

Hierarchies of Brain and Being

Abraham Maslow and the Origins of The
Hierarchy of Needs in German Brain Science

Daniel J. Coonan

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Hierarchies of Brain and Being:
Abraham Maslow and the Origins of The Hierarchy of Needs in
German Brain Science

By

Daniel J. Coonan

Readers

Dr. Robert Abzug (Advisor)	History	Date
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Dr. Mark Micale (Second Reader)	History	Date
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To my parents:

—Dad who inspired me to write

—Mom who taught me how to forgive

Table of Contents

<i>Acknowledgements</i>	i
PROLOGUE	1
PART I – BEING	
Security, Self-Esteem and the Subjectivity of Hierarchy	18
<i>The Relic and the Stew</i>	19
<i>A Melody: The Pains and Problems of Self-Esteem and Love.</i>	25
<i>Magnification Level No. 1</i>	35
<i>A Russian Doll of Needs</i>	39
<i>The Thinker, The Poet, The Man of Action</i>	42
<i>Holy Order: heiro-arche</i>	45
<i>The Most Outlandish Analogies</i>	50
PART II – BRAIN	
The Crises of Mind and Brain, Culture and Science	65
<i>War and the Theory of the Brain</i>	68
<i>In Crisis: The Scientist and The Science of Localization</i>	74
<i>The Third Way</i>	80
<i>The Brain in Shock: Diaschisis, Evolution and Hierarchy</i>	85
The Creative Science	94
<i>The Dominant Science</i>	98
<i>The Memory of Metaphysics</i>	100
<i>The New Biology</i>	105
<i>The Symbolic Real</i>	107
<i>A Reason In Knowledge</i>	113
<i>Coming to Terms</i>	119
Author’s Note	125
Bibliography	126

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Prologue

An American psychologist, Abraham Maslow, would become famous for a theory of a hierarchy of human needs written in 1943. It held that the needs of human life appeared in consciousness in a hierarchical sequence, and once satiated, culminated in the achievement of a state of self-actualization – a kind of reverence for everydayness. As a young man, Maslow’s absorption and adoption of the problems and preoccupations of twentieth-century German philosophy and science came via a deep intellectual engagement with the work of neurologist and biologist, Kurt Goldstein. Goldstein, Maslow’s senior by 30 years, lived through the sanguinary crisis of World War I as well as the distressing interwar Weimar period in Germany. Wounded and profoundly changed by these national tragedies, Goldstein reexamined his profession and became witness to a biology and science he believed utterly failed to describe with accuracy and honesty the phenomenon of the brain and mind, human life and nature itself. Out of his pain and dissatisfaction, he crafted an alternative approach to biology and the natural sciences that incorporated the insights and epistemologies of the philosophies of nature and of human existence deliberated by such thinkers as Aristotle and Heidegger. This approach known as ‘holism’—a remaking of the boundaries of science—would captivate and transform Abraham Maslow’s thought and work.

Holistic science and biology as Goldstein conceived them were aimed at finding a pattern, a form of a biological organism that persisted through time, and that thereby had achieved an adequacy of behavioral responses to the threats of the environment. A particular

arrangement of life, an organism came to exist because it could respond adequately to the violence of nature and not perish. The foundational idea in holism was to study the whole living thing, not merely a part of it. For example, the idea was not to study the brain, in isolation from the rest of the environment, the body, and even parts of the brain itself; rather, it was to study the phenomena of the body as it exists in a total environment, whether the body itself or the natural world that surrounds it, and not independent of them. The idea was to “see” the whole picture; the complete set of facts, determined through empirical study and brought to order by a creative procedure of seeing the organism’s pattern of existence. In giving form to the methods and epistemology of holism, Goldstein articulated a prolonged attack on natural science based in models of the universe given by physics and chemistry, collectively known as materialist and mechanical approaches to science. These approaches—based on reducing physical worlds to their simplest parts like the atom, an epistemology known as atomism—incorrectly, according to Goldstein, adhered to the idea that simple parts, like parts of the brain, when added together represented the pattern and functioning of the organism. To Goldstein, knowledge of an organism can only proceed from a dialectical relationship between facts established empirically and the patterning of those facts through a creative seeing of the pattern that made the facts ordered and meaningful. The human being was not just a sum of its parts, of heartbeats and pulmonary gas exchange, cellular respiration and division, or cerebral glucose metabolism and cognitive processing; rather the human being existed as a ‘whole’ and the significance of the facts of the heart or individual cells—and especially the brain—had to take into account the particular pattern of a human form, stable across time in order to establish scientific fact and knowledge.

This essay examines the origins of Maslow’s theory of the hierarchy of needs in Goldstein’s holism and I present both broad interpretations of their works and historical arguments of the significance of their work. I sought to write this work as both narrative and history in that I use approaches from biography and formal historical analysis and argumentation. At a high level, it is a foray into the intellectual and cultural history of a transcontinental exchange in the middle of the twentieth-century between America and Germany on psychology, philosophy and the science of the brain and body. It is one such example of the many intellectually impactful relationships that flourished between American and German scholars and intellectuals who had fled Nazi Germany in the 1930s. The essay takes a comparative approach to the lives and works of Abraham Maslow and Kurt Goldstein and I focused on several key texts. I explicate and analyze Goldstein’s major work on the brain, biological science, and living things, *The Organism*, and two of Maslow’s articles on his adoption of Goldstein’s holistic method and the theory of the hierarchy of needs, respectively, “Holistic-Dynamic Theory in the Study of Personality” and “A Theory of Human Motivation.” I seek to trace and demonstrate the direct and crucial influence of Goldstein on Maslow’s thought as well as contextualize the intellectual and historical settings in which their ideas took shape. The ideas, especially Goldstein’s, are difficult and challenging as they are at times technical in nature, at others, simply wrought with concepts of science utterly alien to contemporary readers. Unfortunately, they defy and resist easy characterization by conventional, straightforward language. I have had to gain fluency with the terms, theories and debates, scientific and philosophical, of neurology in the nineteenth and early twentieth-century, which prove especially difficult to nonmedical professionals. The concepts are as elusive, and the issues are as thorny, as those of modern

neuroscience and medicine today.¹ I have tried to describe the various theories in enough detail for an educated reader to understand them, defining terms and making things plain where I can. However, my limitations as a writer to do justice to such rich concepts and commentary will be apparent and all I can ask of my reader is patience and forgiveness – any failure to make the ideas accessible is mine.

The historiography of this essay is both diverse and yet drawn from an underdeveloped field of academic historical works. As a figure of historical interest, Maslow has only recently begun to receive serious and dispassionate treatment by academic historians.² Jessica Grogan's *Encountering America: Humanistic Psychology, Sixties Culture, and the Shaping of the Modern Self* provides an important comprehensive contextualization of Maslow in the emergence of the humanistic psychology movement in the 1960s.³ Humanistic psychology, difficult to precisely define, was a collective of individual psychologists, psychotherapists, psychoanalysts as well as various other professions from authors to lay philosophers that articulated a strong dissent from the two dominant theories of human behavior and psychology, Freudianism and behaviorism. The dissent of this group transformed into a broad criticism of American culture as conformist, consumerist, and repressive, creating inauthentic individuals lacking true autonomy and liberated

¹ See Aikaterini Fotopoulou, *From the Couch to the Lab: Trends in Psychodynamic Neuroscience*, (Oxford: Oxford University Press, 2012) for an example of contemporary efforts of neuroscience, and the debates therein, to develop models of the mind based on neurological studies of the brain. Here, the psychoanalytic model of the mind is described as useful in the development of full-scale models of the mind and the brain.

² See Andrew R. Heinze, *Jews and the American Soul: Human Nature in the 20th Century*, (Princeton and Oxford: Princeton University Press, 2004). See Chapter 12: “The Creation of American Humanism”, 261–294 for the context of Maslow’s thought in developments of American humanism in the middle part of the century. Heinze demonstrates, as opposed to Protestant sources, the role of Jewish thinkers in the development of secular humanism. This is important context for understanding Maslow’s place in American history.

³ Jessica Grogan, *Encountering America: Humanistic Psychology, Sixties Culture, and the Shaping of the Modern Self*, (New York: Harper Perennial, 2013).

selfhood.⁴ Maslow's impacts in both psychology and in broader American culture took place in this context and Grogan's work provides the essential cultural history necessary to understand Maslow's importance. Other useful histories of the 1960s have focused more on politics and culture as related to politics as opposed to a more specifically cultural analysis of movements like Humanistic Psychology. In some cases, the history has been written by scholars actively involved in the politics of the 1960s.⁵ A notable exception is Doug Rossinow's *The Politics of Authenticity: Liberalism, Christianity and the New Left in America*.⁶ Rossinow is part of the next generation of scholars not alive during the events of the 1960s and his analysis includes religion and culture as categories of analysis in addition to politics. He writes useful passages on the emergence of "therapeutic responses" to national and personal distress that emerged during the period.

My scholarship differentiates itself from the period in which Maslow achieved fame in several important ways. First, I describe an intellectual genealogy long before the 1960s of the hierarchy of needs and self-actualization that adds understanding as to why Maslow's theory captured the attention of Americans in the 1960s and how the theory is employed into the present by a wide-variety of individuals with different, and at times, conflicting interests. The lack of a history of the origins of the hierarchy of needs is a gap in the history of the humanistic

⁴ A limited selection of works that represent of these criticisms by writers allied with humanistic psychology are: Karen Horney, *The Neurotic Personality of Our Time*, (New York: Norton, 1937), Erich Fromm, *Man for Himself*, (New York: Rinehart, 1941), and Rollo May, *Man's Search for Himself*, (New York: Norton, 1953).

