivoli (ca. 1568), Salone, Villa d'Este at Tivoli (photo: author).



Fig. 5.18 Villa d'Este at Tivoli, view from the loggia towards the garden and beyond (photo: author).



Fig. 5.19 Girolamo Muziano, fresco of the long wall (ca. 1568), Salone, Villa d'Este at Tivoli (photo: author).



Fig. 5.20 Curzio Macarone, Fountain, Salone, Villa d'Este at Tivoli (photo: author).

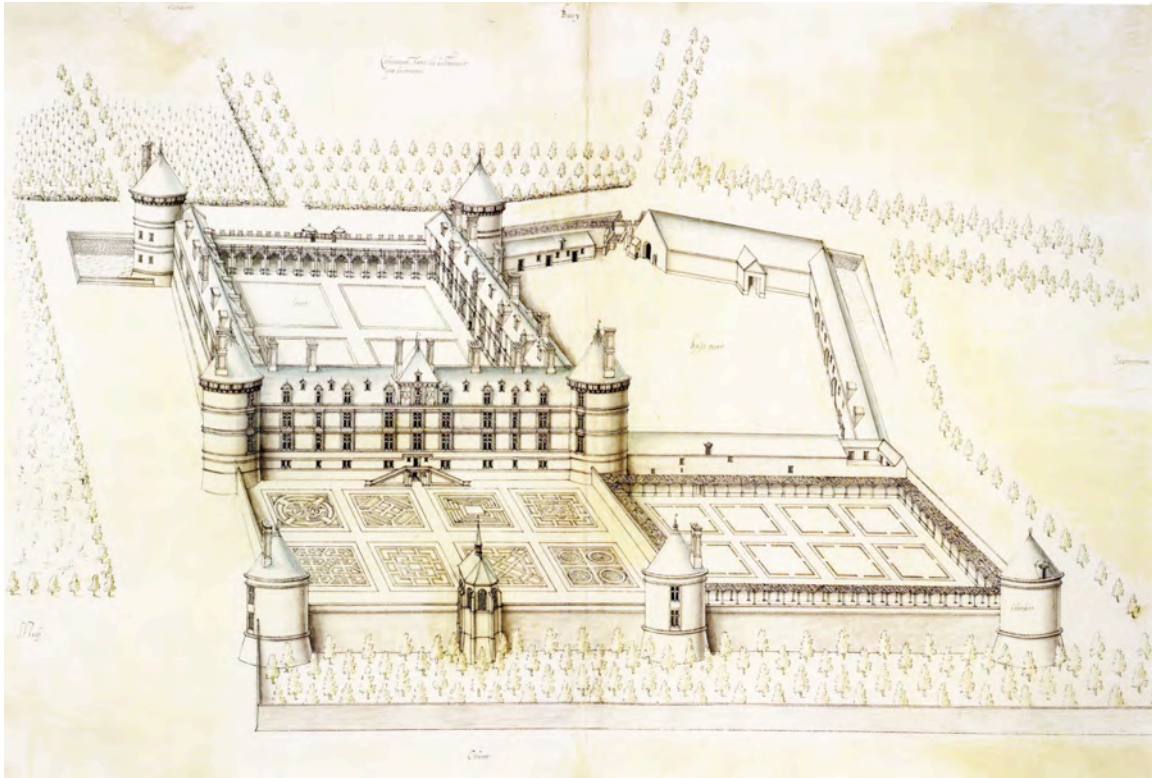


Fig. 5.21 Jacques Androuet Du Cerceau, Bury (1579), etching (Boudon/Mignot 2010, 239).

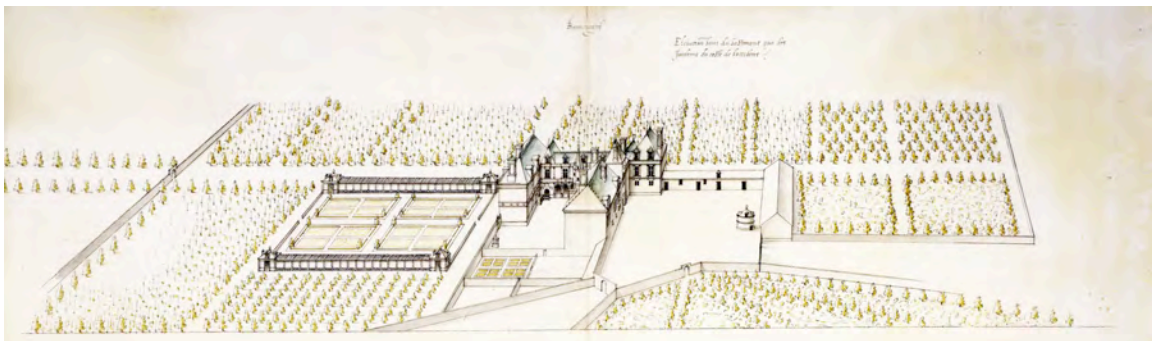


Fig. 5.22 Jacques Androuet Du Cerceau, Beauregard (1579), etching (Boudon/Mignot 2010, 231).

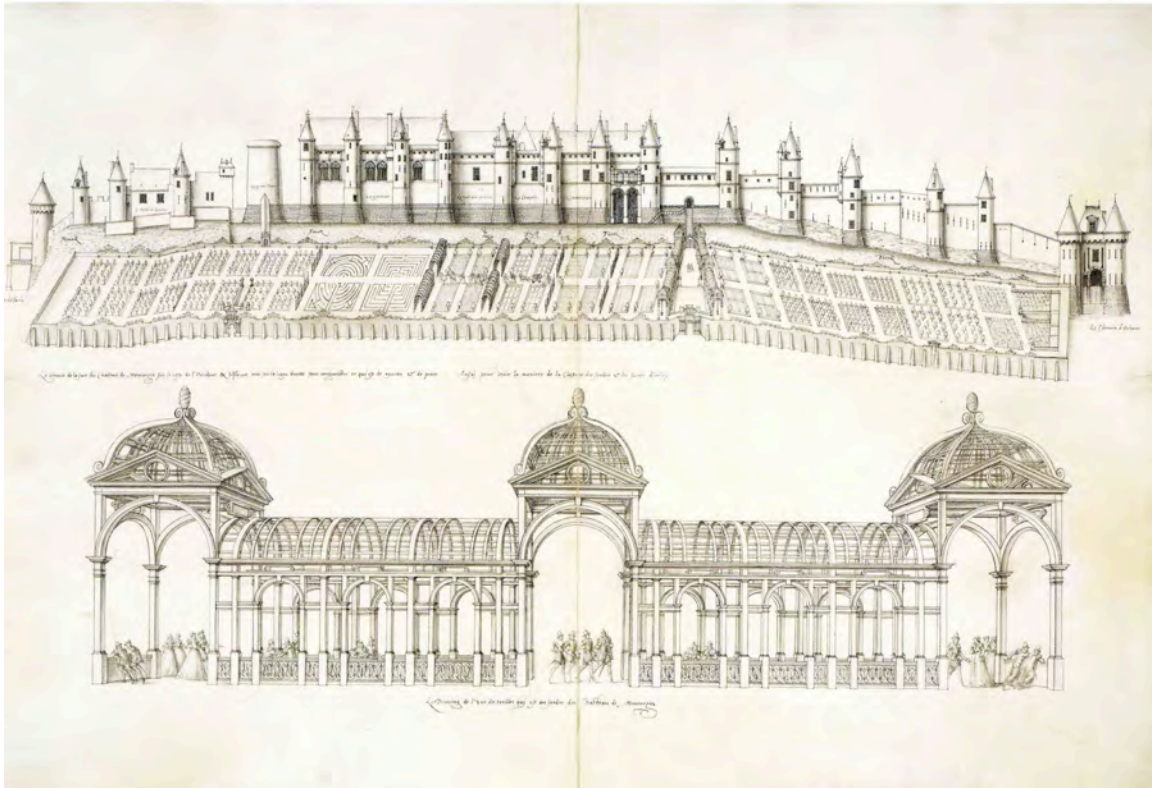


Fig. 5.23 Jacques Androuet Du Cerceau, Montargis, parterre gardens and the pergola gallery (1576), etching (Boudon/Mignot 2010, 85).

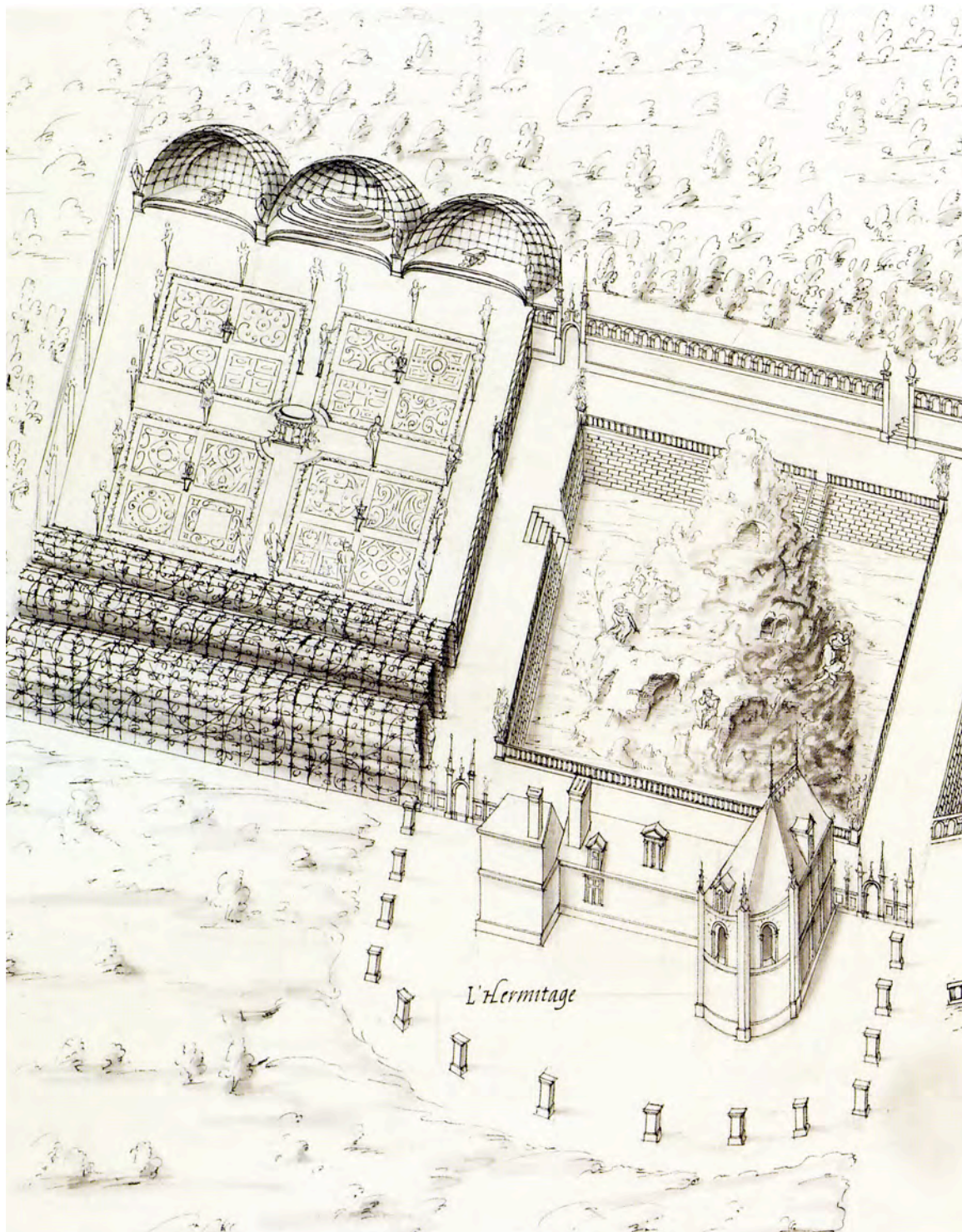


Fig. 5.24 Jacques Androuet Du Cerceau, Gaillon, Hermitage of Lydieu (1576), etching (Boudon/Mignot 2010, 130).

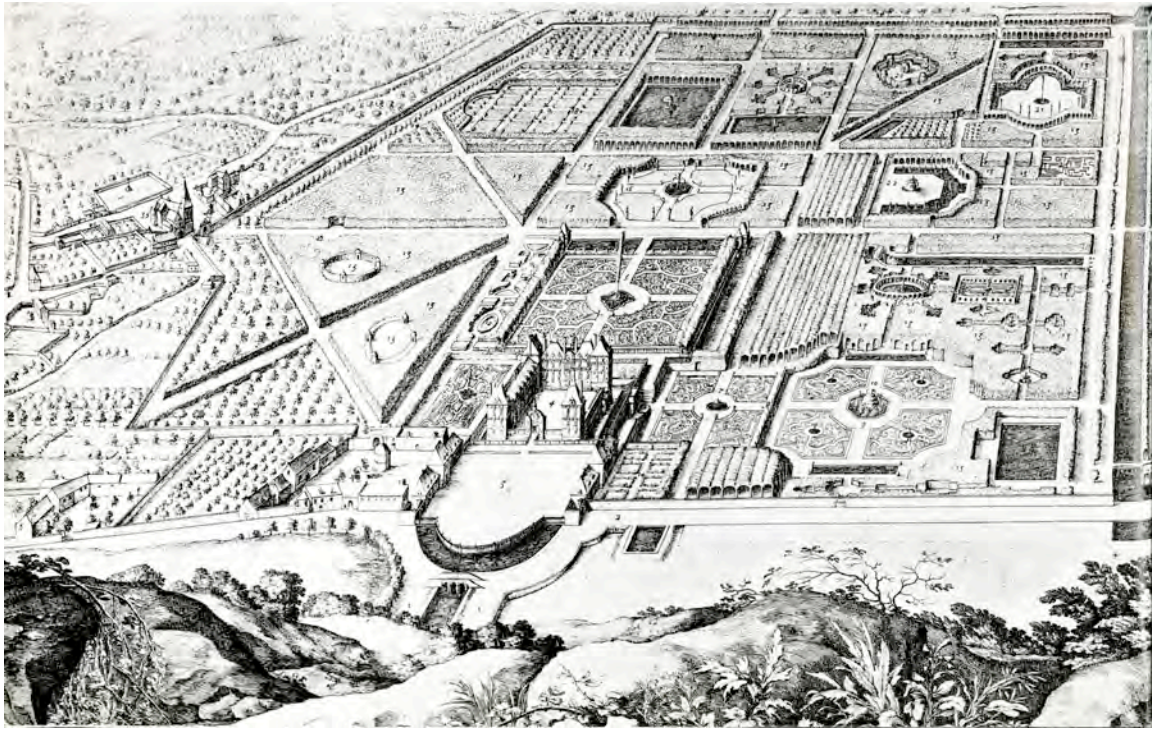


Fig. 5.25 Henri Mauperché, Château of Liancourt (1654) (Woodbridge 1986, 138, fig. 142).



Fig. 6.1 Giovanni da Udine, vault decoration, Sala degli fogliami, Palazzo Grimani at Santa Maria Formosa, Venice.

http://www.flickr.com/photos/daisuke_ido/3176700156/sizes/z/in/photostream/



Fig. 6.2 Baldassare Peruzzi and Giorgio di Giovanni, vault decoration, loggia, Palazzo Belcaro, Siena. (Fondazione Federico Zeri, Università di Bologna, Photo Archive, Allinari Fratelli, Artstor).



Fig. 6.3 Giorgio di Giovanni, vault decoration, loggia, Palazzo Chigi-Saracini, Siena.
<http://www.flickr.com/photos/bramhall/2527676169/sizes/o/in/photostream/>



Fig. 6.4 Correggio, Refectory of the Abbess, Camera di San Paolo, Parma (Kliemann/Rohlmann 2004, 14).



Fig. 6.5 Andrea Mantegna, vault decoration, Camera Picta, Palazzo Ducale, Mantua (Scala Archives, Artstor).

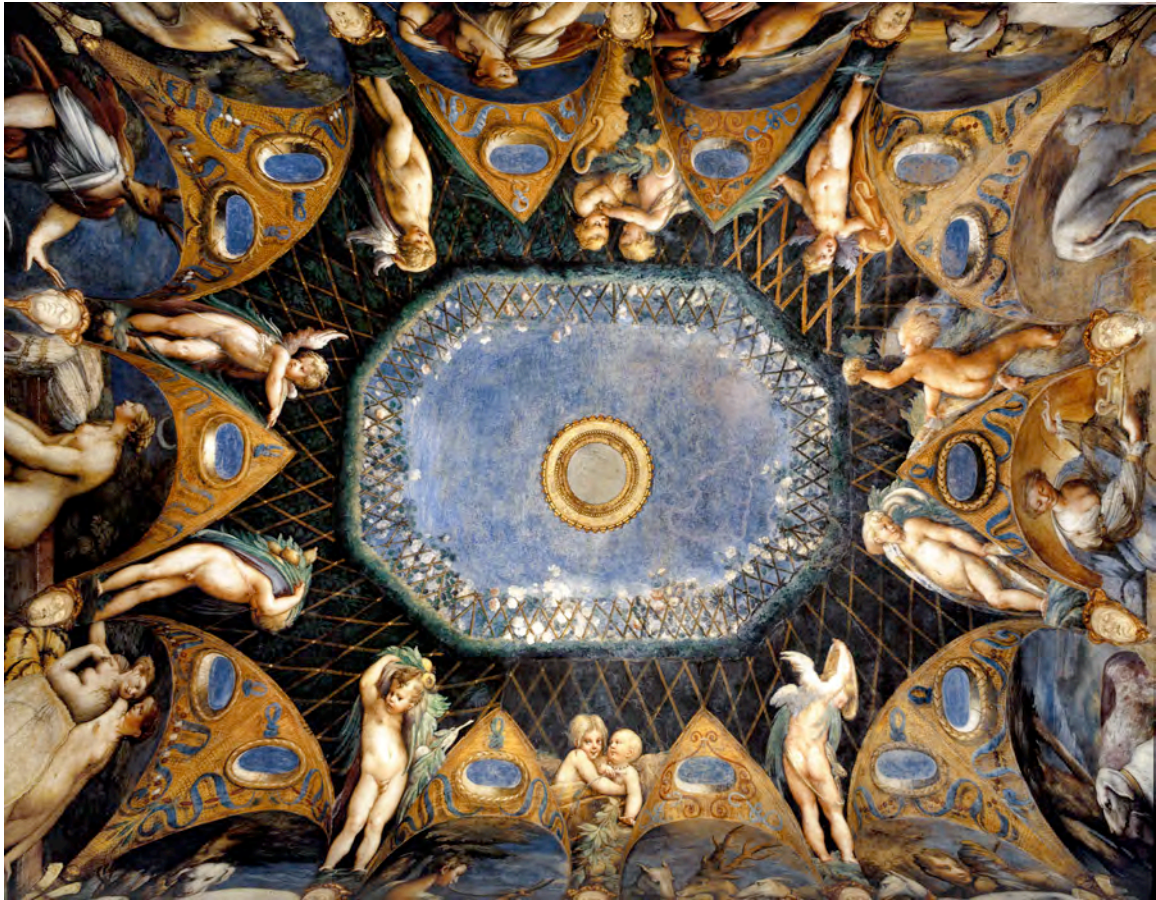


Fig. 6.6 Parmigianino, vault decoration, Room of Diana and Actaeon, Rocca San Vitale, Fontanellato (Kliemann/Rohlmann 2004, 275, pl. 110).