⁵ See Todd Gitlan, *The Sixties: Year's of Hope, Days of Rage*, (New York: Bantam Books, 1989), David Farber, *The Age of Great Dreams: America in the 1960s*, (New York: Hill and Wang, 1994), Maurice Isserman and Michael Kazin, *The Civil War of the 1960s*, (New York: Oxford University Press, 2000).

⁶ Doug Rossinow, *The Politics of Authenticity: Liberalism, Christianity and the New Left in America*, (New York: Columbia University Press, 1998). See 7–8 for the contextualization of Maslow's work as nonpolitical and part of a refashioning of the experience of existence in psychologies and philosophies of secular humanism.

psychology movement. Particularly in that most historical writing on Maslow and humanistic psychology, and psychology in general, begins with the immediate post-World War II period and then focuses on the events in the 1960s.⁷ A detailed examination of the ideas that formed the basis of Maslow's dissent against the prevailing scientific approaches of the nineteenth-century serves as an example of how transplanted intellectual traditions and conflicts from Germany in the 1930s and 40s altered the American intellectual and cultural landscape in important ways that had consequence for the 1960s and beyond. It also helps us to see how science is a concept that is responsive to culture in establishing facts as well as how cultural challenges affect the definition of what scientific inquiry is as well as what its limits are. No such detailed examination exists of the immediate intellectual sources and contexts of the 1930s and 40s in which Maslow crafted the hierarchy of needs. This essay fills that gap in the case of Maslow and

⁷ For a history on the rise of psychologists as experts following a massive effort to treat soldiers experiencing psychological maladies after returning home from WW II and its effect on political culture see Ellen Herman, *The Romance of American Psychology: Political Culture in the Age of Experts*, (Berkeley: University of California Press, 1996). She devotes a section on Maslow as part of her chapter "The Growth Industry," which, among other things, examines the rise of psychotherapy as well as humanistic perspectives on defining health and normality. Her examination of Maslow is unflattering. I do not disagree with her critical portrayal as she uses compelling evidence. However, her analysis of Maslow's cultural impact is based on his admittedly resentment-ridden private journal entries of often-unpublished material and ideas that had not reached the public. Her use of the journal entries allows her to effectively and persuasively suggest that Maslow and humanistic psychology were part of a deeply concerning process of the "manufacture of normality" in a broad based effort by post-war psychologists to "solidify their authority of every aspect of individual and social life." (274) Her unsympathetic suggestion is that the elitist and angry elements of Maslow's more ideological thoughts and analysis in his journal demonstrate that some forms of subjectivity like self-actualization, despite their liberationist aspects, are actually sites of social control and manipulation by larger power structures. In the case of self-actualization, I believe her claim is overstated and needs to be balanced against the fact that the actors themselves in Humanistic Psychology were often aware of these hegemonic possibilities, were concerned about them, but yet saw their work as part of advancing not just health and well-being, but spiritual freedom and social justice. Herman does acknowledge this, but her use of the biographical journal entries written in the late 1960s during the height of the social upheaval, rife with intense emotions and opinions, gives an incomplete perspective on the impact of self-actualization, and theories like it, on American individuals and culture.

fits in with current academic scholarship on other central figures of the humanistic psychology movement, like Robert Abzug's coming biography of the psychotherapist, Rollo May.

Secondly, prior to more recent works by academic historians, much historiography on humanistic psychology has had explicitly political motives, seeking either to promote or detract from Maslow's and humanistic psychology's intellectual and historical legacy.⁸ Early histories have taken a less critical approach and have presented the assessment of the movements place in history made by the actors themselves and their immediate supporters, especially in the case of Maslow. This is especially true of the eminently useful and well-organized biography of Maslow by Edward Hoffman, *The Right to Be Human: A Biography of Abraham Maslow*.⁹ These histories have the tendency to exaggerate the importance of the humanistic psychology movement in the events of 1960s as well as in the consequences and impacts on academic psychology. History does not bear out these works' assessments, especially in regard to the impact of Maslow and Humanistic Psychology on academic psychology. Most major universities do not have a formal programs and faculty working in humanistic psychology and the research agenda of humanistic psychology has largely fallen off that of academic psychology. It seems

⁸ For promoters of Maslow and his legacy see: Frank Goble, *The Third Force: The Psychology of Abraham Maslow*, (New York: Grossman, 1970), Richard Lowry, *A. H. Maslow: An Intellectual Portrait*, (Monterey, California: Brooks/Cole Publishing Company, 1973), and Colin Wilson, *New Pathways in Psychology: Maslow and the Post-Freudian Revolution*, (New York: Taplinger, 1972). For an erstwhile liberal turned conservative perspective and a screed against Maslow and Humanistic Psychology, see Joyce Milton, *The Road to Malpsychia: Humanistic Psychology and Our Discontents*, (San Francisco: Encounter Books, 2002). For a conservative attack on the rise of psychotherapy associated with Maslow and Humanistic Psychology see Christina Hoff Sommers and Sally Satel, M.D., *One Nation Under Therapy: How the Helping Culture is Eroding Self-Reliance*, (New York: St. Martin's Press, 2005). Both authors are resident scholars at the American conservative think-tank, American Enterprise Institute.

⁹ Edward Hoffman, *The Right to Be Human: A Biography of Abraham Maslow* (Los Angeles: Jeremy P. Tarcher, Inc., 1988). See Roy José DeCarvalho, *The Founders of Humanistic Psychology*, (New York: Praeger, 1991) for a well-organized discussion of the main figures in Humanistic Psychology: Gordon Allport, Abraham Maslow, Carl Rogers, Rollo May, and James Bugental.

that a revolution in psychology failed to happen. This is perhaps why most scholarship on the 1960s underappreciates and, to some extent, ignores the movement. However, Maslow's work in particular has moved into popular, academic, business and even military environments where his concepts of the hierarchy of needs is still researched and more often applied as a paradigm in powerful ways.¹⁰ Few of these works, however, take a critical and dispassionate view of Maslow. They instead serve as evidence of the impact of the body of ideas of Humanistic Psychology beyond the immediate political contexts of the 1960s, and in Maslow's case, of how his theory moved into different cultural and professional contexts.

Historiography on Goldstein is limited and this presents an opportunity for further expansion.¹¹ The most important and comprehensive work on Goldstein that places him in the immediate context of the development of German holism in the late nineteenth and early twentieth-century German medicine, culture, politics and philosophy is Anne Harrington's *Reenchanted Science: Holism in German Culture from Wilhelm II to Hitler*. An aim of this essay is to provide explanation, analysis and context for understanding Goldstein's main work, *The*

¹⁰ See the massive blockbuster on personal success, Stephen R. Covey, *The Seven Habits of Highly Effective People: Restoring the Character Ethic*, (New York: Simon and Schuster, 1989), 131 for his use of Maslow in a discussion of right versus left brain hemispheres. Interestingly, the dual nature of the brain received its initial recognition in the era of Goldstein's mentor and teacher, Carl Wernicke. See Chip Conley, *Peak: How Great Companies Get Their Mojo from Maslow*, (San Francisco: Jossey-Bass, 2007) for an example of how the hierarchy of needs was used to craft an entire corporate strategy to turn around a failing boutique hotel chain. See Lieutenant Colonel Patrick E. Kline, *Hierarchy of Needs; Building a Path to Peace*, Strategy Research Project, Peacekeeping and Stability Operations Institute, (Carlisle: U.S. Army War College, 2010) for an example of how the hierarchy of needs is used as military strategy to manage modern conflict and wage counterinsurgency campaigns by protecting populations basic needs as a means to win the support of the civilian population support and undermine enemy operating capability.

¹¹ I have relied on Detlev Peukert, *The Weimar Republic: The Crisis of Classical Modernity*, trans. by Richard Deveson, (London: Allen Lane The Penguin Press, 1991) and Eric Weitz, *Weimar Germany: Promises and Tragedy*, (Princeton and Oxford: Princeton University Press, 2007) for the context of Goldstein's work in Weimar Germany.

Organism, which articulates his theories on the human brain, scientific holism and the existential dilemmas of humans. The path from the science of the brain to existentialist concerns of anxiety and courage that Goldstein takes in *The Organism* is difficult to comprehend, which is why I devoted a good portion of my work at explication. I needed to show in detail what Maslow "saw" in Goldstein's work, in order to demonstrate its key role in the development of the hierarchy of needs and self-actualization.

It has not been recognized in the immense literature on Maslow the extent to which Goldstein influenced his work. The literature vastly underappreciates the degree to which he contributed the key concepts that made Maslow famous. Most commentary gives a precursory nod to Goldstein's influence, usually crediting him as the thinker from which Maslow obtained the concept of self-actualization. Almost entirely scholars miss the foundational influence Goldstein had on Maslow's career in that he supplied him with the criticisms of scientific materialism, the method and epistemologies of holism, and the very concept of a hierarchy of needs for which Maslow became famous. While certainly others hold a particularly important place in the development of Maslow's thought, Goldstein holds the place of one of his greatest intellectual influences. Notwithstanding the historian or biographer's impulse to see the importance of their subject everywhere in the materials of history, I feel the textual and historical analysis I engaged in allows such a claim. Other influential teachers, like the anthropologist Ruth Benedict, the Gestalt psychologist Max Wertheimer and the psychotherapist Alfred Adler played intellectual as well as more emotional roles in Maslow's life. Benedict's ideas and encouragement likely led to the development and the inclusion of belonging and love in the hierarchy of needs; there is also an argument to be made that she played a substitute mother role for a Maslow wounded as a child, by what he believed was a mother who did not love him.

While Wertheimer served in the role of intellectual father, Adler also acted in that capacity, though differently: Maslow experienced Wertheimer as warm and encouraging, while Adler was an intellectual force of nature. Goldstein played none of these dramatic roles in Maslow's life; he rather remained, from what I can detect, in relationship to Maslow only in a professional sense.¹² Perhaps this distance, along with the brilliance and humanity of Goldstein's work, had something to do with Maslow's ability and desire to adopt and use Goldstein's concepts so persuasively and with such large importance for American psychology and culture. A future study would be valuable that examined in detail the modes of transmission of Benedict, Wertheimer and Adler's ideas to Maslow and his adoption and use of them; much would be revealed about how American subjectivity transformed and stayed the same in the twentieth-century.

I also utilized a diverse set of theoretical texts to guide my understanding and advance my interpretations of the historical significance of Maslow and Goldstein's work. Thomas Kuhn's *The Structure of Scientific Revolution* provided the concepts of establishment, dissolution and evolution of large and small scientific paradigms as an infinite contest to describe nature accurately—with accuracy defined as the paradigm's ability to reliably predict the behavior of natural phenomena in the system. It also made clear how when science changes, because the paradigm no longer predicts the phenomena of nature reliably, so too does nature itself. Peter Berger's sociological analysis in *The Sacred Canopy: Elements of a Sociological Theory of Religion* of the dialectical role of human activity in establishing both physical institutions and subjective structures of consciousness allowed me to comprehend how the nature of change in

¹² See Abraham Maslow, *The Journals of A. H. Maslow*, ed. by Richard J. Lowry, vol. 1. (Monterey, Calif.: Brooks/Cole Pub. Co., 1979), 427 for Goldstein's distant relationship to Maslow. See Hoffman, *The Right to Be Human*, 86–110 for the background on Maslow's relationship with the key figures in his intellectual development like Benedict, Wertheimer, and Adler.

science alters human subjectivity and mindedness. Psychoanalyst Jonathan Lear's *Love and its Place in Nature* presented the idea that psychology is a science of subjectivity because it necessarily integrates the realm of human meaning into the creation of mindedness; it made clear that the idea of a so-called objective study of the mind and self is deeply problematic. Thomas Lacquer's *Making Sex: Body and Gender from the Greeks to Freud* offered a useful discussion of the gray line between science and culture in terms of how the physical body and the science of the body are sites of contest between what is an undisputed scientific fact and how larger cultural processes like gender and even theories of biological sex have a role in what science determines is "real". Robert Abzug's *Cosmos Crumbling: American Reform and the Religious Imagination* played an important role in understanding the historical elements, processes and dynamics at play in the development of moral and sacred consciousness in groups of reformers in antebellum American, which extends into the present and that figures like Maslow represent and bring into view.

I tried to read the *The Organism* and Maslow's articles from the point of view of a scientist as well as a historian. My procedure was destined to fall short, as I have no formal scientific training; yet nonetheless it has been a revealing and profitable procedure to follow. I have an abiding interest in science and a respect for the rigorous requirements of hypotheses, testing, data acquisition and analysis – the tools of the “real” so to speak. Scientists work in the day-to-day realm of the “real” (a patient experiencing disease and pain, a disease process that requires careful isolation and study, and a reliable physical world that behaves predictably according to certain well-established phenomena like weight, density, temperature, etc.) and any history of science must respect the so-called boundaries of the real. But as is clear to many scholars of the history of science, it is problematic to try to completely separate science from

culture and history, especially science that touches the body and mind.¹³ In fact, like the historian, scientific holism as Maslow and Goldstein conceive it does not separate itself from the worlds of human meaning and knowledge created by the what sociologist Berger describes as the act “world-building.”¹⁴ Science as a foundational institution of society, like religion, follows a dialectic path in history of three major processes in constructing the inner and outer worlds of human life: (1) externalization: "the ongoing outpouring of the human being into the world, both in the physical and mental activity of man," (2) objectivation: "the attainment by the products of this activity (again both physical and mental) of a reality that confronts its original producers as a facticity external to and other than themselves, and (3) internalization: "the re-appropriation by men of this same reality, transforming it once again from the structure of the objective world into structures of subjective consciousness." Berger's framework allows us to clearly see what it is that I argue Maslow and Goldstein are doing in a larger sense.

First, they are making the argument that science is a product of human activity and therefore subject to human meaning: there is no “objective” reality that stands outside human life and time. While this idea has reached broad acceptance by students of the humanities as well as the sciences today, when these two men wrote and lived these types of relativistic ideas had just begun to emerge. Maslow and Goldstein's work are representative of the emergence of the awareness of a blurriness between the objective and subjective structures of the world and, to a lesser extent, they themselves advanced the conceptualization of the human world as an interrelated, constitutive and dialectic process of science, society and subjectivity. This

¹³ See Peter J. Bowler and Iwan Rhys Morus, *Making Modern Science: A Historical Survey*, (Chicago and London: The University of Chicago Press, 2005) for this perspective. Harrington and Lacquer's works also make these claims.

¹⁴ Peter L. Berger, *The Sacred Canopy: Elements of a Sociological Theory of Religion*, first published 1967 by Doubleday. (New York: Anchor Books, 1990), 3–6.

conceptualization has achieved broad and deep representation in the products of the outpouring of a particular kind of human activity especially relevant to this essay: the discipline of writing history. It is with such a framework that I crafted this essay. The transcultural and intellectual exchange between Goldstein and Maslow offers us a historical case study from which to see in some detail the transformation of science throughout the contemporary American period by these new forms of thought.

The second thing I argue in this essay is that Maslow's and Goldstein's theories on human motivation and the brain were not only efforts to overcome the scientific epistemologies and methods based on a strict materialist version of nature and "reality," but rather as part of an effort to alter subjectivity and the self, and the mind and consciousness. They both disagreed profoundly with the Freudian version of the self and mind described by the topographical theory of mind, familiarly known as the id, ego and superego. Like many others during this time period, they became involved with the attempt to dismantle models of the mind, which had cleaved the world into "subject" and "object" categories of analysis that resulted in philosophical and psychological dualism. In other words, the mind, self, consciousness, and to some extent, the body became radically separate from nature and the world as the homes of human experience. Goldstein in particular allied with a twentieth-century philosophical movement known as phenomenology, which sought to view the world and guide the study of nature without any preconceived categories of analysis, like the subjective and the objective. These efforts amounted to then, not just a new science composed of new epistemologies and methods, but rather to imagining a new kind of personhood that was reintegrated with the natural world and imbued with order and meaning. Through the recognition of a special kind of engagement with nature and the living human world, that they described as science, Maslow and Goldstein envisioned a

new kind of subjectivity that was: based in reason yet emotionally attuned; unafraid of creativity and spirituality as essential to good scientific understanding of the self and the world; committed to classical virtues like courage and Judeo-Christian values like love; and rooted democratic and personal freedom that opposed tyranny, fascism and racism. What I demonstrate in this thesis is that their work was part of an effort of re-sacralization of the world and everyday life by reconciling sacred and profane understandings in the construction of the world and reality. I offer the reading that they addressed themselves in their work, often implicitly, to the broad problems of modernity and the so-called disenchantment of the world. In Maslow's case especially, we see a man who wanted to save the world from loneliness, sickness, isolation, societal disintegration, and even war. He wanted to save the world by "discovering a psychology for the peace table."¹⁵ His younger self perhaps even believed it was possible that psychology could; later in life, his views on the possibilities of salvation from the conflicts, inner and outer, and psychology's ability to offer such deliverance, changed dramatically.

Along with these claims, I demonstrate how psychology acts as a unique site for the mediation between science and philosophy as well as between the human sciences and culture. This demonstration is important in that it should guide our understanding of what contemporary neuroscience is doing when it studies the brain. My claim is that psychology and philosophy as they have been used to describe the experience of emotions, cognition, and mind profoundly influence the construction of biology and the brain. These "problems" have not been overcome and my essays fits squarely in the camp that is suspicious of efforts to render the mind in a strictly "objective" and deterministic way. I also question the idea that the brain can be rendered without a conception of the mind as they are used in a dialectical process of validation. Each

¹⁵ Maslow quoted in Hoffman, *The Right to Be Human*, 149.

theory, the models of mind and brain, tests the other. The anatomy constructs the mind, but so to does the mind construct the anatomy. My examination of Goldstein's work demonstrates this. Maslow represents the how these theories of mind and brain flow out into popular constructions of the self that have explicit cultural constructions and objectives. That there are unsettled theories of the mind and the brain – as opposed to uncontroversial facts like the physiological role and functioning of the heart – I think demands the kind fraught reconciliation between biology and psychology in which Maslow engaged.¹⁶ To think with a mind is to wonder about where it comes from, to look at the mystery of the flesh and then—construct a mythology of where the mind comes from, as stories of origins are preferred, perhaps demanded.

Essential to the process of architecting what Goldstein believed was the next step in the advancement of scientific method and knowledge was his vigorous criticism of a model of the brain known as localization. Localization achieved widespread success and use in German neurology clinics and medical school education in the late nineteenth-century. Localization theory described a model of the brain that was organized by specific and discrete anatomical regions that correspond to specific functions of the mind like language and vision. As opposed to a model of the brain where the acts of mind are produced as a function of the whole brain, the locationist model of the brain was extrapolated from strong empirical evidence that damage to specific places in the brain produced specific dysfunctions in speech. Therefore, one could “locate” or localize where speech came from in the brain, hence the term localization. However, the rest of the organization of the brain by distinct anatomical regions that correspond to specific

¹⁶ Incidentally, the heart was a deeply contested site of anatomy until William Harvey's 1628 model of the heart. Aristotle believe the heart was the seat of intelligence, the phenomenon that is now located in the brain. He works out his idea of the functioning of the body in his three main works on biology, *The History of Animals*, *On the Parts of Animals*, and *On the Generation of Animals*.

mental acts like, hearing, sight and touch was largely theorized. In this theory, there were disparate hearing tissues, seeing tissues, speaking tissues, etc. and in concert these tissues somehow produced consciousness.