Fig. 6.7 Dosso Dossi, Camera delle Cariatidi, Villa Imperiale, Pesaro (Kliemann/Rohmann 2004, 19).



Fig. 6.8 Palazzo Vecchio, Florence, Marco da Faenza, painted pergola on the ceiling at the foot of the stairs leading from the Room of Leo X to the Quarter of the Elements (photo: author).



Fig. 6.9 Palazzo Vecchio, Florence, Marco da Faenza, painted pergola on the ceiling at the top of the stairs leading from the Room of Leo X to the Quarter of the Elements (photo: author).



Fig. 6.10 Palazzo Vecchio, Florence, Marco da Faenza, painted pergola on the ceiling at the top of the stairs leading from the Room of Leo X to the Quarter of the Elements (photo: author).

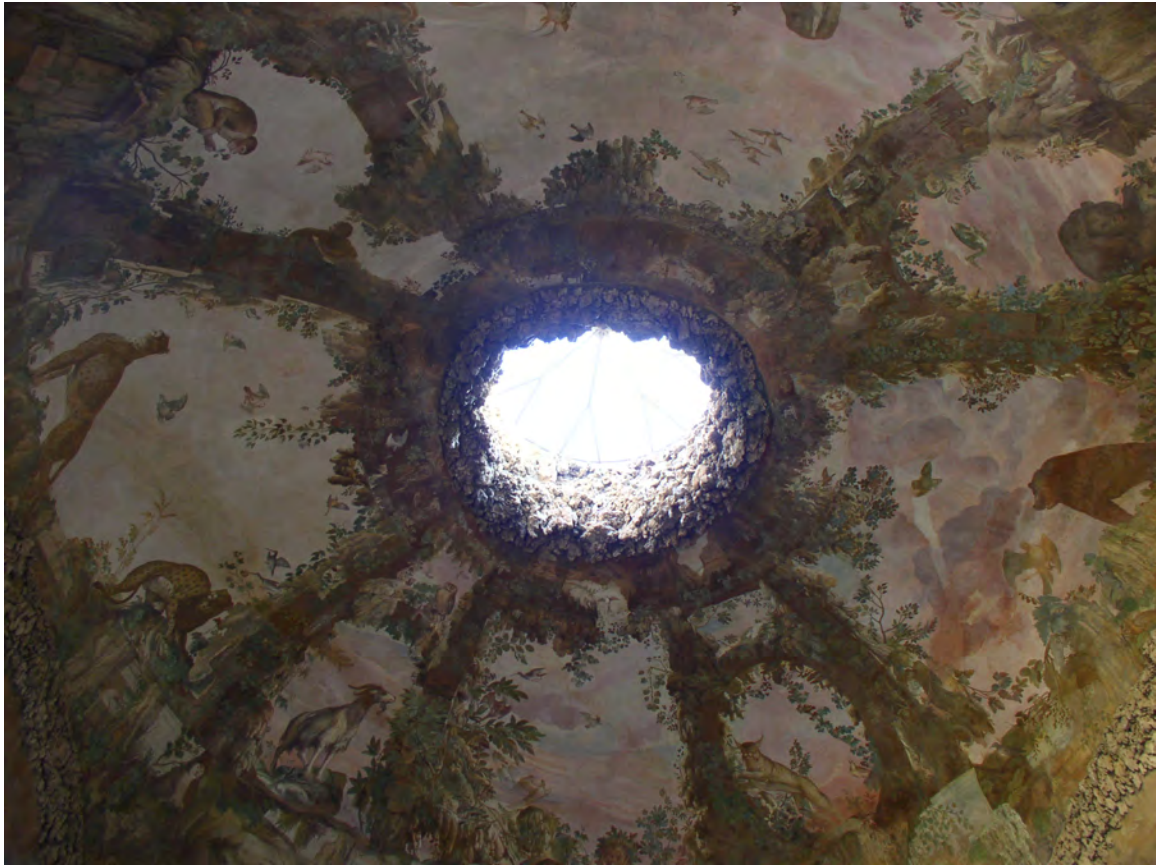


Fig. 6.11 Grotto of Buontalenti, First Chamber, Boboli Gardens, Florence (photo: author).



Fig. 6.12 Grotto of Buontalenti, Second Chamber, Boboli Gardens, Florence (photo: author).



Fig. 6.13 Grotto of Buontalenti, Third Chamber, Boboli Gardens, Florence (photo: author).



Fig. 6.14 Andrea del Sarto, *Tribute to Caesar* (ca. 1520), Salone, Villa Medici at Poggio a Caiano (Scala Archives, Artstor).



Fig. 6.15 Bachiacca, *The Gathering of Manna* (1540/1555), National Gallery of Art, Washington D.C. (Artstor).



Fig. 6.16 Antonio di Gino Lorenzi, Niche of the Unicorn, Grotto of the Animals, Villa Medici at Castello (Artstor).



Fig. 6.17 Alessandro Allori, vault decoration (1589), loggia, Palazzo Pitti, Florence (Kliemann/Rohmann 2004, 46).



Fig. 6.18 Palazzina Marfisa, Ferrara, Loggia degli Aranci, ceiling decoration with vine (ca. 1559) (photo: author).

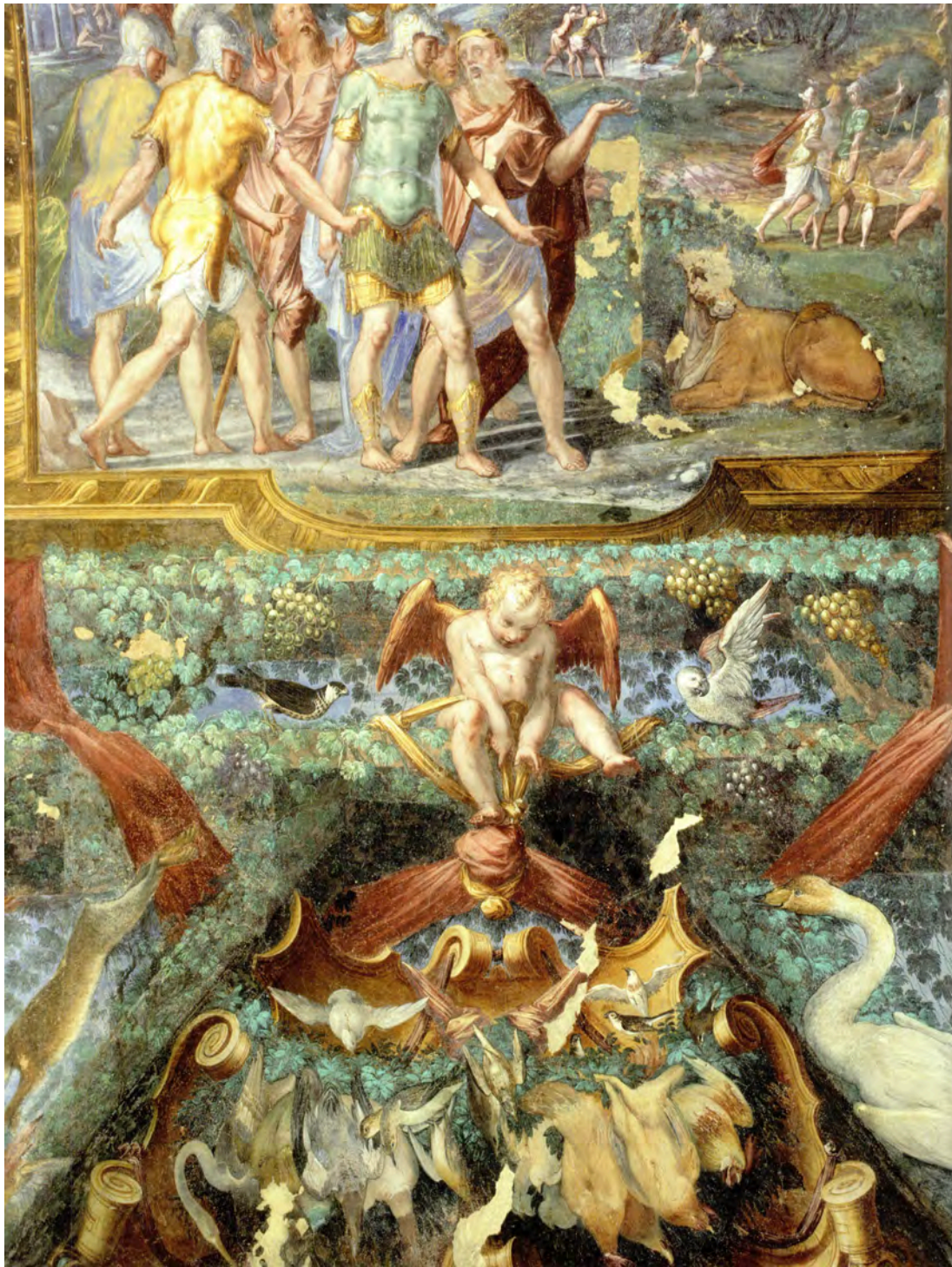


Fig. 6.19 Cristoforo Gherardi, decoration of the loggia, detail, Palazzo Vitelli a Porta Sant'Egidio, Città di Castello (from Dalla Ragione 2009).



Fig. 6.20 Cristoforo Gherardi, decoration of the loggia, detail, Palazzo Vitelli a Porta Sant'Egidio, Città di Castello (from Dalla Ragione 2009).



Fig. 6.21 Cristoforo Gherardi, decoration of the loggia, detail, Palazzo Vitelli a Porta Sant'Egidio, Città di Castello (from Dalla Ragione 2009).

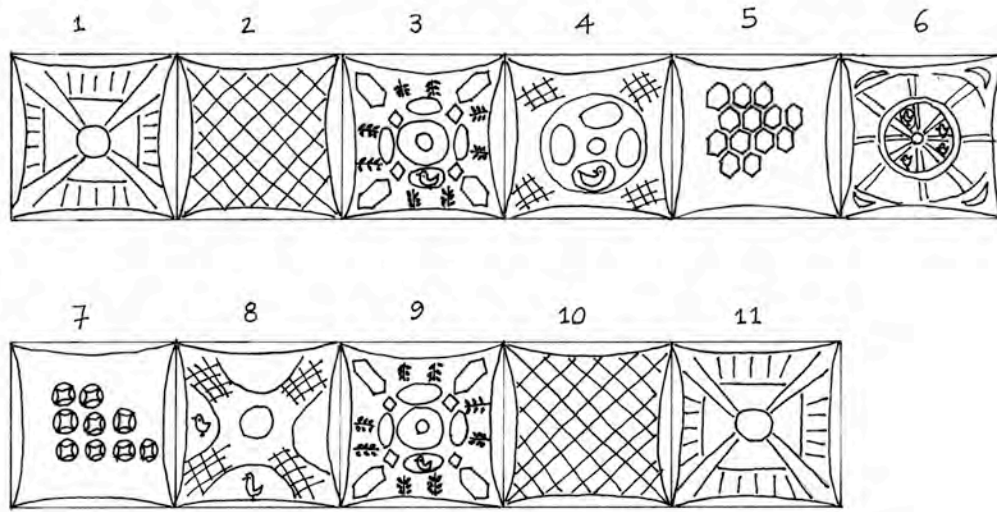


Fig. 6.22 First Loggia of Gregory XIII, decorative scheme of the vaults (author).



Fig. 6.23 First Loggia of Gregory XIII, Vault IV (Photo Vatican Museums).



Fig. 6.24 First Loggia of Gregory XIII, Vault VIII (Photo Vatican Museums).



Fig. 6.25 First Loggia of Gregory XIII, Vault IX (Photo Vatican Museums).



Fig. 6.26 Villa Medici, Rome, Studiolo of Ferdinando, vault decoration, Jacopo Zucchi (1576) (photo: author).



Fig. 6.27 Villa Giulia, semicircular portico, vault decoration, type (A) pergola (at the center of the portico) (photo: author).



Fig. 6.28 Villa Giulia, semicircular portico, vault decoration, type (A') pergola (at the end of the south arm of the portico) (photo: author).



Fig. 6.29 Villa Giulia, semicircular portico, vault decoration, detail of fig. 6.28, putto holding flags with the Del Monte coat of arms (photo: author).

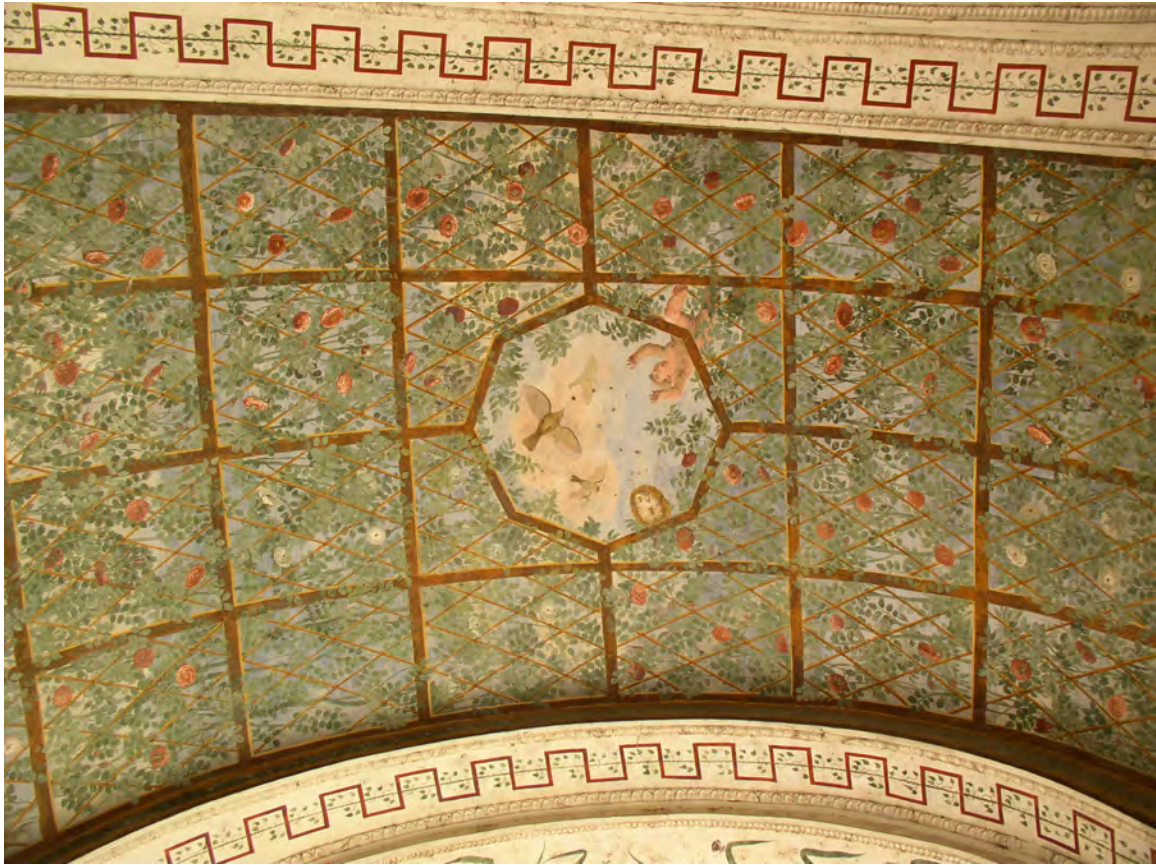


Fig. 6.30 Villa Giulia, semicircular portico, vault decoration, type (B) pergola (in the north arm of the portico) (photo: author).



Fig. 6.31 Villa Giulia, semicircular portico, vault decoration, octagonal opening in rose trellis with two winged putti (photo: author).



Fig. 6.32 Villa Giulia, semicircular portico, vault decoration, type (C) pergola (in the south arm of the portico) (photo: author).



Fig. 6.33 Villa Giulia, semicircular portico, vault decoration, trelliswork with oval and diamond openings (photo: author).



Fig. 6.34 Villa Giulia, semicircular portico, vault decoration, octagonal opening in vine trellis with pissing putto (photo: author).



Fig. 6.35 Villa Giulia, semicircular portico, vault decoration, octagonal opening in the vine trellis with an owl and two putti (photo: author).



Fig. 6.36 Villa Giulia, View of the Villa Giulia and the Fontana Pubblica, fresco on the piano nobile of the villa building (photo: author).

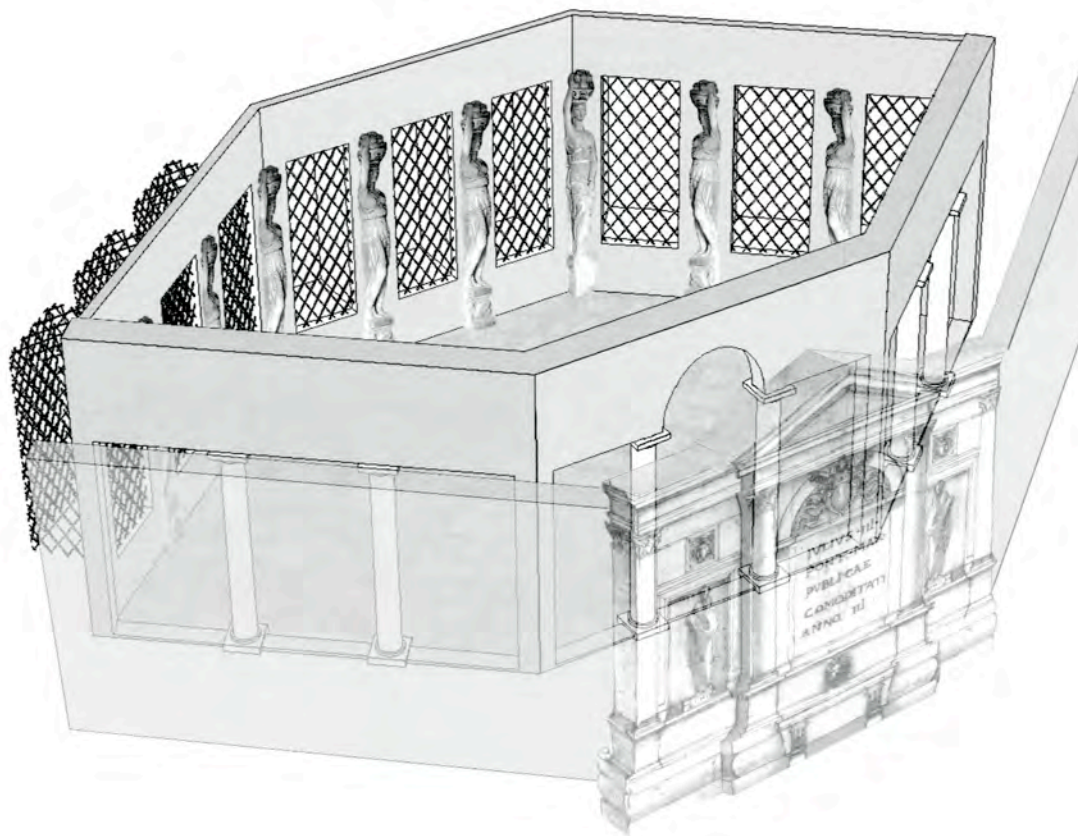


Fig. 6.37 Fontana Publica on the Via Flaminia, hypothetical reconstruction by Fagiolo (Fagiolo 2007, 67, fig. 9).

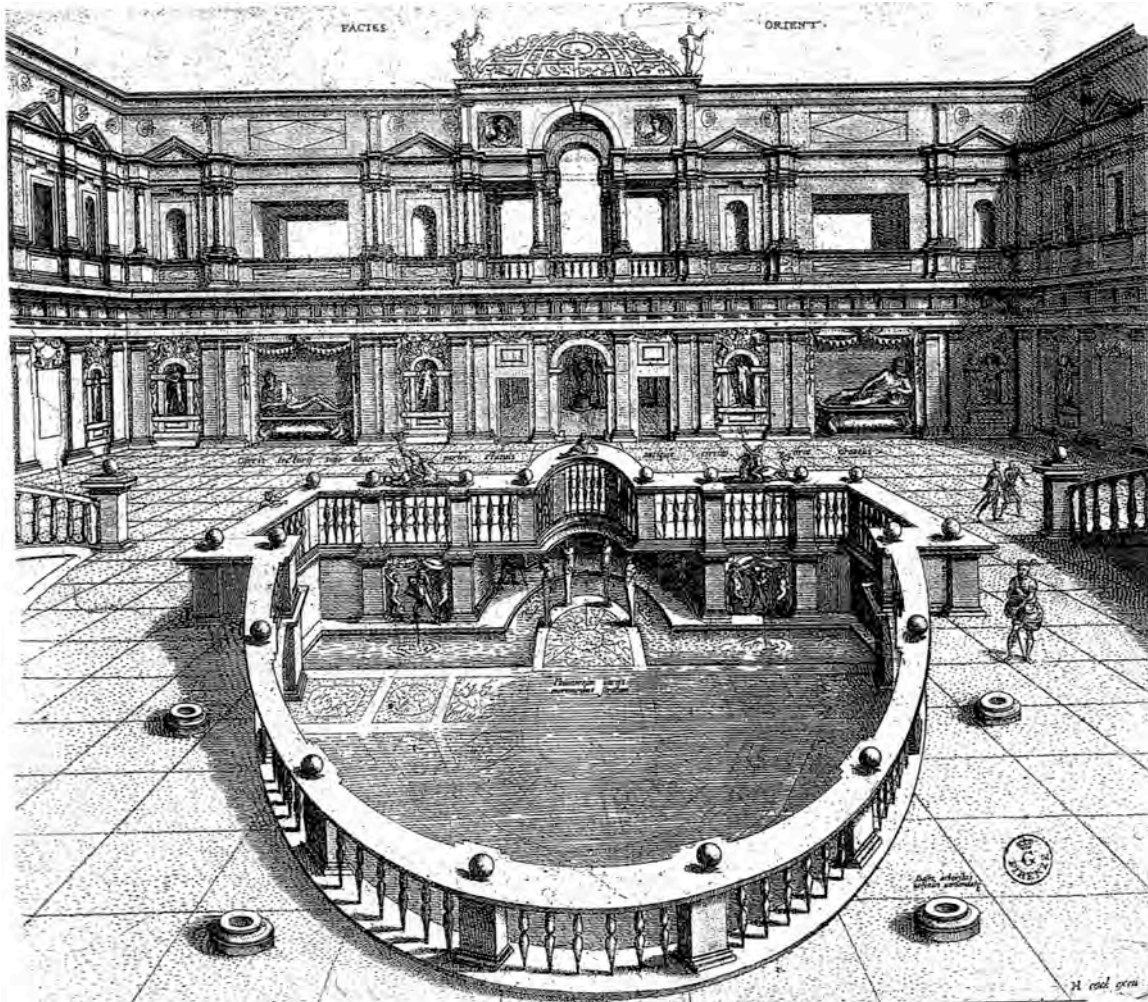


Fig. 6.38 Villa Giulia, View of Sunken Nymphaeum, by Hieronymus Cock/Antonio Lafrery (ca. 1568) (Fagiolo 2007, 84, fig. 44).



Fig. 6.39 Villa d'Este at Tivoli, mosaic and stucco pergola, corridor on the garden level (photo: author).



Fig. 6.40 Villa d'Este at Tivoli, mosaic and stucco pergola, detail of vine and rose trellis with bird, corridor on the garden level (photo: author).



Fig. 6.41 Villa d'Este at Tivoli, rustic fountain in the corridor on the garden level (photo: author).



Fig. 6.43 Design drawing of the Villa Farnese at Caprarola by Vignola (ASP Piante e disegni 49 no.10, photo: author).



Fig. 6.44 Villa Lante at Bagnaia, Palazzina Gambara, fresco depicting the Villa Farnese at Carparola (photo: author).

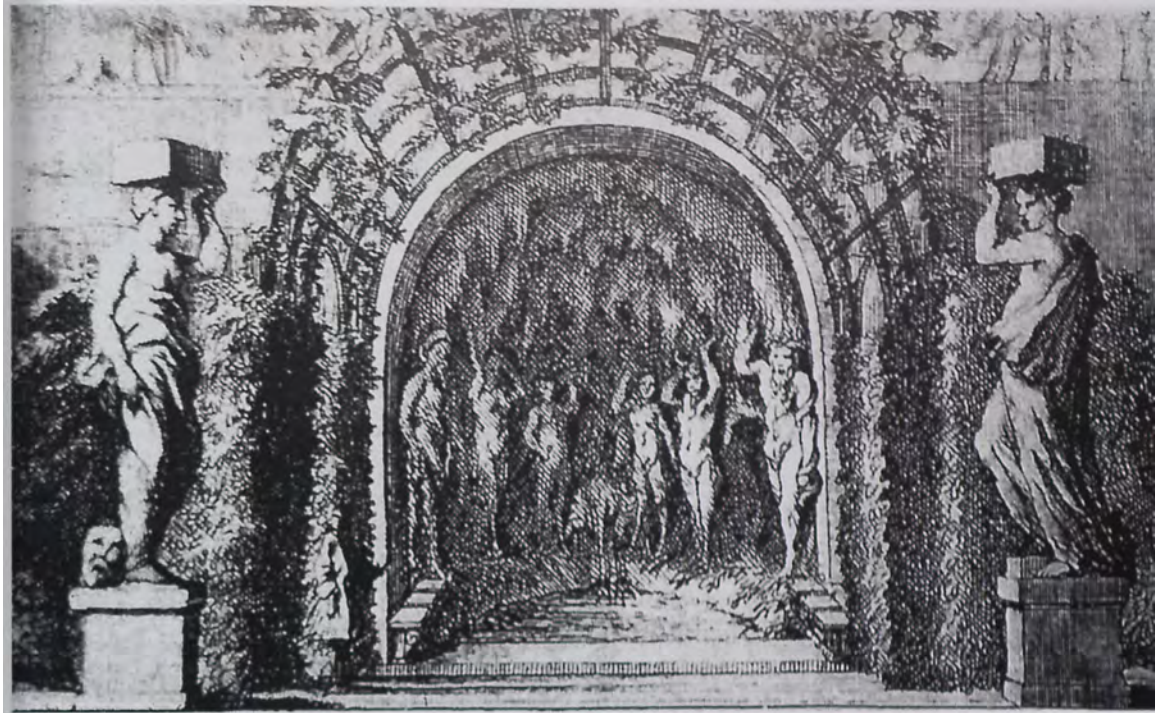


Fig. 6.45 Villa Farnese at Caprarola, Pergola in front of the Fountain of the Deluge, print by S. Zucchi (Liserre 2008, 41, fig. 70).



Fig. 6.46 The main street of Caprarola, looking back from the Palazzo (photo: author).



Fig. 6.47 Villa Farnese at Caprarola, circular portico, ground level (photo: author).



Fig. 6.48 Villa Farnese at Caprarola, Sala del Mappamondo (photo: author).



Fig. 6.49 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 1W (photo: author).



Fig. 6.50 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 1N (photo: author).



Fig. 6.51 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 2W (photo: author).



Fig. 6.52 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 2N (photo: author).



Fig. 6.53 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 3W (photo: author).



Fig. 6.54 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 3N (photo: author).



Fig. 6.55 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 4W (photo: author).



Fig. 6.56 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 4N (photo: author).



Fig. 6.57 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 5W (photo: author).



Fig. 6.58 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 5N (photo: author).



Fig. 6.59 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 6W (photo: author).



Fig. 6.60 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 6N (photo: author).



Fig. 6.61 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 7W (photo: author).



Fig. 6.62 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 7N (photo: author).



Fig. 6.63 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 8W (photo: author).



Fig. 6.64 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 8N (photo: author).



Fig. 6.65 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 9W (photo: author).



Fig. 6.66 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 9N (photo: author).



Fig. 6.67 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 10W (photo: author).



Fig. 6.68 Villa Farnese at Caprarola, circular portico, illusionistic pergola, section 10N (photo: author).

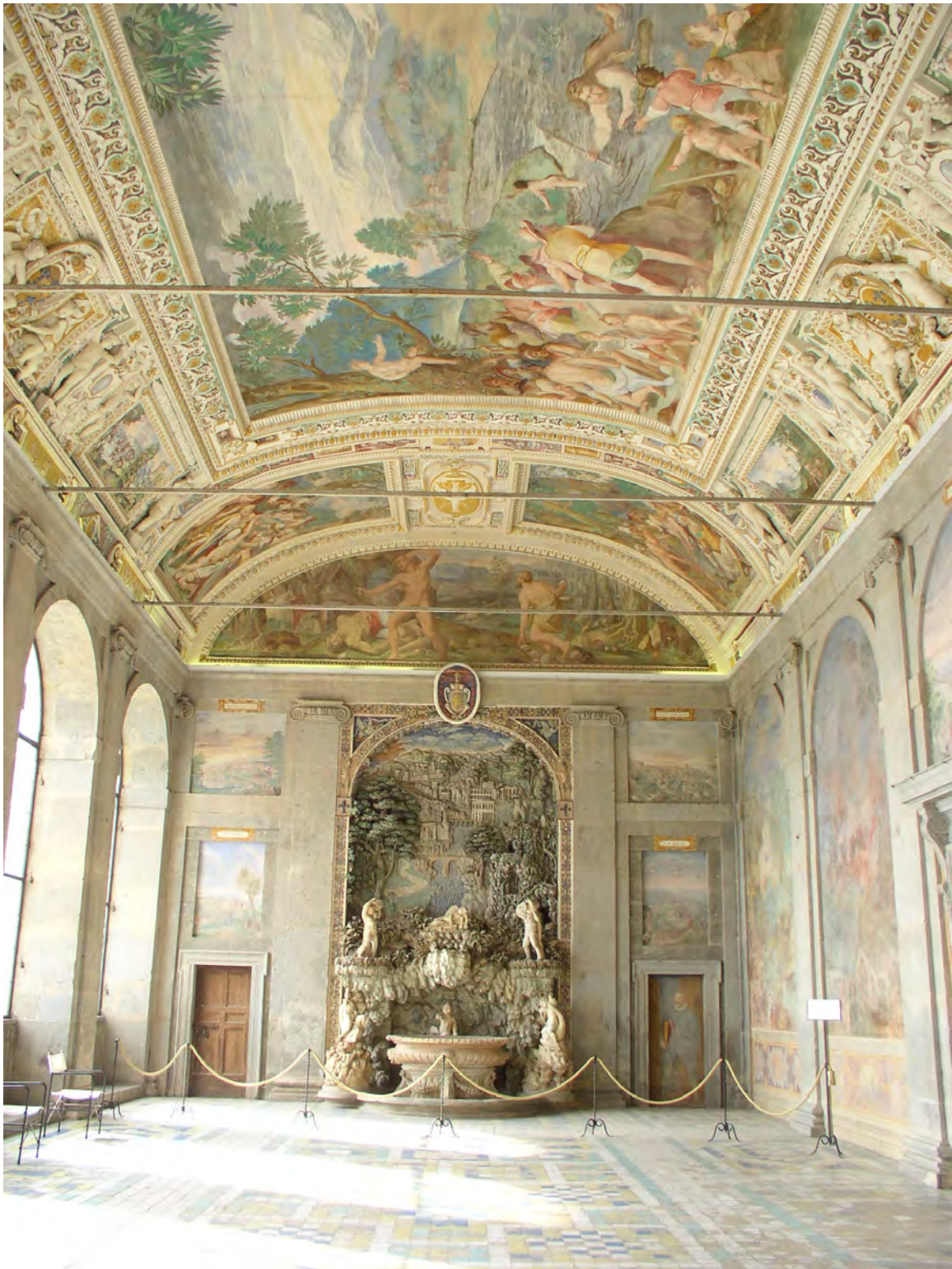


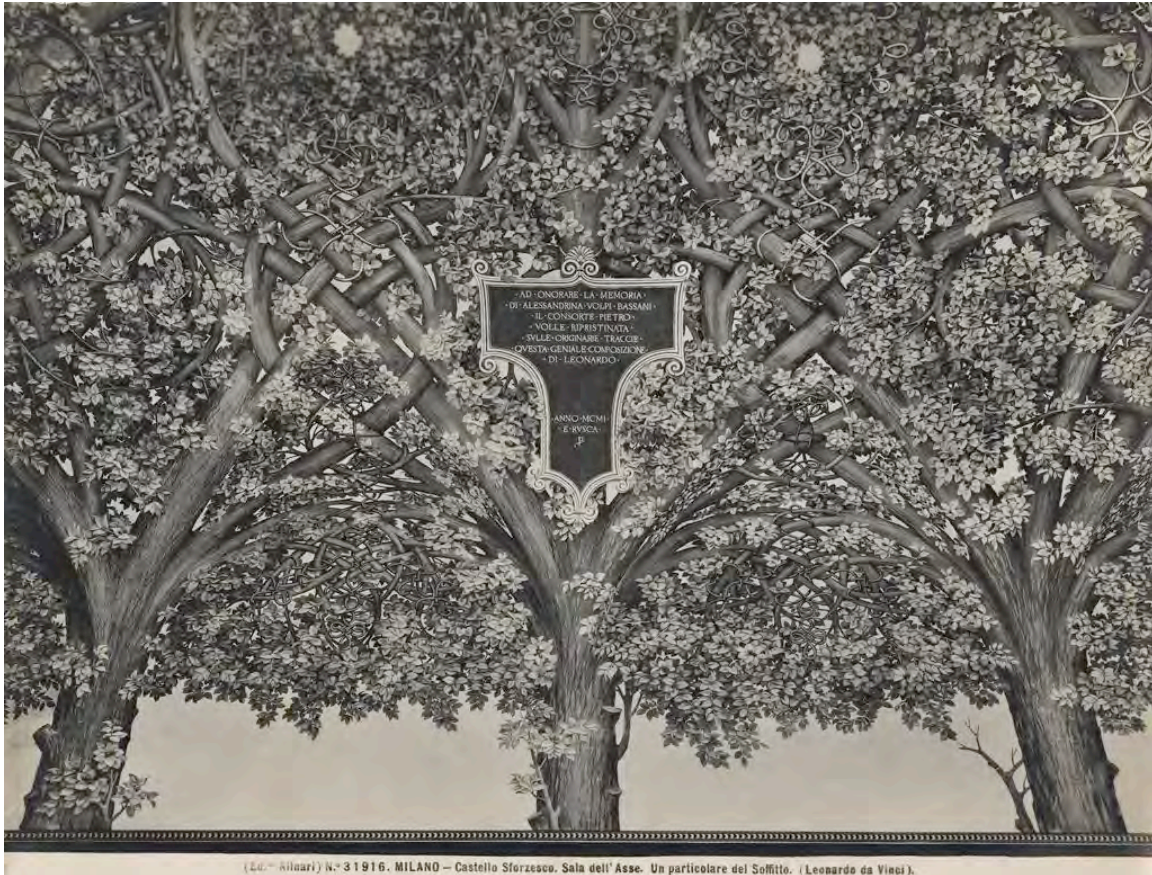
Fig. 6.69 Villa Farnese at Caprarola, loggia (Room of Hercules) (photo: author).



Fig. 6.70 Villa Farnese at Caprarola, corridor of the tower (photo: author).



Fig. 6.71 Villa Farnese at Caprarola, corridor of the tower, detail, trees and ropes forming knotwork patterns, with the Farnese coat of arms at the center (photo: author).



(L. - Allinari) n.° 31916. MILANO - Castello Sforzesco. Sala dell' Asse. Un particolare del soffitto. (Leonardo da Vinci).

Fig. 6.72 Castello Sforzesco, Milan, Sala delle Asse by Leonardo Da Vinci (1497) (Fondazione Federico Zeri, Università di Bologna, Photo Archive, Allinari Fratelli, Artstor).



Fig. 6.73 Villa Farnese at Caprarola, Fountain of Venus, illusionistic pergola on the vault (photo: author).

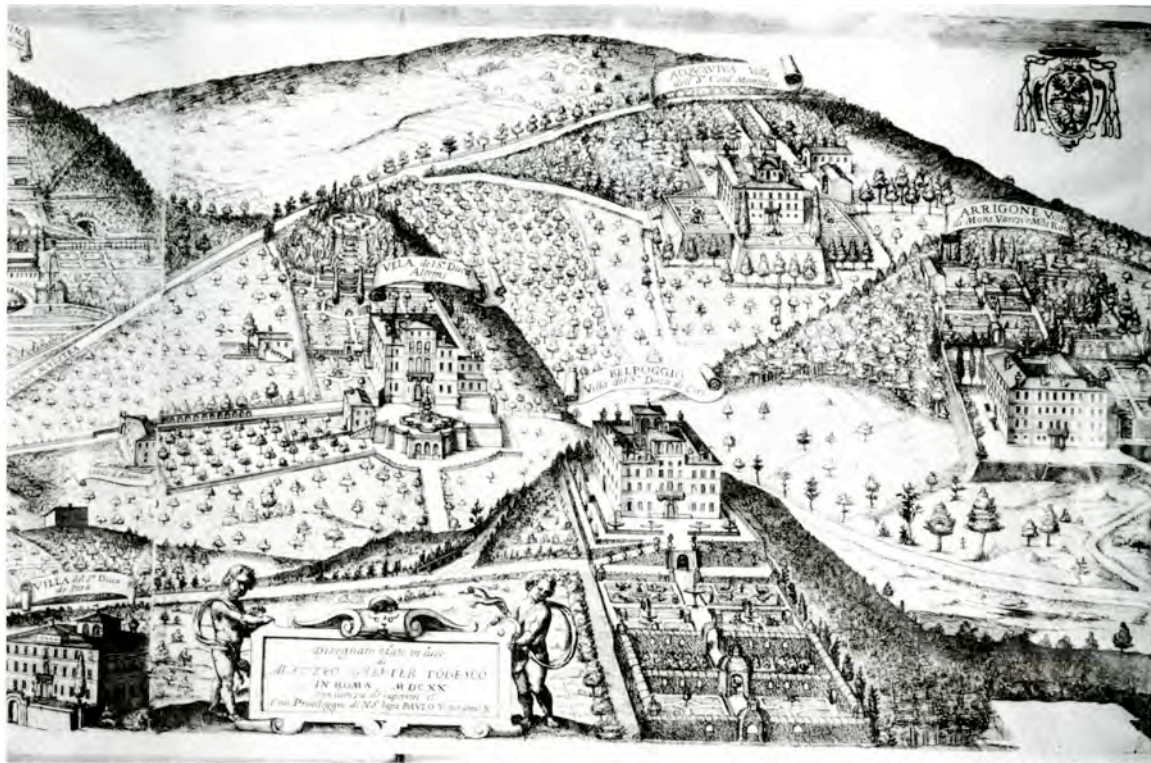


Fig. 7.1 Matteo Greuter, View of Frascati (1620), detail with the Villa Belpoggio (Coffin 1991, 180, fig. 149).