This *theorization of anatomy* was completed by German brain researchers who used a theory of mind, known as associationism, to fill in the gaps of the localization model. I define and describe associationism in detail later in the essay; however, it is a difficult and vague concept that eludes succinct and clear summarization. But for now, suffice it to say that mind according to association psychology operated by a principle which generally held that what the eyes saw, the ears heard or the skin felt—distinct sensory information from sense organs—*associated* together to form “ideas” that in unison produce consciousness. So some physiologists made the theoretical leap that if sight ideas and sound ideas are associated together, then there must be tissues that store these ideas for use in vision and language. What Goldstein attacked forcefully were the underlying epistemologies, like associationism, used to fill in the rest of the picture of the brain. These epistemologies variously known as materialistic and mechanistic have origins in the classical physics of Newton and the mechanical philosophy of Descartes. The history of localization fits within this larger framework in the history of science of using the methods, concepts, models and language of physics to study and explain a large variety of natural phenomena. Goldstein, and then Maslow, waged various arguments against what they felt were the substantial inadequacies of these paradigms to accurately describe not only nature, but also human life that they referred to as “human nature.” For Goldstein these criticisms found roots in Kant and Goethe who had both articulated that the study of the organic, living world required concepts unique from those of the realm of the inorganic, the subject proper to physics. These deep roots in both German rational and romantic philosophy, then, connect Maslow’s

work to a long philosophical debate over the proper roles of science and philosophy in describing nature. In large part, what has not been recognized about Maslow's work is its origins in this fundamental contest to describe all manifestations of nature, whether the physical "inorganic" universe (cosmology), organic "living" substance (biology), or the dimensionless non-place of the mind (psychology). I argue Maslow and Goldstein were both trying to reconcile science with metaphysics, looking for a third way to establish scientific knowledge that flowed from a creative process of looking for stable patterns in nature, individual organisms and humans.

For Maslow the reconciliation was in psychology; for Goldstein it was biology – and for both, the way forward lie in the arousal of a radical and creative reimagining of not only the foundations of their disciplines and science itself, but of the nature of suffering in the world. Maslow saw the possibility of happiness and joy—the true transcendence of suffering—as part of the nature that humans inhabit, while Goldstein made suffering bearable in the willingness to endure the anxious uncertainty of scientific and existential knowledge—and the dread of having to live in a nature that is eternally rife with blood and violence, that is yet worth the cost due, by the revelation of joy and spiritual and practical conquest of the world. The reconciliation of suffering is the common element—what I interpret and characterize as a 'scientific theodicy'—that forms the bridge from Goldstein to Maslow. Indeed, Maslow credits Goldstein as his bridge to holism. The following chapters on the development of the hierarchy of needs, Goldstein's dissent from a dominant scientific paradigm, and Goldstein's articulation of an idea of science known as holism explain how and why Maslow drew such deep inspiration from Goldstein's work.

PART I – BEING

Chapter 1

Security, Self-Esteem and the Subjectivity of Hierarchy

There is a Hierarchy of Being, and God is the Lord of all; and this Hierarchy of Being is also a Hierarchy of Intelligence. All created intelligences are subordinate to the one uncreated intelligence of God. Also all sciences are related to the one science of God, from Whom all descend and to Whom all return; and in that hierarchy of sciences, theology, or the science of God, is the first and the Queen. All other sciences, physical and human that is, relating to the world and to man are subordinate, but inseparably united, because in God all truth is one.

— H. E. Manning, *Internal Mission of Holy Ghost*

In the wonderment of this taxonomy, the thing we apprehend in one great leap, the thing that, by means of this fable, is demonstrated as the exotic charm of another system of thought, is the limitation of our own, that stark impossibility of thinking *that*.

— Michel Foucault, *The Order of Things*

In 1943 Abraham Maslow published two journal articles, “The Dynamics of Personality Organization I & II”, that most clearly evince his full-scale adoption of the holistic method and scientific epistemologies developed by Kurt Goldstein. They would be combined under the title “Holistic-Dynamic Theory in the Study of Personality” in Maslow’s second book, *Motivation and Personality*.¹ While the coming hierarchy of needs would expound an organized, fully conceptualized theory of human motivation, these two articles addressed the phenomena of personality and the methods with which to examine it. It would also establish motivation as the foundation of personality, paving the way for the organization of distinct categories of motivation like self-esteem and security. What remained elusive for Maslow, however, was how

¹ Abraham Maslow, *Motivation and Personality*, 1st ed. (New York: Harper & Row, 1954), 22–61.

to define personality, to say what it is. Is it personal identity, or is it another word for the mind? Is it the psychological entity known as the self, or is it closer to the concept of consciousness? Or is it perhaps best understood as the concept of character? These slippery questions are the implicit questions Maslow tries to answer; and in doing so he find himself caught up in linguistic issues that have broader historical implications for what it is that he is doing.

The Relic and the Stew

The article makes an attempt to establish the theoretical groundwork—the epistemologies—for the general study of the personality and seeks to open up a space for the holistic study of psychological phenomena by attacking scientific epistemologies rooted in scientific materialism like reductionism, atomism and mechanical philosophy. I argue that in large measure, perhaps overwhelmingly, Maslow derives his epistemological and methodical basis for the study of the personality from Goldstein’s scientific conception of holism. Building off Goldstein’s work, he describes psychological data and methodology and their use as well as posits a theoretical structure called the “syndrome concept” with which to organize inquiry into the personality. He spends the majority of the article attempting to give the syndrome concept and holism in psychology – life. Maslow asks, “How is the personality organized?” and offers the following definition:

Our preliminary definition of a personality syndrome is that it is a *structured, organized complex* of apparently diverse specificities (behaviors, thoughts, impulses to action, perceptions, etc.) which, however, when studied carefully and validly *are found to have a common unity that may be phrased variously as a similar dynamic meaning, expression, “flavor,” function, or purpose.*²

The five elements of the “common unity” of (1) dynamic meaning, (2) expression, (3) flavor, (4) function and (5) purpose, all designate concepts that are both overlapping and analogous of one

² *Ibid.*, 31–32 (my emphasis).

another. Yet, he is at the same time trying to establish them as different and distinct. In this sense, his concept of the personality is unstable and confusing; it is an interlocking yet frayed system of “sameness” and “otherness.” This attempt at a unification not of opposites, but rather slight differences, gives the article and the personality syndrome a certain elusive quality; however, it is clear what he is trying to do; we “know” what he means: he is trying to describe the personality as a “whole” psychological entity that yet has “parts” one can study in greater detail.

To explain this unstable object, he use analogies that both seem familiar yet strange. He describes the personality as food: “we may introduce the concept of “psychological flavor,” using as an example a dish composed of different elements and yet having a *character* of its own, e.g., a soup, a hash, a stew.”³ Interestingly, he adds a footnote to this description worthy of inclusion here because it is a comment from a biography of Emily Dickson called, *Life and Mind of Emily Dickenson* by the early twentieth-century poet and Guggenheim Fellow, Genevieve Taggard:

I have had to tell the story, not as one draws a line from left to right, marking the birth at the left, and death at the right; but as one ponders while he turns over a relic over and over in his hands.⁴

The allusion to the personality as a relic, turned over and over, as an object of wonderment is important because of the multiform meanings of relic: it refers to the remains of the body after death, a trace of the past whether object or idea-object, and most importantly, a sanctified dead-thing of the past deserving of reverence. To again draw an analogy not only to the personality an artifact, but also to the process of studying the personality as a relic, in contemplation and wonder, are important for understanding what Maslow is doing in a larger historical sense in his

³ *Ibid.*, 32–33 (my emphasis).

⁴ *Ibid.*, 33 (my emphasis).

construction of personality and its method of construction. Between the character of a stew and the relic of the personality, we can begin to get a sense of the odd yet commonplace elements in the process of creating human subjectivity. We can see how at the outset of the work, he is in the hazards of words.

Beyond gastronomic analogy, he presents an example of child behavior and psychopathology more familiar to contemporary understanding of psychological dynamics to illustrate the concept of ‘dynamic meaning’. However, by recognizing the immediate contrast to the strangeness of ‘self as stew,’ if we can consider that stew has *character* or a *personality*, the seemingly factual nature of his example opens up the idea of regarding his particular example a psychopathology of child behavior as not fact, but rather artifact. He describes two different children, each behaving in a way that demonstrate an unmet *need*:

Since these specificities have the *same source or function or aim*, they are interchangeable and may actually be thought to be psychological synonyms of one another (*all “saying the same thing”*). For example temper tantrums in one child and enuresis [bed-wetting] in another may come from the same situation, e.g., rejection, and may be attempts to achieve *the same end*, e.g., attention or love for the mother. Thus, though they are *quite different* behaviorally, they may be identical dynamically.⁵

It is important to note here that these feelings of rejection and need for attention or love for the mother are the exact feelings and needs Maslow would lament he did not receive from or were not met by his mother. It is hard to not recognize an element of the psychoanalytic concept of transference in Maslow’s example.⁶ Further, the child is likely an abstract-child-object, and

⁵ Maslow, *Motivation and Personality*, 32 (my emphasis).