Fig. 7.2 Palazzo Giustiniani-Odescalchi, Bassano Romano, loggia, one of the arch soffits with pergola (photo: Michael O'Neill).



Fig. 7.3 Palazzo Altompeo, loggia with illusionistic pergola (photo: author).



Fig. 7.4 Palazzo Altemps loggia, vault decoration, second bay from the entrance, octagonal frame enclosing a square with circular projections (photo: author).



Fig. 7.5 Palazzo Altemps, loggia, a pair of hip herms and ram's heads framing a bird (photo: author).



Fig. 7.6 Palazzo Alttempo, loggia, terracotta vase with lilies, putti and the Orsini bear (photo: author).



Fig. 7.7 Palazzo Altemps, loggia, white vase with roses, a turkey, and putti playing with an ostrich (photo: author).



Fig. 7.8 Palazzo Altemps, loggia, terracotta vases with an arrangement of carnations, myrtle and white flowers of trumpet-like form (photo: author).



Fig. 7.9 Palazzo Altemps, loggia, first lunette on the rear wall from the entrance with three putti and an ostrich (photo: author).



Fig. 7.10 Palazzo Altemps, loggia, right lunette above the entrance with three putti and the Orsini bear (photo: author).



Fig. 7.11 Palazzo Altemps, loggia, left lunette above the entrance with three putti and the Altemps ram (photo: author).



Fig. 7.12 Palazzo Altemps, loggia, painted carved wood support of the pergola (photo: author).



Fig. 7.13 Casa Zuccari, Rome, vestibule, vault decoration. Counterclockwise from top left we see, the Nemean lion, the Erymanthian boar, the horses of Diomedes, the struggle with Anthaeus, and the child Hercules killing the serpents. A monkey and a turkey are depicted on either side of the scene of the horses of Diomedes (bottom center), and other small birds people the trellis. (photo: author).



Fig. 7.14 Casa Zuccari, Rome, loggia, vault decoration. Personifications of Perseverance (octagon, center), Labor (oval, upper left), of Diligence (partial view of oval, upper right); Ottaviano Zuccari, father of the painters, his wife Antonia and daughter Bartholomea (lunette, bottom left), and the painter brothers Taddeo and Federico Zuccari (lunette, bottom right). A marten is depicted beneath the octagon (bottom center). (photo: author).



Fig. 7.15 Villa Aldobrandini at Frascati, view from the north (photo: author)



Fig. 7.16 Villa Aldobradini at Frascati, view from the north terrace onto the Roman Campagna (photo: author).



Fig. 7.17 Matteo Greuter, View of Frascati (1620) (Ehrlich 2002, xx-xxi).

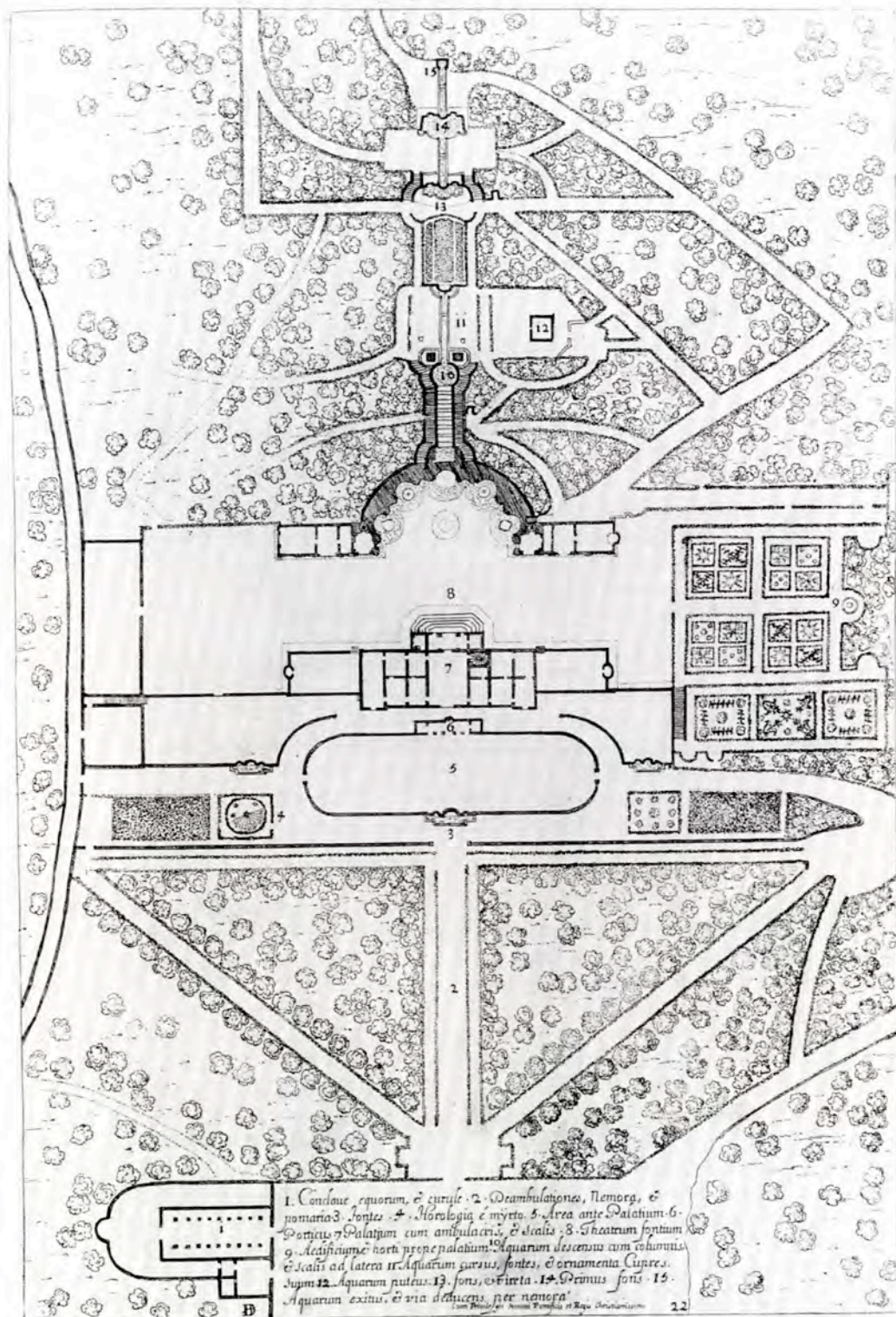


Fig. 7.18 Domenico Barriere, Villa Aldobrandini at Frascati, plan (1647) (Ehrlich 2002, 80, fig. 35).



Fig. 7.19 Villa Aldobrandini at Frascati, View of the Water Theater, with the Room of Apollo to the right (photo: author).

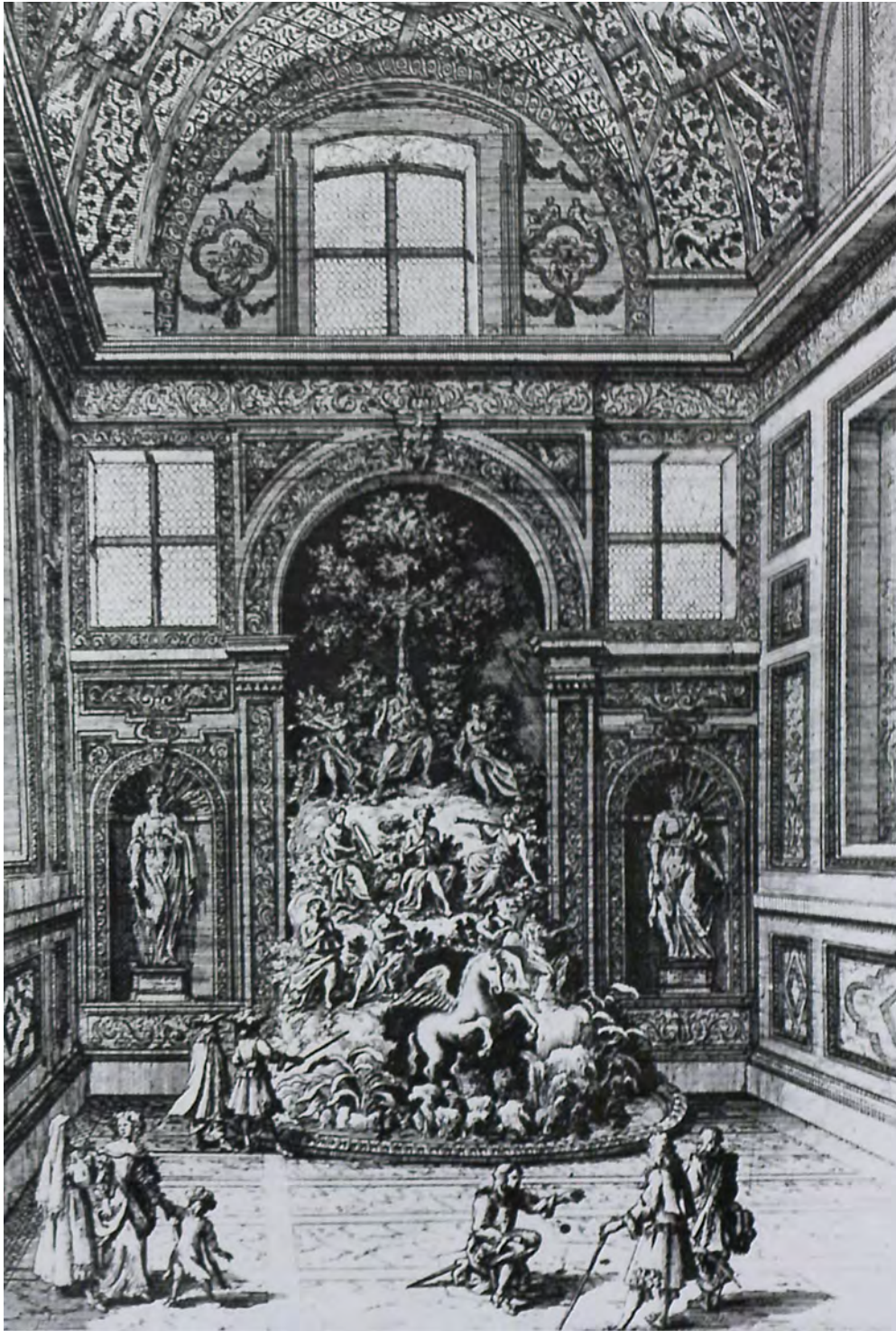


Fig. 7.20 Giovanni Battista Falda, Villa Aldobrandini at Frascati, Room of Apollo (1675), engraving (Ehrlich 2002, 94, fig. 47).

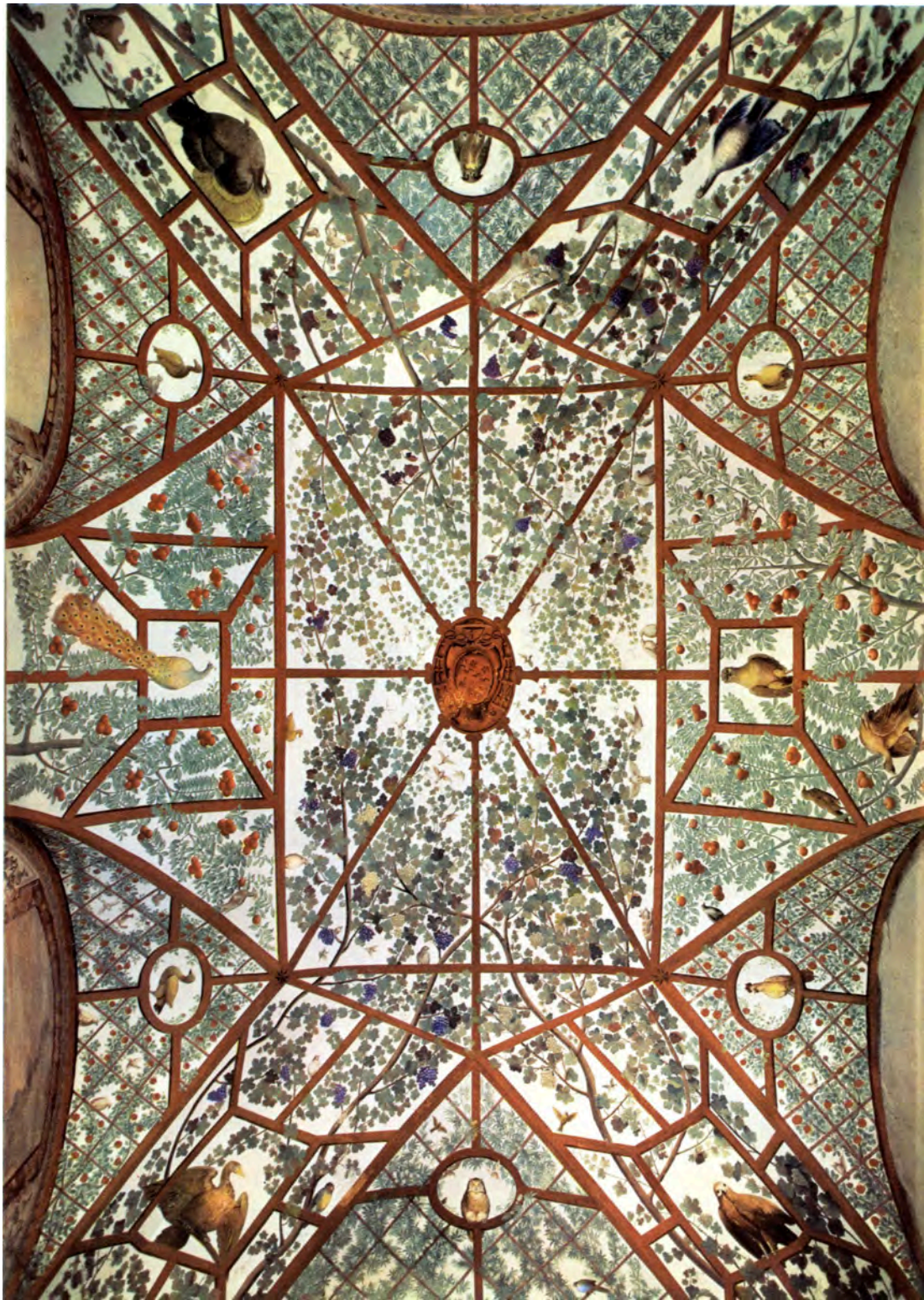


Fig. 7.21 Villa Aldobrandini at Frascati, Room of Apollo, vault decoration (from D'Onofrio 1963).



Fig. 7.22 Villa Grazioli (Acquaviva-Montalto), piano nobile, Sala dei putti (from ADSI and FAI 1993, 42).



Fig. 7.23 Palazzo Pallavicini Rospigliosi, Loggia della Pergola, general view (Hendriks 2003, 86, fig. 52).



Fig. 7.24 Palazzo Pallavicini Rospigliosi, Loggia della Pergola, vault decoration, first bay (Hendriks 2003, 94, fig. 61).



Fig. 7.25 Palazzo Pallavicini Rospigliosi, Loggia della Pergola, vault decoration, third bay (from Negro 2003, 95, fig. 62).

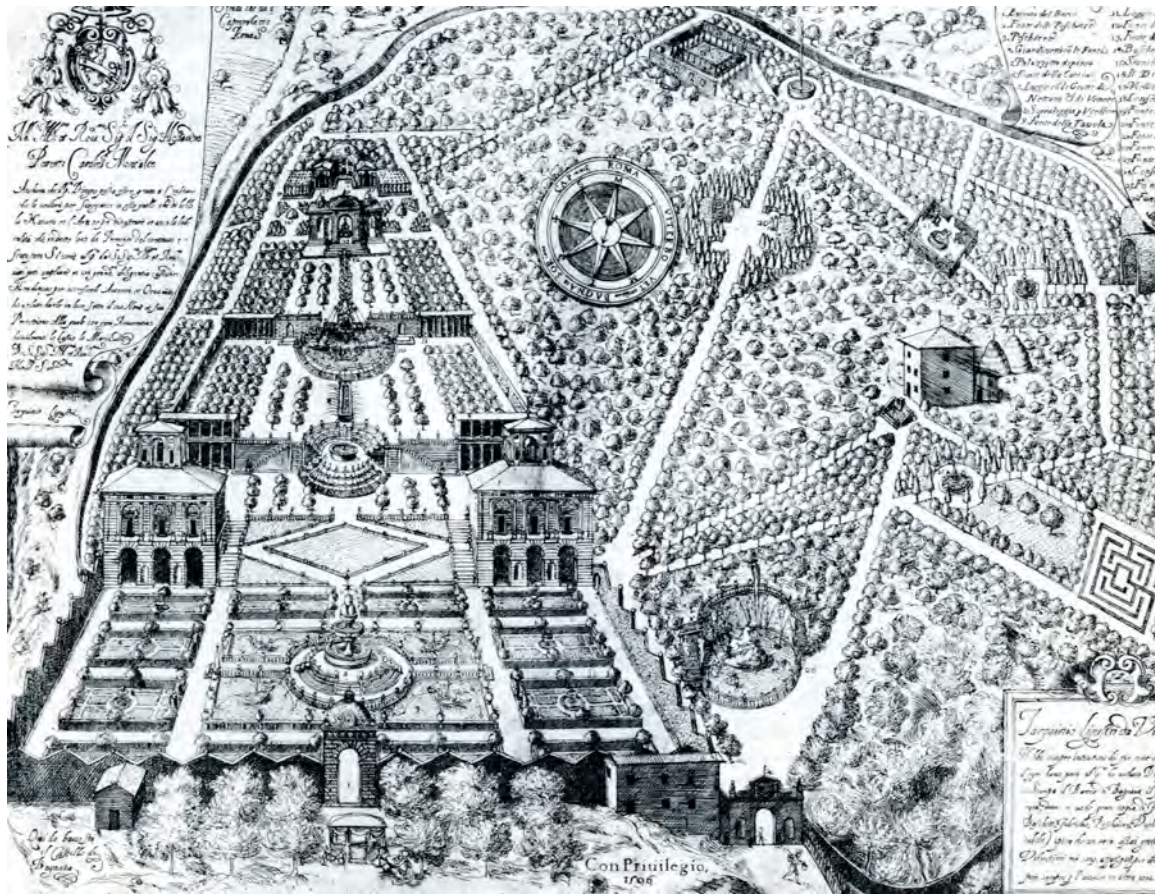


Fig. 7.26 Tarquinio Ligustri, View of the Villa Lante at Bagnaia (1596) (Lazzaro 1990, 249, fig. 229).



Fig. 7.27 Villa Lante at Bagnaia, Palazzina Gambara (right) and Palazzina Montalto (left) (photo: author).



Fig. 7.28 Villa Lante at Bagnaia, Palazzina Gambarà, fresco with the view of the Villa Lante (photo: author).



Fig. 7.29 Villa Lante at Bagnaia, Palazzina Montalto, interior of the loggia (S. Frommel 2005, 298).

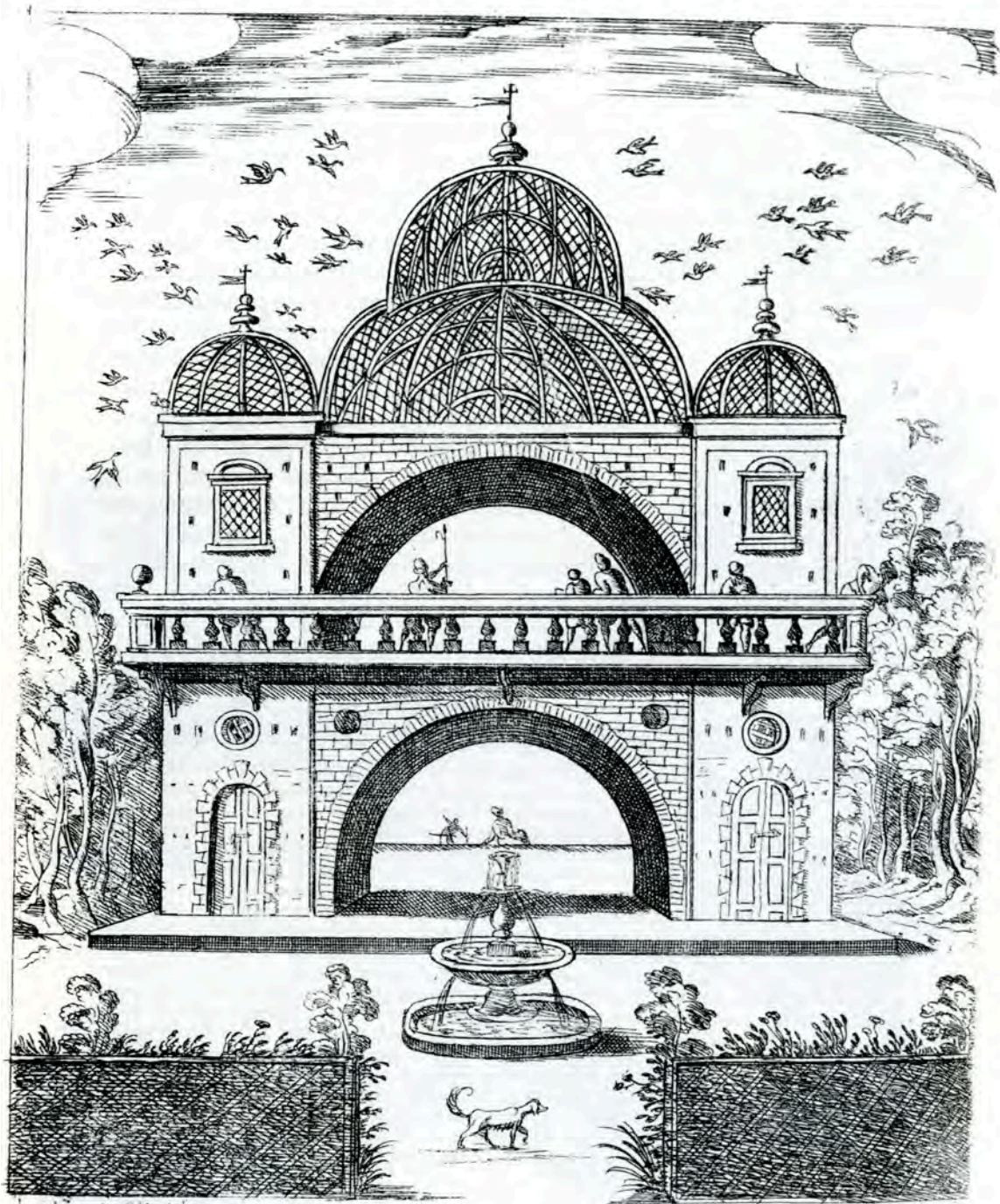


Fig. 7.30 Giovanni Pietro Olina, *Uccelliera* (1622), an aviary (from Olina reprint 2000).



Fig. 7.31 Palazzo Lancellotti, Sala della pergola, vault decoration (Cavazzini 1998, 76, fig. 88).



Fig. 7.32 Villa Borghese, Rome, Aviary Pavilion (photo: author).

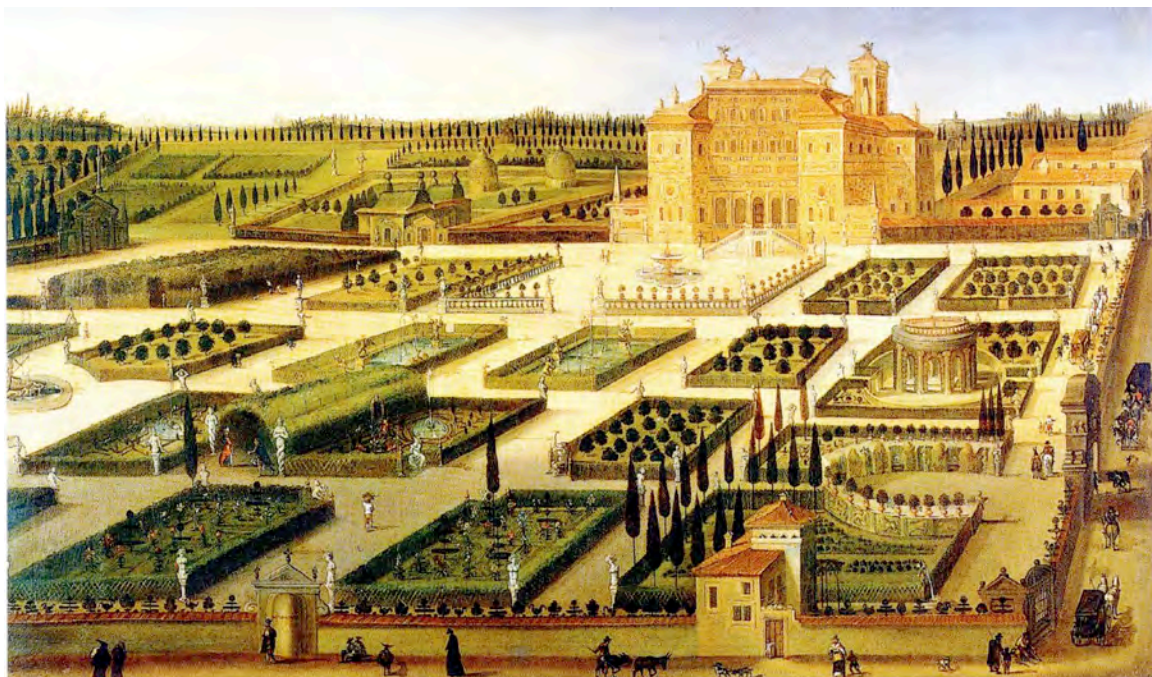


Fig. 7.33 Joseph Heinz, View of the Villa Borghese (1625) (Campitelli 2009, 122, fig. 99).



Fig. 7.34 Villa Borghese, Aviary Pavilion, fresco with birds by Annibale Carracci (Campitelli 2008, 50, fig. 39).

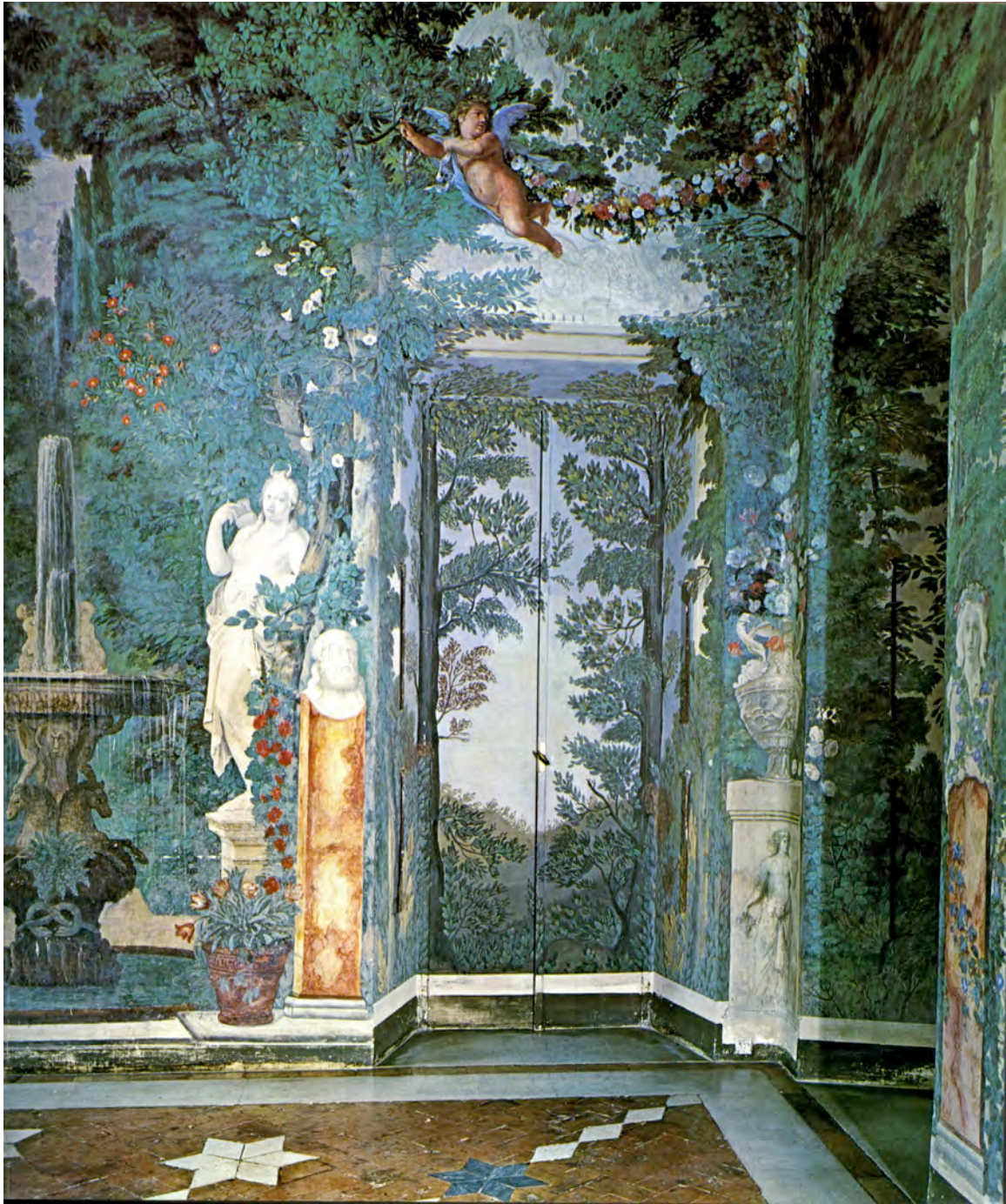


Fig. 7.35 Villa Falconieri, Frascati, Stanza della Primavera, fresco by Giovanni Francesco Grimaldi (Tantillo Mignosi 1980, frontcover).



Fig. 8.1 Otto Brunfels, *Herbarum Vivae Icones* (1530), titlepage (Pavord 2005, 167, fig. 60).



Fig. 8.2 Otto Brunfels, *Herbarum vivae eicones* (1530), wild daffodil and spring snowflake (Pavord 2005, 169, fig.61).



Fig. 8.3 Otto Brunfels, *Herbarum vivae eicones* (1530), violets (Pavord 2005, 170, fig.62).



Fig. 8.4 Leonhart Fuchs, *De historia stirpium* (1542), chap.239, cherry tree (Pavord 2005, 178, fig. 66).



Fig. 8.5 Leonhart Fuchs, *De historia stirpium* (1542), chap.254, rose (Pavord 2005, 181, fig. 68).



Fig. 8.6 Leonhart Fuchs, *De historia stirpium* (1542), portrait of Fuchs (Pavord 2005, 174, fig.64).



Fig. 8.7 Leonhart Fuchs, *De Historia Stirpium* (1542), portraits of the three artists responsible for the illustrations (from top left): Albrecht Meyer, Heinrich Füllmaurer, and Rodolph Speckle (Pavord 2005, 176, fig. 65).



Fig. 8.8 Pedanios Dioscorides, *De Materia Medica*, Codex Vindobonensis (Österreichische Nationalbibliothek Med. Gr. 1), asphodel (*Asphodelus aestivus*) (Pavord 2005, 86, fig. 21).



Fig. 8.9 Pedanios Dioscorides, *De Materia Medica*, Codex Vindobonensis (Österreichische Nationalbibliothek Med. Gr. 1), bramble (*Rubus fruticosus*) (Pavord 2005, 87, fig. 22).



Fig. 8.10 Pietro Andrea Matthioli, *Commentaries of Dioscorides' De Materia Medica*, 1598, titlepage (Kaden 1982, pl. 9).



Fig. 8.11 Wolfgang Meyerpeck and Giorgio Liberale, sea lavender (*Limonium latifolium*) carved into a block of pear wood, for Matthioli's *Commentarii in libros sex Pedacii Anazarbei* (1565) (Pavord 2005, 248, fig. 98).



Fig. 8.12 Jacopo Ligozzi, Mourning iris (*Iris susiana*), one of a series of drawings of plants (1577-1578) made for Francesco de' Medici (Koreny 1988, 239, fig. 87).



Fig. 8.13 Jacopo Ligozzi, Cypress vine (*Ipomoea quamoclit*), one of a series of drawings of plants (1577-1578) made for Francesco de' Medici (Pavord 2005, 240, fig. 94).

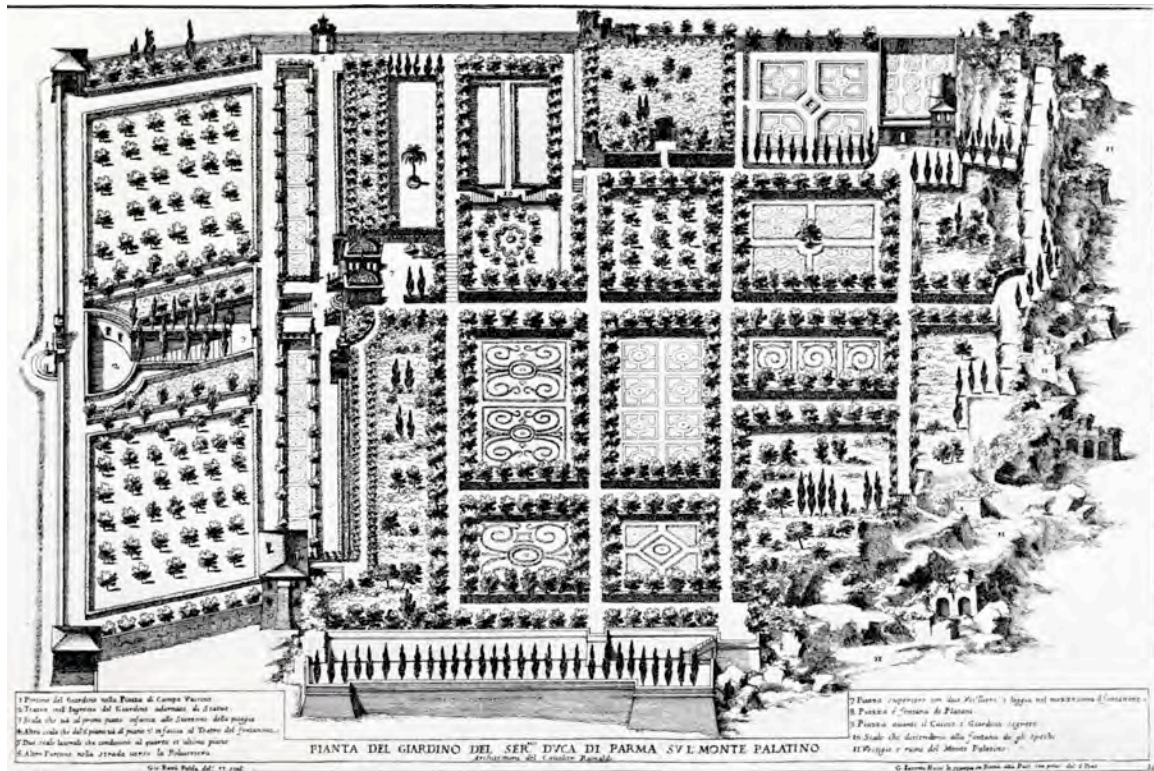


Fig. 8.14 Giovanni Battista Falda, Plan of the Horti Farnesiani (1676) (Coffin 1991, 72, fig. 56).