⁶ Edward Hoffman, *The Right to Be Human: A Biography of Abraham Maslow* (Los Angeles: Jeremy P. Tarcher, Inc., 1988), 7–9. Maslow is quoted, “What I had reacted to and totally hated and rejected was not only her physical appearance, but also her values and worldview, her stinginess, her total selfishness, *her lack for love for anyone else in the world*...her primitive animal-like care for herself...the whole thrust of my life-philosophy and all my research and theorizing has its roots in a hatred for and revulsion against everything she stood for...*I knew certainly of the direct consequences of having no mother-love.*” Yet, Maslow felt he was also

while his first daughter would have been about two and capable of the behavior he mentions, it is unlikely that Maslow would have had any clinical experience with children. He was never trained as a child psychologist or psychotherapist and nor did he administer any child psychotherapy as a professional. With an abstract child-object and a high degree of negative emotionality towards his own childhood that “projects” onto the abstract object, it is possible to see how this construction of dynamic meaning is more artifact than fact.

In Maslow’s model of the personality, psychological flavor and dynamic meaning are two important categories describing the functioning of the syndrome. A third category of importance is *interchangeability* by which he means behaviors and their underlying causes, like those unmet needs for love of the abstract child, are, “all saying the same thing.” He uses interchangeability to establish a classification of resemblances between ‘function’, ‘purpose’, ‘source’ and ‘aim’. They are the same he claims; yet in their linguistic sense, they are clearly different and distinct. *Function* describes the action of performing an activity, what and how something does something, while *purpose* describes the reason why that something is done. *Source* describes the cause of something, the place – or the non-place of mind and language, from which it originates; *aim*, closer to the meaning of purpose, describes the goal of activity but less why it is done. It is here that personality is confusing, enigmatic and unstable; in trying to establish sameness, otherness haunts and undermines the personality, which is why personality as relic is an object of perpetual wonder and, in a sense, suffering. Maslow can never quite say

denied his father’s love as a child as well, which created some confusion for him over masculine and feminine roles. He felt himself and humanistic psychology as feminine, and indeed, identified with femininity. This created a conflict for him as he idealized the masculinity he associated with his father. I mention this dynamic as it sheds light on his ambivalent inner life and the dynamics of his suffering that help explain his attraction and adoption of Goldstein’s holism that spoke to conquering suffering and becoming whole through science. See Abraham Maslow, *The Journals of A. H. Maslow*. ed. by Richard J. Lowry, vol. 1. (Monterey, Calif.: Brooks/Cole Pub. Co., 1979), 53 for Maslow’s self-interpretation.

what it is and he becomes captured by his problem and the system he constructs; he spends much of his later life vacillating between self-doubt and grandiosity over his work and is frustrated at the lack of recognition of its value to and impact upon American psychology and science as well as American cultural life and even humankind.⁷

There is some irony as he recognizes that, “the problem of language is a difficult one here. How shall we label this unity in diversity?”⁸ Yet he contends that his systems of interchangeability, psychological flavor and dynamic meaning begin to solve those linguistic issues and bring stability to the personality. The final piece to overcome the problem of language and bring order to the personality—to explain how it functions to move the systems—is the concept of motivation. “Some of these difficulties can be solved if we introduce into our considerations the functional concepts of motivations, goals, purposes, or coping aims,” Maslow states and thereby attempts to establish a foundation for the personality.⁹ He moves from pondering what the sanctified relic of personality is, to puzzling, wondering over what it does and why. Personality and motivation are united and, in their reconciliation of the problems of language, the functioning of a human subjectivity is given form.

⁷ See the unpublished article, “The Unnoticed Psychological Revolution” written somewhere around 1968 in Abraham Maslow, *Future Visions: The Unpublished Papers of Abraham Maslow*, ed. by Edward Hoffman, (Thousand Oaks: SAGE Publications, 1996), 122–125. “Why aren’t the books of humanistic psychologists ever mentioned, let alone the writings of the few relatively few humanistic economists, political philosophers, and sociologists? Their books simply aren’t noticed. For example, none of my books has ever been reviewed in any of the popular magazines or newspapers like the *New York Times*.” and “This whole system that I am constructing composes a comprehensive philosophy of life, a philosophy of everything, so that a psychological system of Being-art...these would possess the *same* goals, strategy, and tactics—the *same intrinsic values* and the *same transpersonal usefulness*—for humankind.” It is this sameness of values that plays a key role in the type of subjectivity Maslow, and those like him during this time, are shaping. Many entries in his journals demonstrate his bouts of self-doubt and grandiosity. See Maslow, *The Journals of A. H. Maslow*, 70, 113, 730, 731, for expressions of grandiosity and 207, 423, 427, 746–47 for expressions of self-doubt.

⁸ Maslow, *Motivation and Personality*, 32 (my emphasis).

⁹ *Ibid.*, 33.

The roots of motivation unmistakably lie in Goldstein's *The Organism*. Compare the following passages:

Maslow:

From the point of view of the functional psychologist the *unified organism* is seen as always facing problems of certain kinds and attempting to solve them in various ways permitted by the nature of the organism, the culture, and the external reality. The *key principle or the centering of all personality organization* is then seen by the functional psychologist in terms of *the answers of the organism in a world of problems*. The alternative phrasing is that the organization of the personality is to be understood in terms of the problems facing it and what it is trying to do about them.¹⁰

Goldstein:

[The part of the organism required] is determined by the task the organism has to fulfill at any given moment, namely, by the situation in which the organism happens to find itself and *by the demands with which it has to cope*. The tasks are determined by the "nature" of the organism, its "essence," which is brought into actualization through the environmental changes upon that act upon it.¹¹

Both passages stress the accordance of the nature of the organism in terms of the problems or tasks set before it by the environmental conditions or the culture and external reality. For Maslow, the personality is directed or motivated to solve particular problems of environment or culture; the reason the personality exists—its key principle—is to answer the challenge of culture in the case of humanity, and external reality in the wider sense of the natural world.

However, in Goldstein's passage the environment plays a more central role, in that the tasks themselves determine the nature of the organism, whereas in Maslow's conception the organism's nature is used to solve the problems of the environment. The difference is that in Goldstein's conception the organism becomes an organism because it has achieved an adequacy of response to the problems of the environment: the environment, and a competent response to it, substantiates the particular form of organism. We can, however, see how Maslow absorbed this

¹⁰ *Ibid.*, 34.

¹¹ Kurt Goldstein, *The Organism* (New York: Zone Books, 1995; First published in English by American Book Company, 1939), 101.

view by the use of the term “unified organism.” In fact, as the organism emerges in response to the environment, the organism is structured with an “essence” or “nature” which designates its not only particular capacity to cope with problems, but also its unique potentialities. It is in the development and use of these capacities – over the life of an individual member of a particular form of life – that the concept of potentialities makes sense. The individual organism develops its capacities on its road to fulfilling the total potentiality of the particular form of living substance of which it is a member.

A Melody: The Pains and Problems of Self-Esteem and Love.

As Maslow has described the abstract shape and taste of the personality and anchored it in motivation, he takes a step down in his level of abstraction and posits two sub-syndromes: the self-esteem syndrome and the security syndrome. He uses the epistemology of the five elements to describe and differentiate these phenomena; he tries to establish self-esteem and security as a diverse processes in the entire process of personality that are dialectically constitutive of one another. The idea is that one must study both the “whole personality” as well as its sub-syndromes to gain knowledge of the human motivation and mentality. These two sub-syndromes of personality will form two of the levels of the hierarchy of needs. Prior to the “Dynamic of Personality” articles, Maslow had written separate pieces on self-esteem and security, where he lays out classifications of what a secure or insecure, self-esteeming or self-scoring person is. Each paper is remarkable for its use of “data” to draw these binary clusters; but what is most remarkable of all is that Maslow acknowledges the “shaky” nature of the data, but yet continues to make broad claims about how to classify a person’s personality and its sub-syndromes of self-esteem and security:

It is well to express at once some of the theoretical qualms that the writer has about the data and the conclusions in this paper...the writer feels, therefore, that *if the concept of*

*“scientific” be stringently interpreted, this is not a scientific research, at least in the eyes of the purists. Even more strongly, it is his feeling that the problems set forth herein may actually be theoretically unsolvable with the methods we have available today if we are interested in only definitive solutions. Granted then that this may be an attempt to solve an unsolvable problem, the paper will be presented without cluttering up of the text with further apologies, questions, and cautions. The writer’s own feeling is that it is quite scientific to use the data that are shaky, and the reader is warned they are shaky.*¹²

Maslow acquired the data via several methodologies that ultimately rest on his judgment as to what the data is “saying” and how it’s “saying the same thing.” For the security sub-syndrome, his methodology to define ‘what security-insecurity is’ was to: (1) “select people who are *extremely and obviously* insecure and then to study them *very carefully* as total personalities in all their aspects,” (2) to refine the definition based on “previous researches,” “general clinical experience,” and reading, and (3) *careful* clinical studies of extreme personalities. The idea was to take a vague concept and make it clear through multiple iterations. And the iterations stop once Maslow feels he has adequately understood the phenomenon, though it is not clear by what criteria adequacy is determined. He employed this procedure on “*about 60* college men and women.”¹³

This method derived directly from Goldstein and is articulated in the first chapter of the *The Organism*, “Method of Determining Symptoms.” This chapter serves as the methodological foundation of Goldstein’s approach to science. He describes how errors in the recognition of symptoms of brain-injured patients are rooted in a deeply flawed theory of brain anatomy and physiology known as localization, which I explicate and analyze in chapter two. This theory was used pervasively by German clinicians in the diagnosis of specific areas of damage to the brain. Goldstein states, “how vital it is, for an accurate interpretation, that description of phenomena be

¹² Abraham Maslow, "Self-esteem (Dominance-Feeling) and Sexuality in Women," *Journal of Social Psychology* 16 (1942), 259–60 (my emphasis).