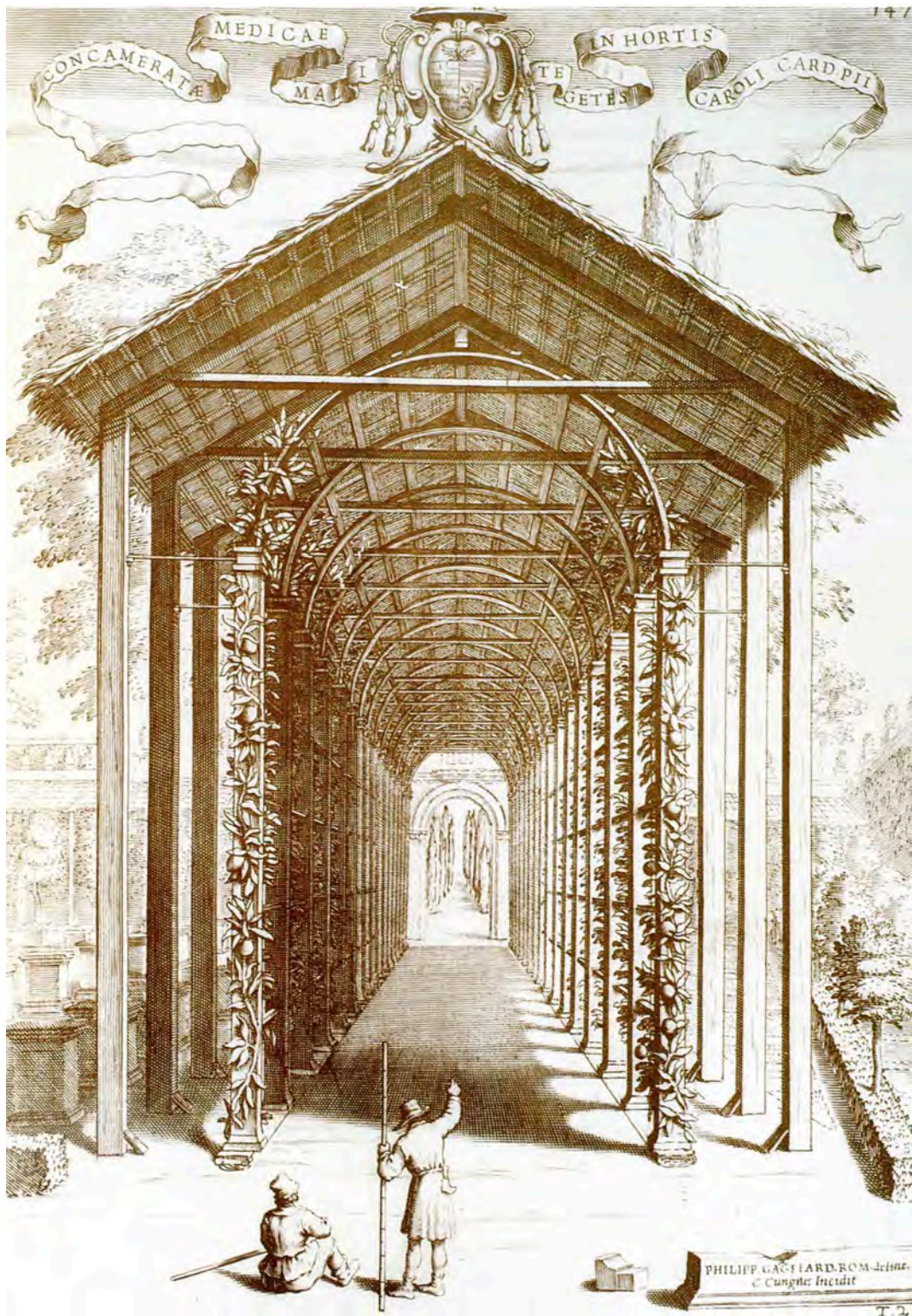


Fig. 8.15 Cardinal Pio's garden, from Ferrari, *Hesperides* (1644) (Campitelli 2009, 69, fig. 47).



Fig. 8.16 Museum of Francesco Calzolari in Verona, from Benedetto Ceruti and Andrea Chiocco, *Musaerum Francisci Calceolari Iunioris Veronensis* (Verona, 1622) (Findlen 1994, 118, fig. 8)



Fig. 8.17 Museum of Ferrante Imperato in Naples, from Ferrante Imperato, *Dell' historia naturale* (Venice, 1672) (Findlen 1994, 39, fig. 2).

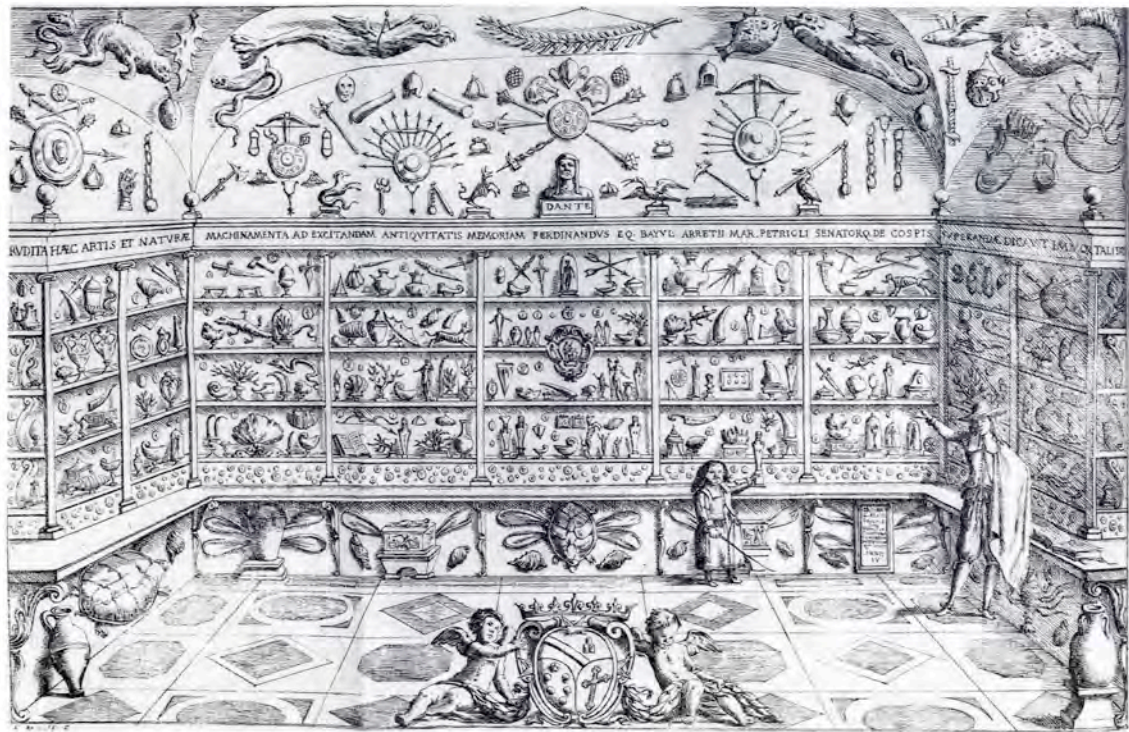


Fig. 8.18 Museum of Ferdinando Cospi in Bologna, from Lorenzo Legati, *Museo Cospiano annesso a quello famoso Ulisse Aldrovandi e donato alla sua patria dall'illustrissimo Signor Ferdinando Cospi* (Bologna, 1677) (Findlen 1994, 120, fig. 9).



Fig. 8.19 The Roman College Museum of Athanasius Kircher, from Giorgio de Sepi, *Romani Collegii Societatis Iesu Musaeum Caleberrimum* (Amsterdam, 1678) (Findlen 1994, 87, fig. 5).



Fig. 8.20 Giovanni Battista Ferrari, *Flora sive florum cultura* (1633), titlepage (from Ferrari *Flora* reprint 2000).



Fig. 8.21 Giovanni Battista Ferrari, *Flora sive florum cultura* (1633), The Metamorphosis of Limace and Bruno (from Ferrari *Flora* reprint 2000).



Fig. 8.22 Giovanni Battista Ferrari, *Flora sive florum cultura* (1633), The Metamorphosis of Melissa (from Ferrari *Flora* reprint 2000).

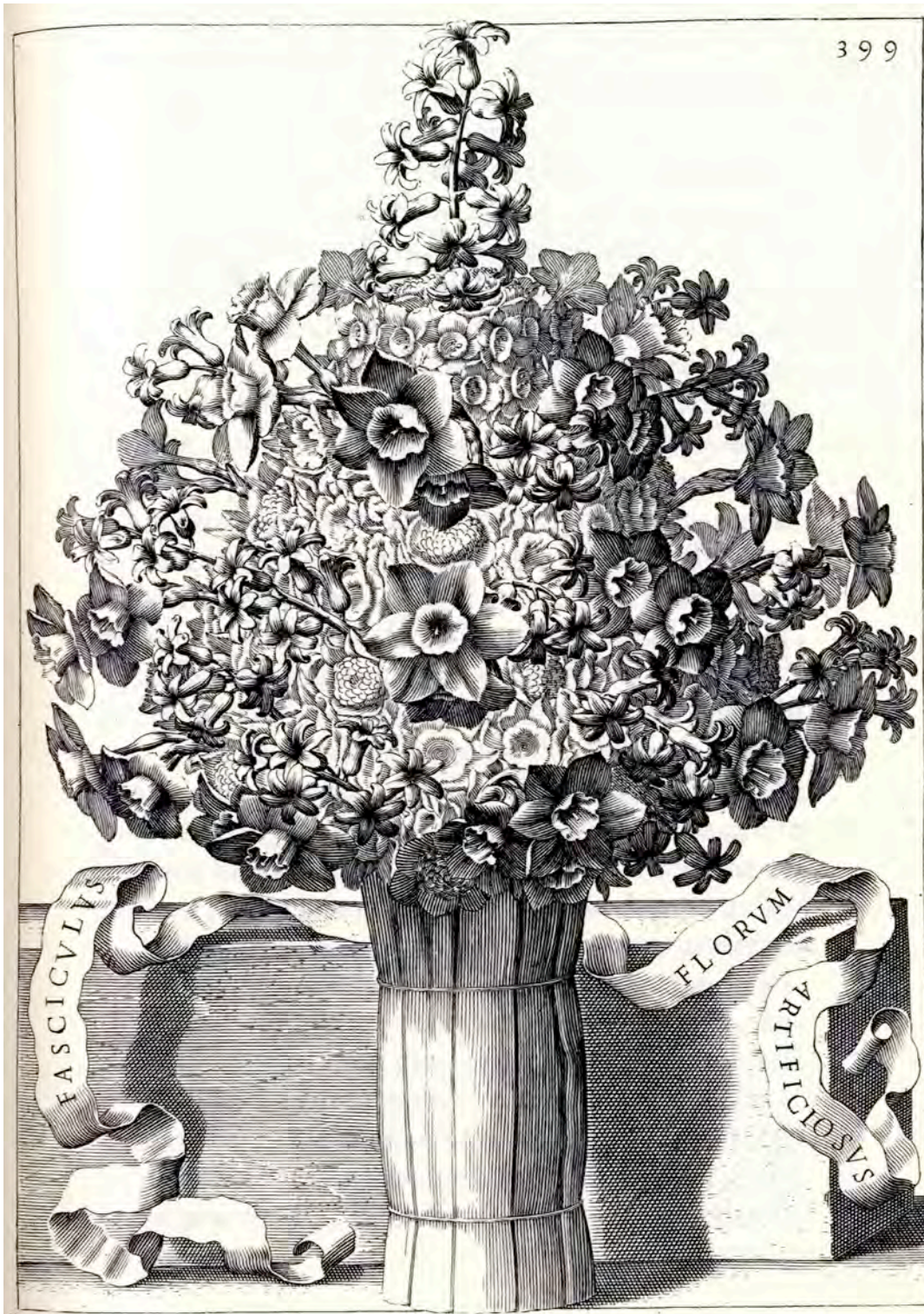


Fig. 8.23 Giovanni Battista Ferrari, *Flora sive florum cultura* (1633), illustration of an arrangement of cut flowers (from Ferrari *Flora* reprint 2000).



Fig. 8.24 Giovanni Battista Ferrari, *Flora sive florum cultura* (1633), illustration of an arrangement of cut flowers (from Ferrari *Flora* reprint 2000).



Fig. 8.25 Giovanni Battista Ferrari, *Flora sive florum cultura* (1633), illustration of a vessel for the display of cut flowers (from Ferrari *Flora* reprint 2000).

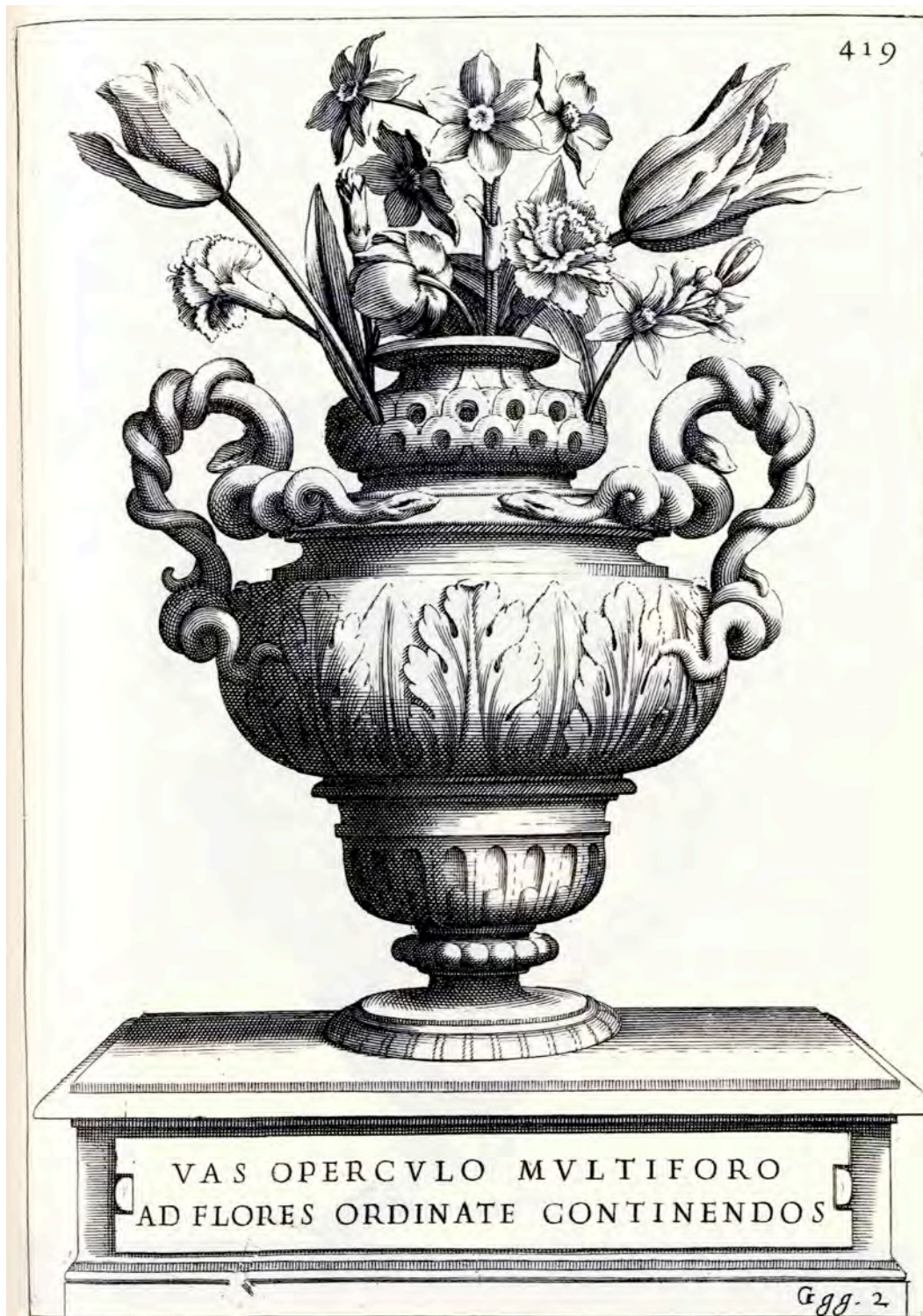


Fig. 8.26 Giovanni Battista Ferrari, *Flora sive florum cultura* (1633), illustration of a classicizing vase holding cut flowers (from Ferrari *Flora* reprint 2000).

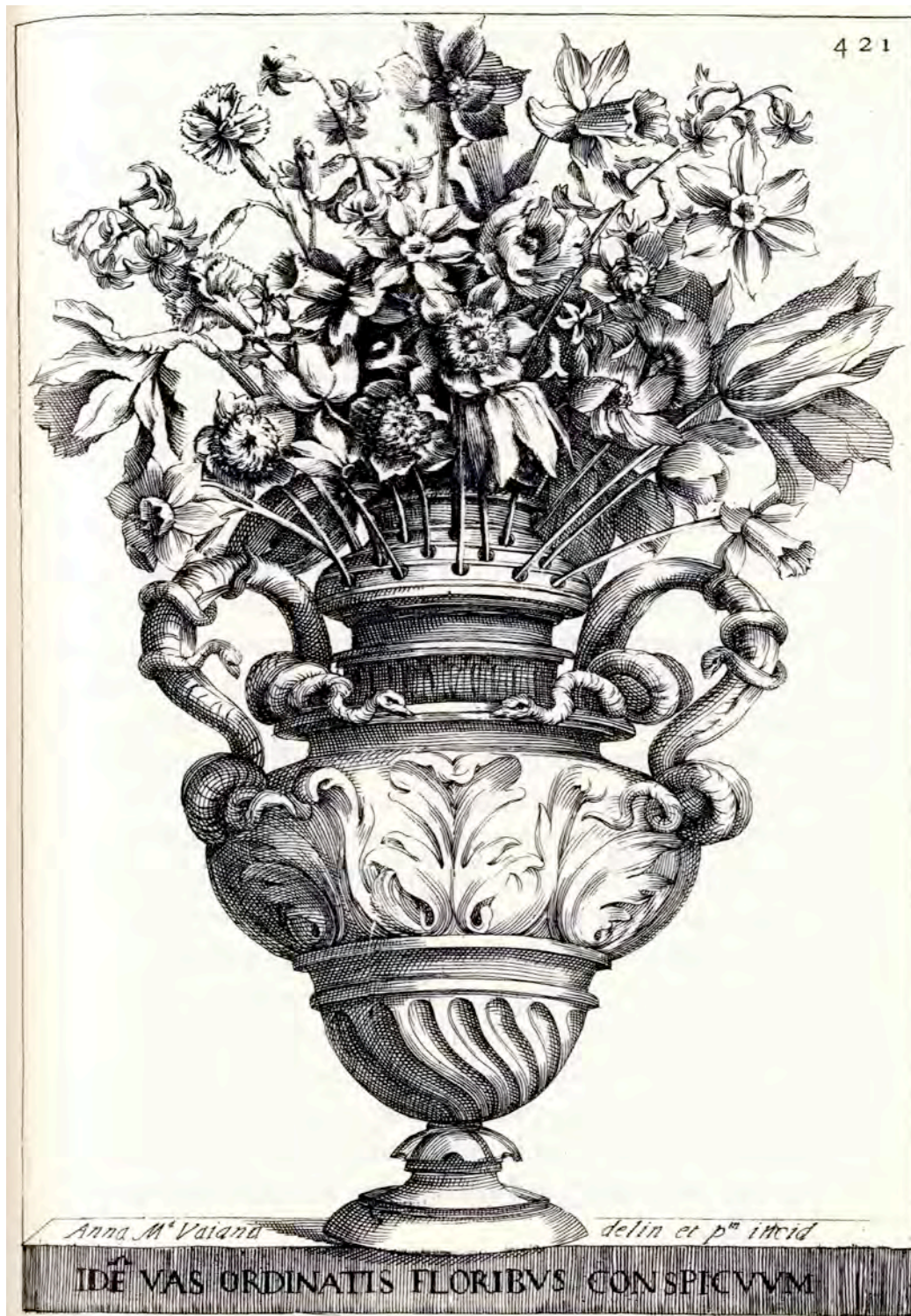


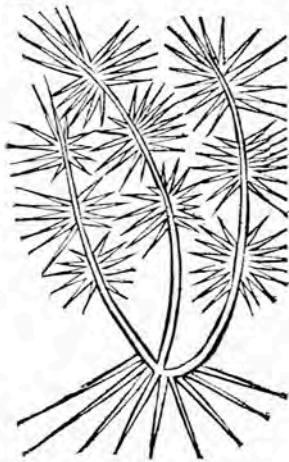
Fig. 8.27 Giovanni Battista Ferrari, *Flora sive florum cultura* (1633), illustration of a classicizing vase holding cut flowers (from Ferrari *Flora* reprint 2000).

De Verbis

nita similia ypoellino. nisi quia sunt minora eo que masticara odorem suauissimum habet.

Operationes

- A ¶ Serapio. auctoritate ysaac. habet aram. Semen eius stringit ventres qui fluit. propter caliditatem quando bibitur et eo aureus vnius cum aqua frigida. aut succo citoniorum. et ipsum confortat membra.
- B ¶ Dioscorides. Semen eius crudum et coactum calculos excludit. vnam pro vocat. menstruis imperat. distillat prodest.
- C ¶ Lactarius sapiens huic perhibet testimonium dicens quod coquinati in aqua solunt. et cum carnisibus spiritalia mundificat. somentum et aqua salsa et oleo decoctio eius valet ad dolorem ystiacum.
- D ¶ Stranguria et dysuria in vino decocti. et cathaplasma ad idem valet. diuretica sunt.



Capitulum. cccvi

Apellus. Pandecta. cap. cccc. lxxij.
 n. Napellus est herba que facta est sicut eleborus niger. cuius radix est odorata ad modum rubei. est antihomocitica her

ba venenosa. et est prima pars aconiti. ¶ Aucenna libro. ii. capitulo de napello. Napellus est herba que est venenum pernicissimum. et est in summo caliditatis et siccitatis.

Operationes

- A ¶ Aucenna. Napellus delet albaras linitum et confert lepre. unde est venenum destruens bibentem se. Maior vero ipsius portio est morsiva. et vnius. et hoc interficit et similiter minus. ¶ Et ex eo cocurricos bibuntur et non moriuntur. Et omnibus confectionibus de quibus muscus crescit.
- B ¶ Et est alius qui vocatur napellus minor. Et vult dicere napellus minor. et est quoddam animal quod assimilatur mure quod moratur in radice napelli nascens cum napello. et qui cum eo appropinquat. non crescit arbor. et est tyria ca napelli et est maior eo. et in eo sunt omnia amara que sunt in napello.
- C



Capitulum. cccvii

Arescus vel bulbos vomifer. vel cepe marini. Dyaf. ca. narcite. vel bulbos emaricus vel bulbos emicus. et haec potro sicut sed minora. bassas hanc et uerum palmarum que manco et concaue. unum et sine solis

Fig. 8A.1 Jacob Meydenbach, *Hortus Sanitatis* (1491), illustration of narcissus taken from the *Der Gart der Gesundheit* (1485) (Van Sprang 1996, 32).

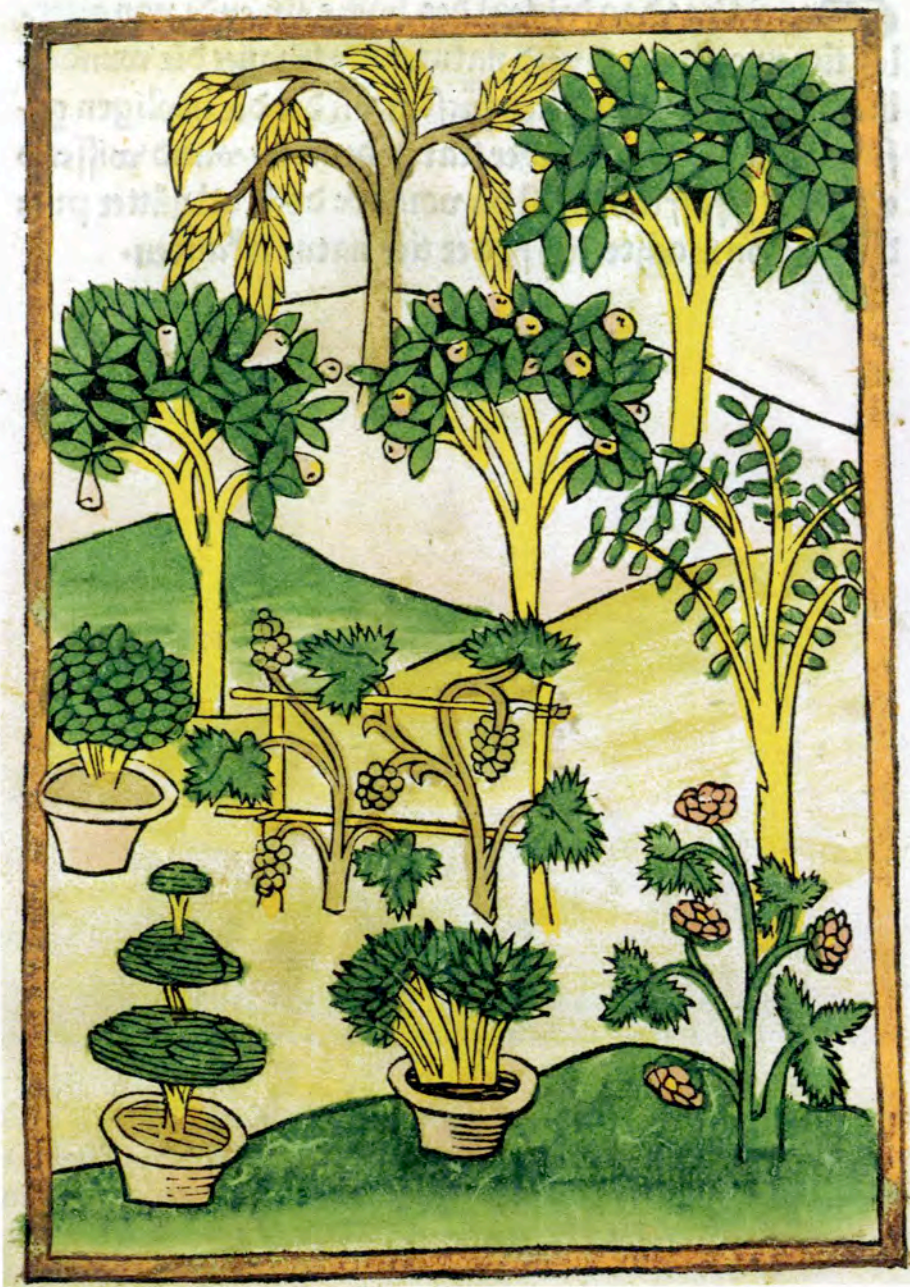


Fig. 8A.2 Conrad von Megenberg, *Buch der Natur* (1478), illustration of plants (Pavord 2005, 151, fig.52).



Fig. 8A.3 Carrara Herbal (1390-1400), two pine trees (Pavord 2005, 128, fig. 40).



Fig. 8A.5 *Liber de simplicibus* or Herbal of Benedetto Rinio (1419), Poppy (*Papaver rhoeas*) (Pavord 2005, 51, fig. 12).

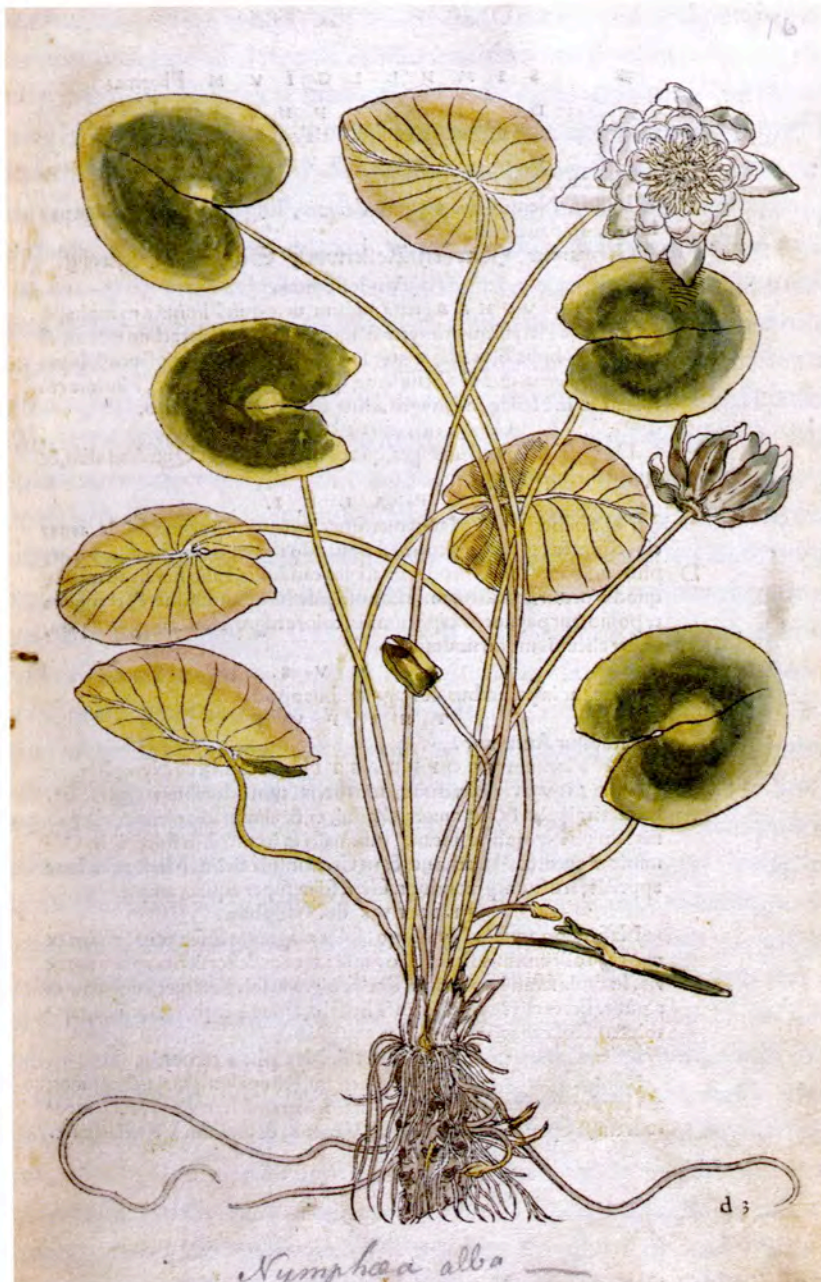


Fig. 8A.6 Hans Weiditz, drawing of a water lily for Brunfels' *Herbarum vivae eicones* (Pavord 2005, 171, fig. 63).

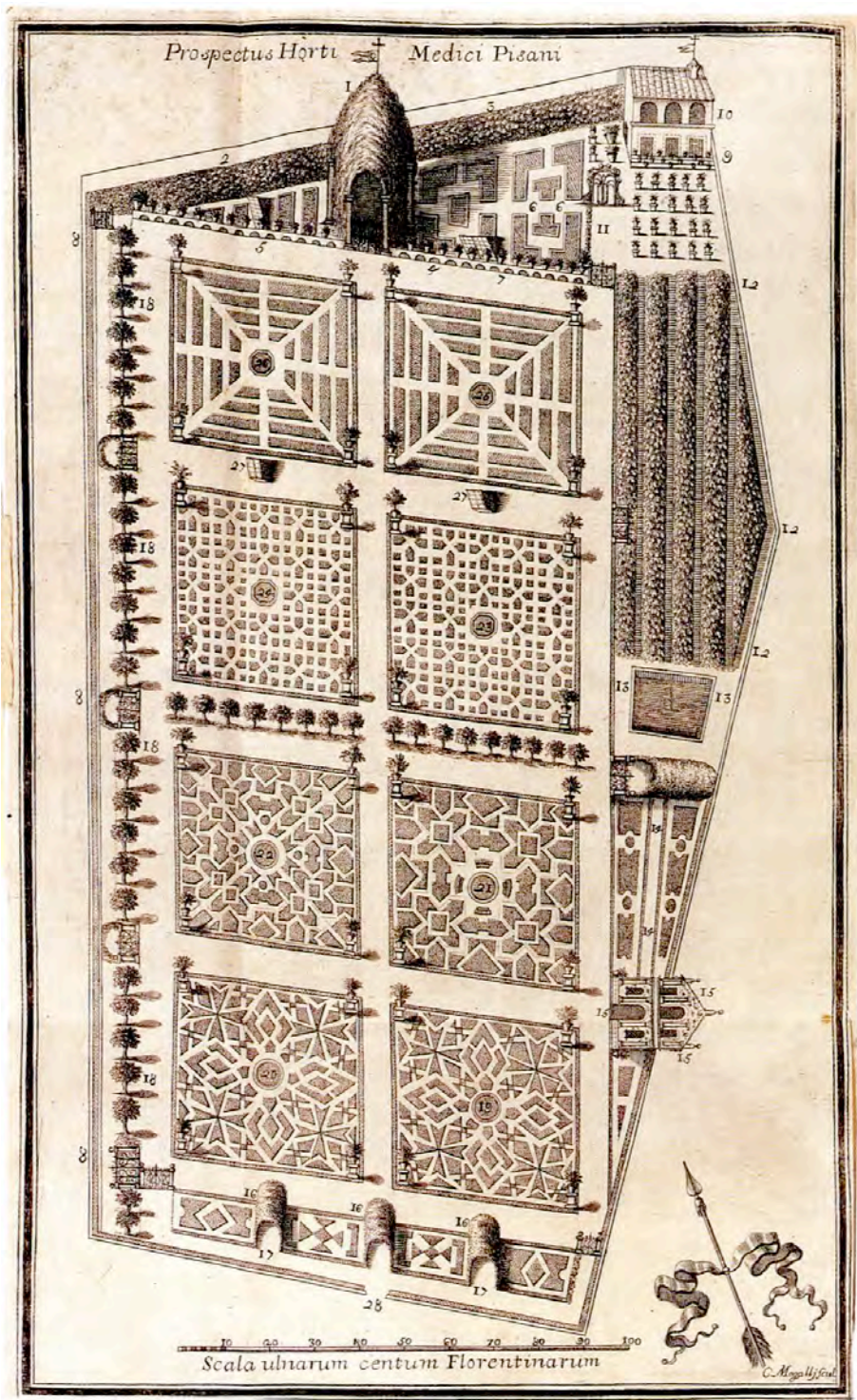
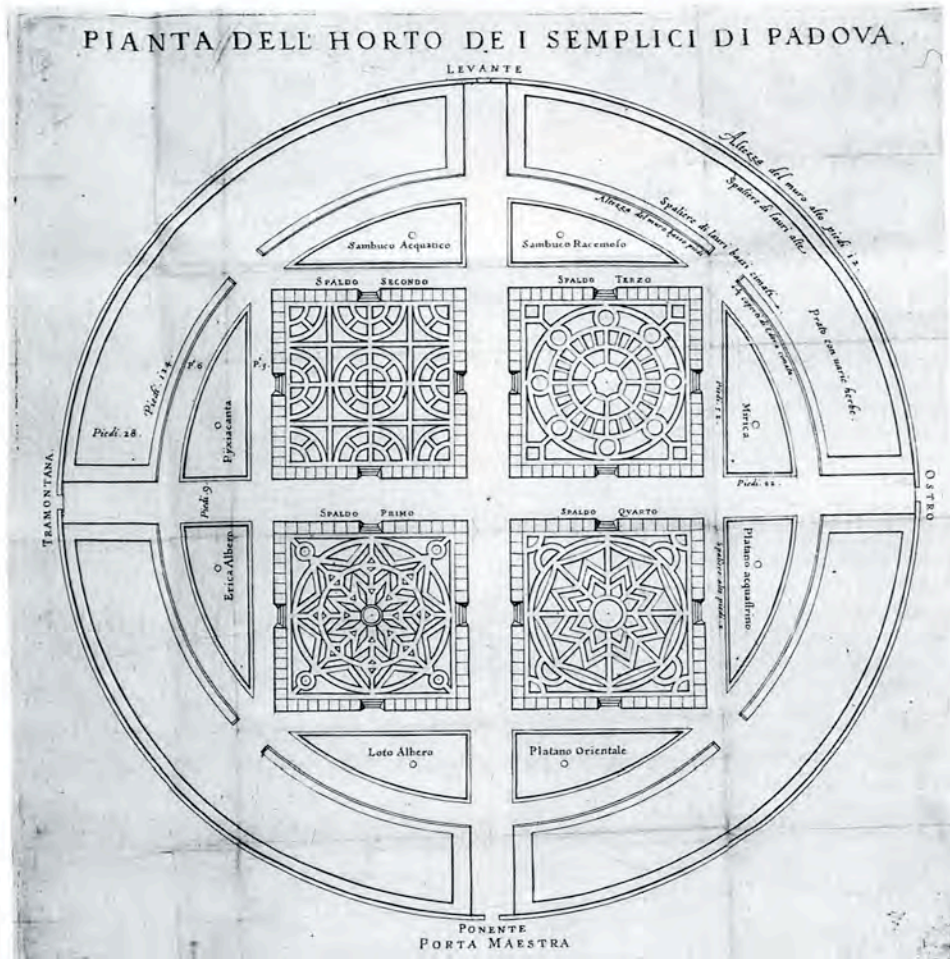


Fig. 8A.7 View of the Horti Medici Pisani (botanical garden at Pisa), from M. Tilli, *Catalogus plantarum horti Pisani* (1723) (Pavord 224, fig. 87).



A I BENIGNI LETTORI.

SI auuertiscono i fauij, & giudiciofi Lettori, che l'Indice delle Piantè del Giardino è stato formato, & composto da un Gentiluomo nobile, & ben'intendente di questa diuina facultà delle piante; il quale ha abbracciato non solo le Piantè cōtenute nel Giardino, ma ancora quelle di fuori ne' molti uasi, & seminario del Magnifico, & Eccellentissimo Cortufo il Presidente, da esser à tempi conuenienti trasferite in esso Giardino per beneficio uniuersale, con molt'altre Piantè Cretiche, & Indie ne soprauenute, che non si cõtengono nell'Indice.

Appresso s'auuertiscono, che le uoci Spaldi, Spalti, Quadri, o appartamenti sono state usate rispetto alla forma, & all'altrezza di quegli altissimi Sporti, o forma di Pomerij interni, & spacio di terreno contenuto tra il Muro alto, & il Muro basso della circonferenza, & tra una Spalliera di Lauri, & l'altra simile ad un Theatro. Et per confessar il uero ingenuamete habbiamo fatto ciò per non saper con quai piu proprie uoci, ò parole esplicare, ò cir

coscriuere artificio tale, fin tanto che qualche piu fauio, & intendete di noi di tale materia si degnerà benignamente auuertirci, come haueremo alla seconda ristapa a nominare, & cõ quali piu proprie uoci, & epitetti esplicare i detti artificiofi, & poco soliti, anzi rarissimi, & singolarissimi appartamenti.