¹³ Abraham Maslow, "The Dynamics of Psychological Insecurity-Security," *Character and Personality* 10 (1942), 332.

minute and exact” and “no phenomenon should be considered without reference to the organism ...*as a whole*” or “in the course of the examination, one comes to a point at which *one feels* that the analysis can be terminated without risk of gross errors in the interpretation. The examination must be carried through far enough at least to ensure that (*on the basis of facts*) a theory can be developed that will render understandable all observed phenomena in question and that will make it possible to predict how the organism will react.”¹⁴

The next iterative step Maslow took to assemble data of the personality was to select “about three dozen people” and to perform “a much more intensive *semipsychoanalytic* study...to “understand” in their unconscious as well as conscious life.”¹⁵ Similar to what was pointed out about Maslow’s lack of training in child psychotherapy, he also had no formal training in psychoanalytic psychotherapy. While his lack of psychoanalytic training calls into question his ability to properly interpret events of the unconscious, I am not interested in the hazards of his approach, but rather what this type of activity represents, what it offers as a way of understanding what Maslow is doing. There are a variety of interpretative possibilities. He is gathering theories and methods of authority to legitimize and rationalize his construction of the personality syndrome. He is participating in the creation of a secular-psychological ethic as opposed to religiously structured morality: the abandonment and suffering of Job by God became the insecurity and isolation of the modern subject due a hostile environment and culture as well as inadequate parenting. He is responding to a broad concern with the phenomena of anxiety—the more philosophical term for insecurity—appearing with increased frequency in philosophical, theological and psychological discourse at the time. *The Organism* features an

¹⁴ Goldstein, *The Organism*, 40–41. Many more statements like these take place in the chapter, 33–67.

¹⁵ Maslow, "The Dynamics of Psychological Insecurity-Security," 333.

important analysis of anxiety that represents a turning point in the text from criticism to a positive articulation of Goldstein's vision of what an organism is and how to study it properly. Included in his description, the concept of security is used to denote the subjective feelings indicate when an organism is "adequate" in meeting the demands of the environment, or when it is at peace with the world.¹⁶ Finally, perhaps he is working out his personal conflicts with his own parents through an externalization of his inner conflicts. Regardless, his use of a semipsychoanalytic method is remarkable for its place in the creation of insecurity-security.

He uses three additional methods to identify the component feelings of the security syndrome: (1) he asked students of his abnormal psychology class to write "long self-analytic autobiographies after hearing a series of lectures on the writer's theories and concepts of security,"¹⁷ (2) he used observations he made from a summer spent with the Northern Blackfoot Indians in Alberta Canada where he concluded that their society excelled in emotional security due to the closeness of parents and children,¹⁸ and (3) a paper and pencil personality test that he had modified from one he used to parse out self-esteem in college age women.¹⁹ With these five procedural steps and the ideas of psychological flavor and personality syndrome in mind, Maslow elaborates on what feelings and perceptions classify as security and insecurity (see figure 1). But as we saw with Maslow's comments on the shakiness of the data, he offers another similar disclaimer, this time on the distinctness between security and insecurity: "We do not wish to engage in a typology...most people in society can be seen as secure and insecure...furthermore, it is not correct to imply a continuum. The truth of the matter is that

¹⁶ See Goldstein, *The Organism*, chapter seven, "Certain Essential Characteristics of the Organism in Light of the Holistic Approach," 229–240 for the analysis of anxiety and 239, 280 for the concept of security.

¹⁷ *Ibid.*, 333.

¹⁸ Hoffman, *The Right to Be Human*, 125–126.

¹⁹ Maslow, "The Dynamics of Psychological Insecurity-Security," 333.

while there is *only one kind of security*, there are many kinds of insecurity.”²⁰ His primary concern is to describe the whole personality and avoid “any apparent atomism in the attempt.”²¹ The critique of atomism is one of Maslow’s central arguments for the adoption of a holistic approach not just to the study personality, but also to the study of nature and culture. The homage to Goldstein’s holistic method and critique of atomism is evident.²² And Maslow then points out that the separation of feelings and perception into personality syndromes like security and self-esteem are merely communicative necessities; again, language traps the true expression of the whole personality (see figure 2). Somehow the whole personality exists between and in the gaps and spaces of words.

A few important differences in the origins of the self-esteem and security are important to recognize, especially since the previous discussion on Maslow’s method and its foundation in *The Organism* focused on the security syndrome. Self-esteem as a concept does not come from *The Organism*. Maslow did his doctoral research on primate dominance and sexuality under Harry Harlow, a pioneer in primate research, at the University of Wisconsin-Madison between 1931 and 1934. Harlow’s initial research interest was the localization of intelligence in the brain cortex of humans and he planned to perform research on primate brains to understand localization. He wanted to know in what anatomical structures higher intellectual operations took

²⁰ *Ibid.*, 333 (my emphasis).

²¹ *Ibid.*, 336.

²² Goldstein has a chapter titled “The Organism Viewed in the Light of Results Obtained Through the Atomistic Method. The Theory of Reflex Structure of the Organism,” in which he articulates a full attack on the study of life by “[dissecting] the behavior of the organism in order to discover those “part processes” that can be considered as governed by *mechanistic laws* and as unambiguous, elementary reactions to definite stimuli.” Goldstein continues on to attack the isolation of part processes as artificial and revealing little fact or knowledge about an organism. He asserts that only reference to a “whole” makes “part processes” intelligible. Maslow is clearly following this line of analysis and criticism. See Goldstein, *The Organism*, 66–69, and *passim*.

place; he wanted to see where the mind “lived” in the brain.²³ This is important because it draws an interesting connection to Goldstein and his rejection of the theory of localization. Maslow would have understood Goldstein’s dissent and why it was significant. Harlow’s interests and career serve to represent the view of the relationship between the brain and mind in American academic psychology at the time; it was decidedly committed to a locationist model of the brain and the scientific epistemologies used to produce it. For Maslow though, his doctoral years were productive under Harlow and he essentially applied Freudian theories of sexuality and Alfred Adler’s theory of power and dominance to his study of primate behavior.

What is remarkable is that Maslow used his conclusions about primate behavior—heavily influenced by psychological theories of human sexuality and power—to make broad conclusions about women’s self-esteem based upon a so-called exhibition of dominance in expressions of sexuality.²⁴ “We can know much about a woman’s self-esteem in general simply by her choice of clothes,” Maslow states flatly, implying that form-fitting, sexier clothing indicates higher dominance and thereby higher self-esteem.²⁵ There are many statements like this about women’s sexuality and dominance throughout the article; this example is far from unique. The degree of circularity is important to notice as it demonstrates how the idea of “objective” studies of primate behavior was heavily guided by theories of human behavior, sexuality and mentality. It is a process of creating systems of analogies that thereby lead to the creation of scientific knowledge. Self-esteem reached the status of a fundamental process in human personality via this circuitous, dialectic and anthropomorphic route; and a similar process will take place between a philosophical theory of mind known as associationism and the locationist model of the brain.

²³ Hoffman, *The Right to Be Human*, 50.

²⁴ Hoffman, *The Right to Be Human*, 55–62.

²⁵ Maslow, *Motivation and Personality*, 35.

To finalize his description of the personality syndrome, Maslow asserts:

We should then characterize two specific behaviors as belonging to the same syndrome if they have the same coping aims with respect to a certain problem, that is to say, if they were *doing the same thing about the same something*...we might then say of self-esteem syndrome, for instance, that it is the organized answer of the organism to the problem of acquiring, losing, keeping, and defending self-esteem, and similarly for the security syndrome that it is the organism's answer to the problem of gaining, losing, and keeping the love of others.²⁶

Once he establishes a linkage between personality syndrome and its sub-syndromes of self-esteem and security – the pains and problem of self-esteem and love – Maslow draws a similarity of his definition to that of a Gestalt, a structural perception of a mental phenomena that indicates a unity or wholeness between the individual parts of the phenomena.

Gestalt psychology is best known by its catch phrase, “the whole is greater than the sum of its parts,” which importantly was coined not by a psychologist, but rather by the musician and philosopher Christian von Ehrenfels.²⁷ It is important here to acknowledge the significant influence of Gestalt psychology on Maslow's work, particularly the work of Max Wertheimer who was a student of Ehrenfels.²⁸ Wertheimer, the founder of Gestalt psychology, relocated to New York from Frankfurt in 1933 after hearing a radio address by Hitler. In his relationship with Maslow, Wertheimer played a fatherly role.²⁹ Wertheimer and Goldstein were friends and it is perhaps through Wertheimer that Maslow was introduced to Goldstein.³⁰ Strong points of convergence exist between Gestalt psychology and Goldstein's work.³¹ A valuable future study

²⁶ Maslow, *Motivation and Personality*, 34 (my emphasis).

²⁷ Anne Harrington, *Reenchanted Science: Holism in German Culture from Wilhelm II to Hitler* (New Jersey: Princeton University Press, 1996), 28. Maslow uses the saying in his article in his discussion of Gestalt psychology, *Motivation and Personality*, 36.

²⁸ *Ibid.*, 108.

²⁹ Hoffman, *The Right to Be Human*, 90–94.

³⁰ *Ibid.*, 108.

³¹ Harrington, *Reenchanted Science*, contains chapters devoted to Goldstein and Wertheimer. See 151–153 for Goldstein's use and modification of Gestalt concepts and methodology. In

would examine in detail Wertheimer's influence on Maslow. What is interesting, however, is that Maslow both allies and differentiates his structure of a whole personality composed of sub-syndromes not with direct reference to Wertheimer, but rather to the music theory of Ehrenfels:

Ehrenfels' first criterion of an organized mental phenomenon was that the separate stimuli, e.g., the single notes of a melody, presented singly to a number of persons, would be lacking something that would be experienced by an individual given the organized totality of stimuli, e.g., *the whole melody*...[and] we shall be able to discover *the flavor*...of the specific behavior only by understanding the whole of which it is a part.³²

The second Ehrenfels criterion was that the transposability of the elements within a whole. Thus a melody retains its identity even when played in a different key with all the single notes being different in the two cases. This resembles the interchangeability of the elements in a syndrome.³³

Here, personality becomes song in addition to food. Flavor and melody are the personality, while the interchangeable ingredients and notes are the sub-syndromes.