Et di piu si dice che nel centro, ò mezo che dire uogliamo di ciascuna delle Areole, che contengono la diuersità dell'herbe, & altre Piantè, ui stanno, o Arbori nobili, ò Arbusti, ò fruttici, o sotto fruttici, come Cipressi, Anagiri, Macaleb, Platani regij, Pini, Peci, Abeti, Loti, Ofiacante, Piriacante, Agrifogli, Lauri Regij, detti Dattili di Tribifonda, Citisi, & tanti altri tali, quante sono il numero delle Areole, lequali sono cõsi computando, cioè nel primo Quadro all'entrare à mano sinistra Areole numero 141. Nel Secondo 125. Nel Terzo 121. & nel Quarto Areole 117. che sumano il tutto ne i detti Quattro Quadri principali Areole numero 504.

Fig. 8A.8 Plan of the botanical garden at Padua, from Girolamo Porro, *Horto dei Semplici di Padova* (1591) (Minelli 1995, 32).

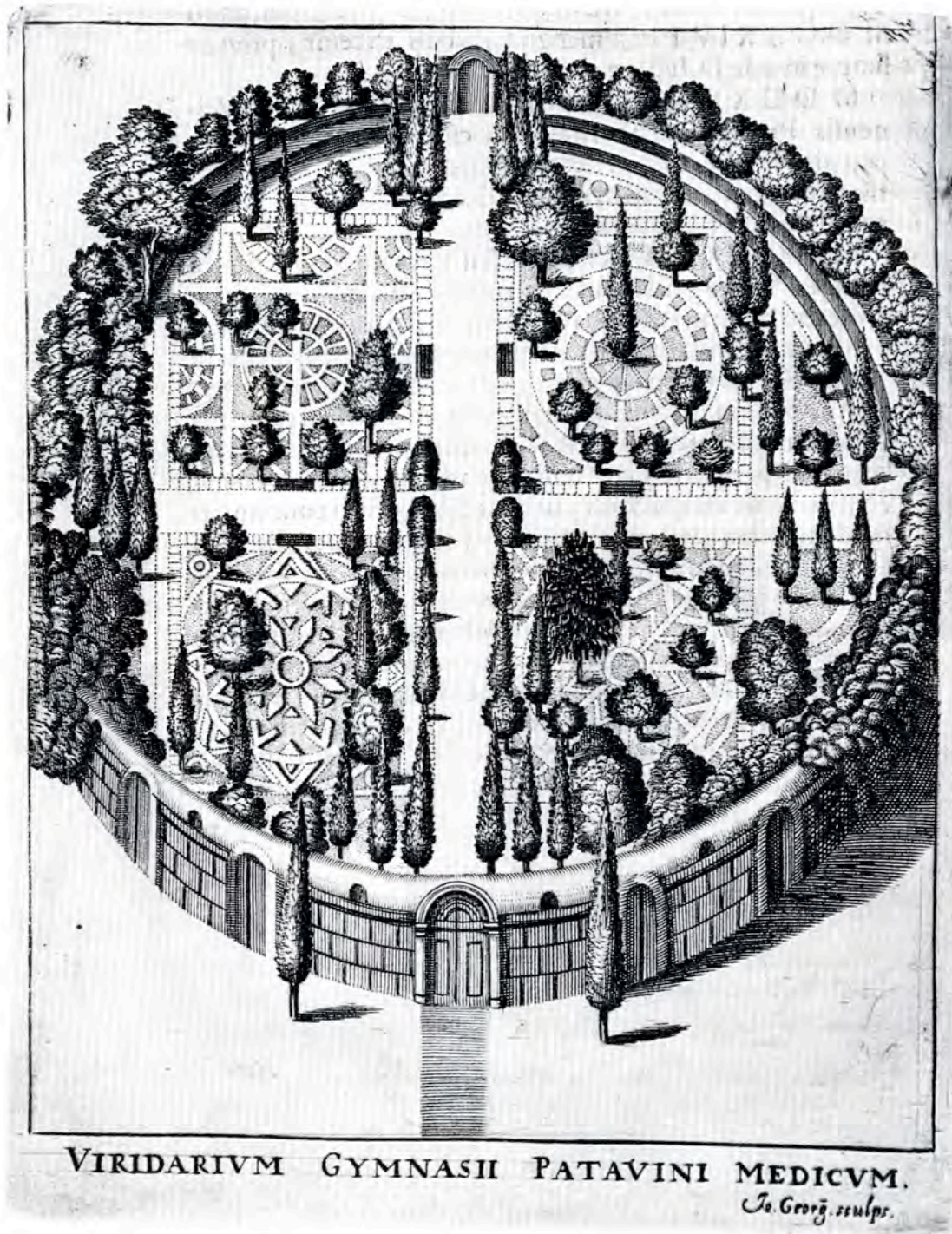
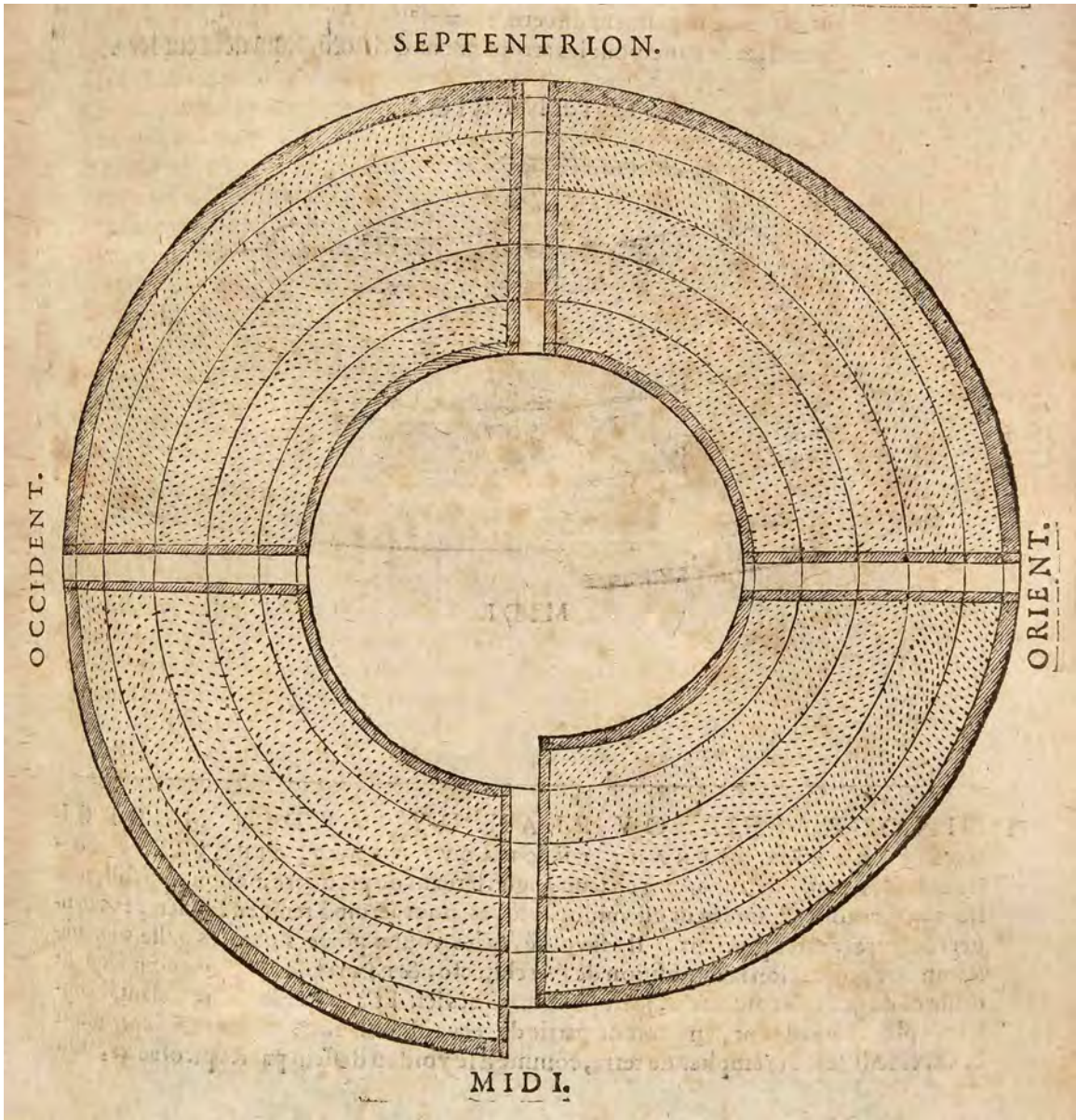


Fig. 8A.9 View of the botanical garden at Padua, from Jacopo Filippo Tomasini, *Gymnasium patavium* (1654) (Minelli 1995, 36).



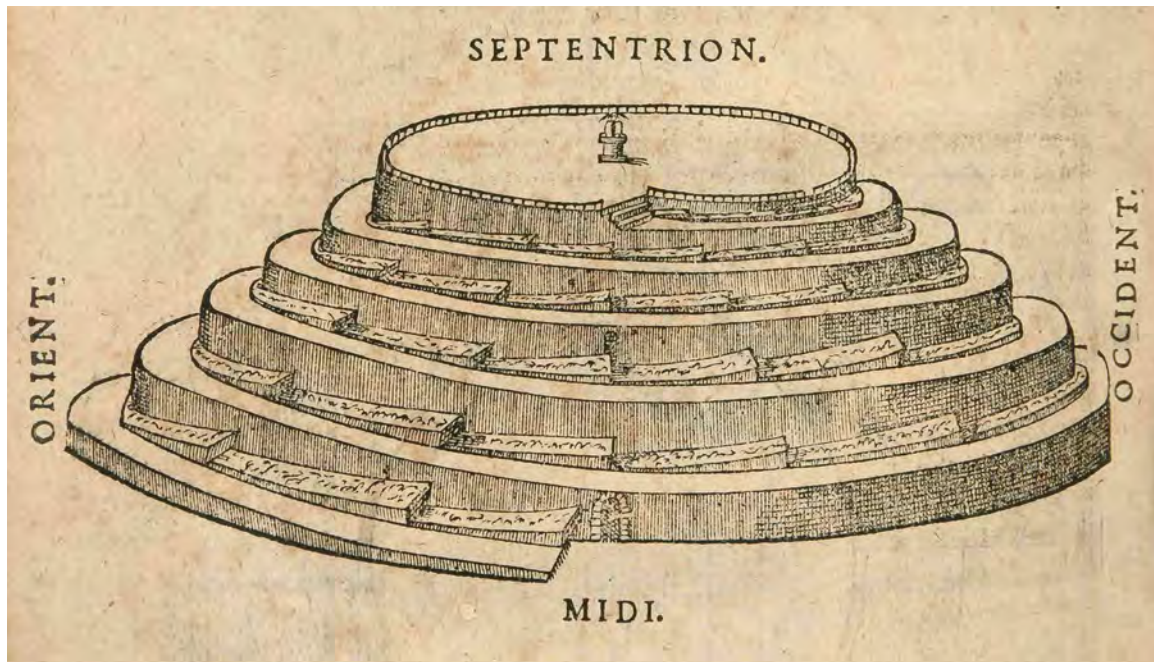
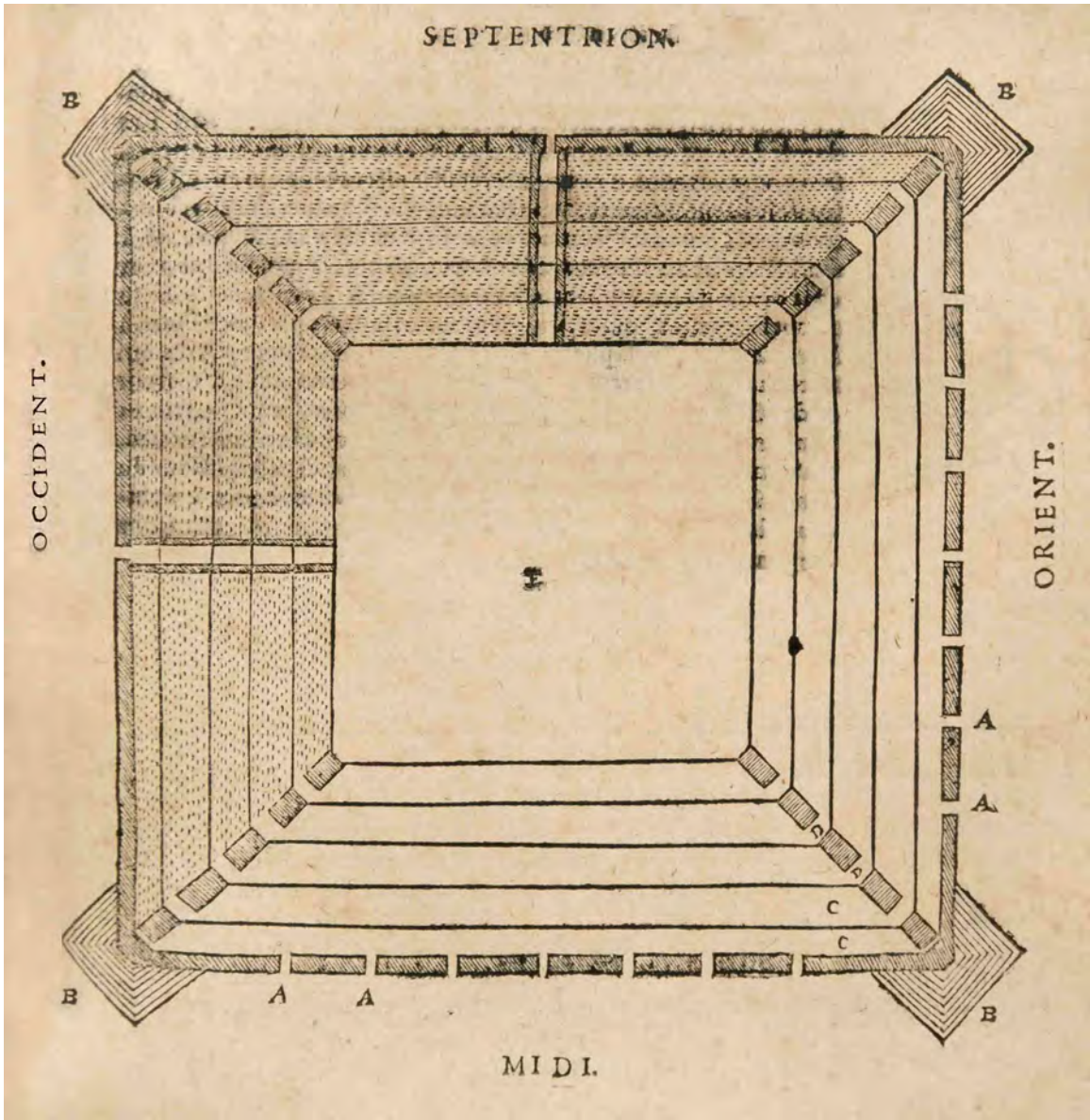


Fig. 8A.10 Circular design for a garden of medicinal plants (plan, above, and perspectival view, below), from Olivier de Serres, *Le theatre d'agriculture et menage des champs*, 1605, 613; 614 (© Dumbarton Oaks Research Library and Collection, Rare Book Collection, Washington DC.)



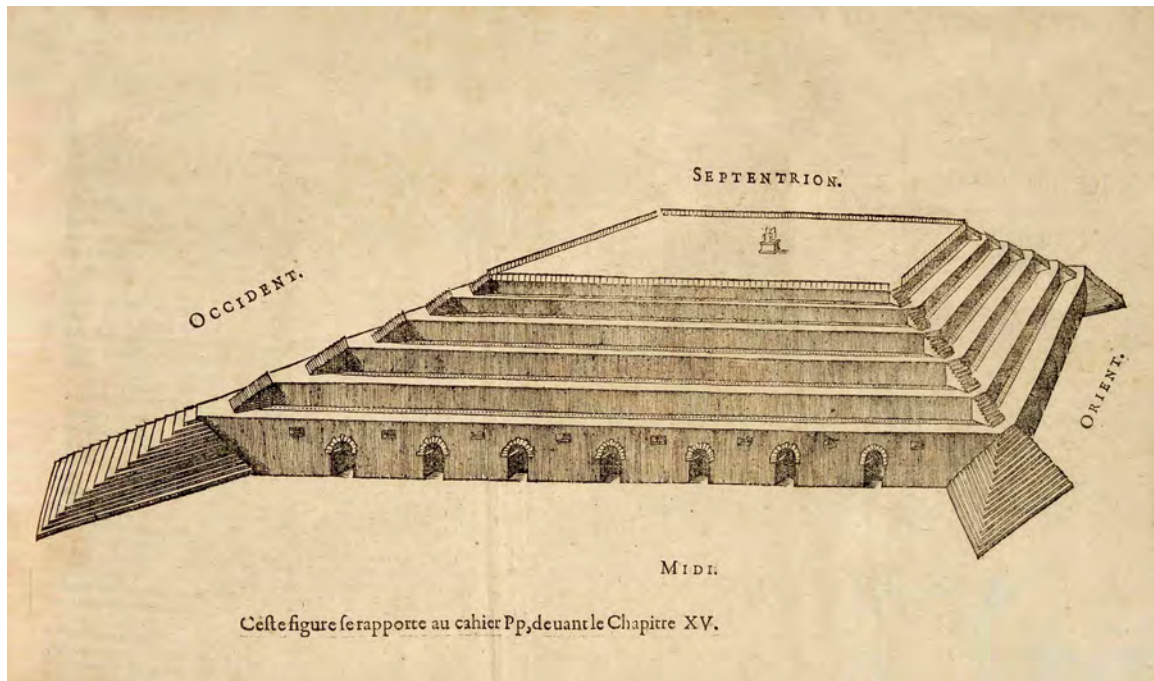


Fig. 8A.11 Square design for a garden of medicinal plants (plan, above, and perspectival view, below), from Olivier de Serres, *Le theatre d'agriculture et menage des champs*, 1605, 615; 617. (© Dumbarton Oaks Research Library and Collection, Rare Book Collection, Washington DC.)



Fig. 9.1 Dumbarton Oaks, Washington D.C., Wisteria Arbor (1930-40) by Beatrix Farrand for Mildred and Robert Bliss. View of the arbor in winter (January 2012). (photo: author).



Fig. 9.2 Dumbarton Oaks, Washington D.C., Wisteria Arbor (1930-1940) by Beatrix Farrand for Mildred and Robert Bliss. View of the arbor in summer (June 2010). (photo: author).



Fig. 9.3 Library of Congress, Jefferson Building, vault and lunette on the north side of the stairs to the gallery of the Rotunda (1897). Vine pergola and the allegory of spring by William Brantley Van Ingen (1858-1955). (photo: author).



Fig. 9.4 Library of Congress, Jefferson Building, vault and lunette on the south side of the stairs to the gallery of the Rotunda (1897). Jasmine pergola and the allegory of autumn by William Brantley Van Ingen (1858-1955). (photo: author).



Fig. 9.5 Smithsonian Castle, entrance vestibule from the Enid A Haupt Garden. View of the vestibule with ceiling and wall decorations by Grace Lincoln Temple (1864-1953). (photo: author).



Fig. 9.6 Smithsonian Castle, entrance vestibule from the Enid A. Haupt Garden. Ceiling decoration with illusionistic pergola (1899) by Grace Lincoln Temple (1864-1953). (photo: author).

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