Notwithstanding this growing system of resemblances of taste and hearing that have a common language of needs for love and self-esteem, Maslow recognizes that there is the "problem of a positive definition of a Gestalt...if we also require that this definition be heuristic, workable, and concrete"³⁴ and he turns to Goldstein's concept of the organism to ground the theory of the personality in something that is physical and biological yet at the same abstract. "It is the organism itself that is mostly highly organized and intradependent as Goldstein has amply *proved*. It would seem the best place to seek for the demonstration of the laws of organization

Harrington's description, I find a striking parallel with how Maslow integrates Gestalt psychology and Goldstein's concepts. It gives the impression that Goldstein had already performed the integration Maslow claimed he was doing, and that Maslow is merely restating this integration, rather than performing it himself. This strengthens my argument of the centrality of Goldstein's influence on Maslow.

³² Maslow, *Motivation and Personality*, 35.

³³ *Ibid.*, 35.

³⁴ *Ibid.*, 36.

and structure,”³⁵ Maslow asserts. From there, he claims the personality syndrome and its method of study are not merely applicable to the mentality, but “can be a theoretical basis for the unified world view that we have called the holistic-dynamic point of view and which we contrast with [the] general-atomistic point of view.”³⁶ Maslow believes he has constructed a new worldview, a new system of science that allows for the inner nature, the essence of being human to be understood.

These articles are the first places we can see how pervasively Maslow uses Goldstein’s abstract yet biological concept of “the organism.” He deploys Goldstein’s methodological and epistemological concept of a “prototype” of a biological organism in his description of the personality syndrome. Goldstein’s describes the prototype character of the organism as one that adequately organizes and orders empirical findings established by the study and observation of forms of life and their biological processes – it is an idea that makes biological information meaningful, and thereby more than information, but rather, knowledge. These prototypes achieve coherency and stability through exhibiting the character of a “Gestalt.” As mentioned, Maslow uses the concept of a Gestalt but modified by the concept of the organism. And similar to Goldstein’s search for a “reason in knowledge”—a set of ideas that bring order, structure and wholeness to biological phenomena—Maslow aims at more than description of psychological functioning: he seeks to establish a paradigm for understanding life as a manifestation of psychology.

However, important and consequential differences emerge between Maslow and Goldstein that are rooted in the application of methods designed to study biological phenomena to examine psychological ones. In *The Organism*, Goldstein clearly states that he is focused on

³⁵ *Ibid.*, 36 (my emphasis).

³⁶ *Ibid.*, 36.

observable, outward behavior called “performances” exclusive of “mental activities, attitudes, and affectivities” while Maslow focuses on exactly those things Goldstein excluded. It is this focus on interiority that is the process of defining subjectivity and the modern psychological individual; Goldstein was wary of using the methods and epistemologies he advances in *The Organism* to study interior life:

On the contrary, such an attempt to apply views and laws of one field of research to another seems very problematic to me, as long as it has not been proven that the two fields are of the same nature. Such an attempt seems to me to be particularly questionable in the present instance [of Gestalt psychology] because, in my opinion, psychology could well be regarded as a special field of biological knowledge, but not conversely.³⁷

It is important to recognize a circularity of influence of methods and epistemology between biology and psychology that demonstrates deep interrelatedness; psychology theory gains scientific credence by grounding its claims in biology. However, as I demonstrate in the case of the brain in my chapters on Goldstein, biology and anatomy is subject to, and in an important sense, created by theories of psychology and mindedness. This expands on the point about the intersubjectivity between primates and humans in the creation of the theory of self-esteem: primate behavior is in a sense created by human sexuality and, then, reflexively human self-esteem is created from theories of primate dominance behavior. A further problematic factor also impinging in the epistemological relationship between psychology and biology is that of philosophy, particularly metaphysics. What is important to recognize is how in the modern

³⁷ He continues on to strike a delicate balance between his theory and Gestalt theory, essentially saying that the various theories of Gestalt psychology requires his theory of the organism to have validity. In this context, it makes sense to view Maslow work as the application of Goldstein’s theory to establish a psychological construction of personality built off a biological theory of forms of life known as organisms. For all organisms, knowledge of gestalts can only flow from the “recognition of the essential nature of the organism,” which in humans is problematic to determine. I expand on what Goldstein means by the term “essential nature” in my later chapters on Goldstein. For now, the definition of the essential nature of the organism is those tasks that it must complete successfully to live and grow. In Maslow’s case, he recognizes those tasks as the satisfaction of the hierarchy of needs, which includes self-esteem and security.

period psychology has come to mediate philosophy and biology. To the degree that subjectivity is stricken with moral meanings like that of self-esteem and security, so is the brain and the body, science and medicine. In Maslow's case we can see this clearly in his studies on sexuality, which he links to self-esteem defined as dominance behavior. In so far as primate expressions of dominance are "biological" and Goldstein's theories address biological phenomena and philosophical problems in scientific method, Maslow's psychology is an exercise in this mediation of science and philosophy.

Magnification Level No. 1

As Maslow nears his completion of the description of the personality syndrome, he begins to propose methodological and epistemological tools with which to guide future study into motivation and personality. His central question and problem is one of classification—striking the difference between sameness and otherness: "how then shall we classify if our data are *not* essentially different and separate from each other?"³⁸ He enters a space of norms and naturalness when he indicates his epistemological position. He uses various phrasings to say that things just go together, because it feels right:

For instance, conventionality, morality, modesty and regard for rules *seem to fall together or belong together very naturally*, as contrasted with another group of clustering qualities, such as self-confidence, poise, unembarrassability, lack of timidity and shyness.³⁹

Conventionality, morality, modesty and regard for rules group under low dominance or low self-esteem, while self-confidence, poise, unembarrassability, lack of timidity and shyness naturally indicate high dominance or high self-esteem (see figure 2). A liberal political outlook is associated with high self-esteem and a set of values that are defined as other than conventional

³⁸ *Ibid.*, 47.

³⁹ *Ibid.*, 46.

morality typically associated with conservative political outlooks. And the use of a neologism of ‘unembarrassability’ is indicative of the ambiguities inherent in language he is trying to overcome; through out his career he would extensively use neologisms as a communicative strategy to convey his revolutionary concepts in psychology.⁴⁰ He will even propose that a new language is required, echoing a similar sentiment of continental philosophers like Heidegger and Wittgenstein.⁴¹ Psychology, politics and values group together “naturally”. Personality syndromes have “hierarchies of importance and clusterings” that express “the inner nature of the [motivation and personality] material.”⁴² Here, Goldstein’s nature of the organism, a form of living Being achieved over time by achieving of an adequate of response to the catastrophic violence of nature is altered. Maslow’s inner nature of the organism is human and not an abstract form of living substance like that of Goldstein’s conception. Maslow defines personality and the inner nature of the human beings with definite contents. This material, or perhaps better understood as non-material, are natural clusterings of values as tied to motivation.

It is in this transformation that we can see how German holism is transformed in American psychology. It changes from an abstract methodological and epistemological statement of how to study living beings to how to define in normative terms the personality and a hierarchy of human motivation. By personality of non-materiality that “spontaneously groups” together, it

⁴⁰ Maslow would trying to create a language of Being by creating a B-[word] construction. For example, there would be B-language, B-love, B-art, B-politics, and B-guilt. See the glossary in Maslow, *Future Visions*, 203–205 for definitions and *passim* for the use of these terms. He would contrast B-language against the “old” language of deficiency, denoted by the construction of D-[word]. He would consider the basic needs as D-needs. See the essay “Higher Motivation and the New Psychology,” 88–100, especially 93, for the contrast. He uses the example of eating a steak (taste and flavor) to make his point about motivations beyond those of the basic needs. He also mentions a taxonomy of 16 B-Values though he does not list them.

⁴¹ I address these problems of language in chapter two as part of the context for understanding the problems Goldstein is addressing in his work.

⁴² Maslow, *Motivation and Personality*, 46, 47.

is possible to see a new type of American subjectivity emerge that is defined by its normative qualities, its naturalness.⁴³ The idea of a spontaneous grouping of characteristics of character and personality is part of a shifting order of interiority emerging in the twentieth-century. The movement from the work of Goldstein to that of Maslow is emblematic of this shift, which I expand on in my conclusion.

While Maslow has given the example of conventionality versus self-confidence, it is merely an example; he has not solved “the common problem of all classifications, that of the principles on which the classifying shall be based.”⁴⁴ To do so, he again takes a strategy of analogy.⁴⁵ He proposes two concepts with which to group inquiry into motivation and personality: “levels of magnification” and the “concept of syndrome concentration”. The concept of syndrome concentration as Maslow envisions is an exercise in statistical correlation between the various data elements of motivation to classify them together in natural clusterings. “If we knew all the data and their interrelationships, this would be easy,” Maslow states. He feels that statistics would valid his claims about subjectivity. Consider the following passages:

Probably our perception of clustering, the subjective feeling that various elements go together naturally, would be reflected in the correlations that would be obtained if we could get measures of the elements.

Probably self-confidence and poise are more closely correlated than poise and unconventionality.

Perhaps a clustering could mean in statistical terms a high average of intercorrelation between all members of the cluster.

Supposing we assume the intracluster correlation to be $r = 0.7 \dots$ ⁴⁶

⁴³ *Ibid.*, 47.

⁴⁴ *Ibid.*, 47.

⁴⁵ *Ibid.*, 47. “The following analogies are offered as indications of the direction in which we must probably look for such a holistic technique of classification.”

⁴⁶ *Ibid.*, 50.

I'm less interested in that he is speculating but rather how he can speculate, what allows him to speculate – the hidden processes that allows him to posit such groupings, the elements that constitute the subjective feeling that allows him to say with such certainty, "probably," "perhaps," "presumably" and "supposing." It is these hidden processes that are the interstitial ties of the spontaneous groupings he uses.

For levels of magnification, Maslow draws the analogy of histological inquiry into the functioning tissues with the technology of a microscope. Technology and tissues are needed to see:

the whole character, the general structure, the formation, and the interrelationships in their totality by holding the slide up to the light and looking at it with the naked eye, thereby encompassing the whole. With this whole picture held clearly in mind we then examine one portion of this whole at a low magnification, let us say ten times.⁴⁷

The naked eye, then, sees the whole, the totality of personality and motivation; sight unadorned transforms the non-place of mentality into the materiality of the body, all by the radiance and glow of light. Once illuminated, the general structure revealed, a microscope of mind allows one, with increasing levels of magnification, to see deeper into the specific organization of motivation or personality, in this case, self-esteem and security. "We may take the security syndrome and examine it as a whole, that is at the level of magnification No. 1," Maslow states.⁴⁸ He then refers back to his criteria that define and guide inquiry into motivation and the personality: "specifically this means studying the psychological flavor or meaning or aim of the total syndrome as a unity."⁴⁹ All this examination is done at increasing levels of magnification, from ten to fifty, and so on. Level 2 would study "overambition, overaggression...or their apparent opposites e.g., bootlicking submissiveness, masochistic trends..." while Level 3 would study at

⁴⁷ *Ibid.*, 47–48.

⁴⁸ *Ibid.*, 48.

⁴⁹ *Ibid.*, 48.

a finer level each of those normative qualities.⁵⁰ This is a strategy of Russian dolls, one of boxes within boxes, where the box of bootlicking is contained within the box of security: it is an attempt to establish a “stable relation of contained to container.”⁵¹ And the container for which Maslow became famous is a hierarchy, indeed, a Russian doll of needs.

A Russian Doll of Needs

In 1943, the same year the personality articles were published, Maslow published the article, “A Theory of Human Motivation,” that described the hierarchy of needs.⁵² He intended the article as part of the series of ideas on personality. As I have demonstrated, motivations or needs, supplied the epistemological ground for the study of the personality as well as the personality itself. Personality features very little in the article. Most writing on the hierarchy of needs has not made this connection explicit, while arguably it is an implicit understanding that motivations move in some kind of structure of mental organization, whether mind, consciousness or personality. Instead, he focuses on what “moves” mentality and argues that five basic needs exist in human beings: physiological needs, safety or security needs, belongingness and love needs, esteem needs, and the need for self-actualization (see figure 3). As I have discussed security and self-esteem, I will briefly discuss physiological and belongingness and love needs and explicate how the hierarchy works. Self-actualization requires a separate analysis. It is the most important point of convergence between Maslow and Goldstein; the notion of self-actualization as a need of the organism is taken directly from *The Organism* and, importantly, modified in a fundamental way to fit into the model of a personality.

⁵⁰ *Ibid.*, 48.

⁵¹ Michel Foucault, *The Order of Things: An Archaeology of the Human Sciences*, (New York: Vintage Books, 1994), xvii.

⁵² Abraham Maslow, "A Theory of Human Motivation," *Psychological Review*, 50 (1943): 370-396.

For most students of the hierarchy of needs, physiological needs are the most obvious and easiest needs to understand and accept as factual. That they are the bases of human action and personality seems self-evident. It conforms to most people's experience in everyday life. However, there is some nuance that Maslow sees: "It seems impossible as well as useless to make any list of fundamental physiological needs, for they can come to almost any number one might wish, depending on the degree of specificity of the description," he points out and thereby complicates the notion of an easy definition of physiological needs.⁵³ It seems there are in infinite variety of boxes all the way up the levels of magnification. So, what exactly are the physiological of needs? He mentions hunger, sex and thirst, specifically because they are "localizable somatically," presumably meaning, in the broadest sense possible, they most clearly emanate from the body; however, it is not clear where: the stomach, the genitals, the blood that transports nutrients or hormones of desire, the cells that want them? Or perhaps the brain or the whole body? Sleep, fatigue and, interestingly, maternal response are considered physiological yet he thinks that they are an exception to a localizable emanation. Again, what parts of the body sleep or respond to the calls of a child? The brain or the whole body? Already there is a problem in a clear distinction between the boxes of the body. Yet, we know what he means and agree that what motivates action primally, what stirs and moves life most is hunger, sex, thirst, and fatigue. This problem of localization of basic needs Maslow points out is the same problem that Goldstein sees in the theory of the localization of brain function: where is sight located in the brain? Or vision? Or, most consequentially, language?

The description of the functioning of the hierarchy given in the section on physiological needs serves as the general description of how the hierarchy works. Needs are a hierarchy

⁵³ Maslow, "A Theory of Human Motivation," 372.

because, “if all the needs are unsatisfied, and the organism is dominated by the physiological needs, all other needs may become simply non-existent or be pushed into the background.”⁵⁴ He seems to say that security will be traded for food, and perhaps even, self-esteem for sex: “all capacities are put into the service of [physiological needs] satisfaction, and the organization of these capacities is almost entirely determined by the purpose of satisfying [those needs].”⁵⁵ Yet, once these *base* or low level needs are satisfied:

At once other (and higher) needs emerge and these, rather than physiological hungers, dominate the organism. And when these in turn are satisfied, again new (and still higher) needs emerge and so on. This is what we mean by saying that the basic human needs are organized into a hierarchy of relative prepotency.⁵⁶

Higher and higher up the hierarchy of needs from animal layers of hunger and desire to the heights of society (safety) and culture (belongingness and love), individuality (self-esteem) and spirituality (self-actualization). “The peaceful, smoothly running, good society ordinarily makes its members feel safe enough from wild-animals, extremes of temperature, criminal assault, murder, tyranny, etc.,” Maslow claims regarding safety needs.⁵⁷ For needs of belonging and love Maslow claims of humans, “he will hunger for affectionate relationships with people in general, namely, for a place in his group, and he will strive with great intensity to achieve this goal.”⁵⁸

⁵⁴ *Ibid.*, 372.

⁵⁵ *Ibid.*, 372.

⁵⁶ *Ibid.*, 372. The term prepotency is important to note because of its origins in biology and evolution. One of the first instances of its use in a description of life processes was in Darwin. He used the term in the *The Origin of Species* in 1859: “A plant's own pollen is always prepotent over foreign pollen.” The connections between the activity of classifying a hierarchy of needs and classifying biological phenomena are important. While these activities are different, the act of separating biological phenomena is not as distinct as it seems from what Maslow is doing in the hierarchy of needs. I suggest this blurriness exists in similar theories of human subjectivity in the period, for example, like Erik Erikson's theories of the human identity and the life cycle. See the entry for “prepotent” in the Online Oxford English Dictionary for the etymology of the word and use in Darwin.

⁵⁷ *Ibid.*, 379.

⁵⁸ *Ibid.*, 381.

Then comes the dynamics of the self-esteem needs and personality syndrome, and once met, the emergence of the pinnacle of Being is reached: that of self-actualization.

The Thinker, The Poet, The Man of Action

Even if all these needs are satisfied, we may still often (if not always) expect that a new discontent and restlessness will soon develop, unless the individual is doing what he is fitted for. A musician must make music, an artist must paint, a poet must write, if he is to be ultimately at peace with himself. What a man can be, he must be. This need we may call self-actualization.⁵⁹

So Maslow says of self-actualization. The degree to which individual's capacity meets the potentiality of their "prototype"—the musician, the artist, the poet—indicates the degree to which the individual is self-actualized, or in Maslow's nomenclature, "fully human."⁶⁰ We can locate the specific origins of the concept of needs and self-actualization for which Maslow became famous in *The Organism*:

It is better we speak of "needs." The organism has definite potentialities, and *because it has them it has the need to actualize or realize them*. The fulfillment of these needs represents the self-actualization of the organism. *Driven by such needs, we are experiencing ourselves as active personalities not, however, passively impelled by drives experienced as conflicting with the personality.*⁶¹

⁵⁹ *Ibid.*, 382.

⁶⁰ The phrase "fully human" has been repeatedly associated with Maslow throughout uses of his concepts and work as well as commentary and literature on them. The context for understanding the phrase will be explain further in the thesis; for now, it indicates the idea when human capacities are equal to human potentialities. In simple terms, it can be understood as when ability is the same as capacity, whether physical, emotional, moral or spiritual.

⁶¹ Goldstein, *The Organism*, 168 (my emphasis). Maslow agrees with Goldstein's conception of the organism as an active agent and personality that is not passively determined by drives. In doing so, Maslow makes a similar argument to Goldstein that causality is not an appropriate epistemological basis for studying the organism and the personality: "Still another way of demonstrating the inadequacy for psychology of conventional cause-effect notions is to show that the organism is not a passive agent to which causes or stimuli do something, but that it is an active agent entering into a complex mutual relationship with the cause..." See Maslow, *Motivation and Personality*, 30. For the similarity to Goldstein's criticism of the concept of causality see 171, 317–320 in *The Organism*. Goldstein anchors his criticism in the advent of general and specific relativity, which established the idea of a probabilistic universe as well as atomic structure as opposed to a causal, mechanistic model described by classical Newtonian

In Goldstein's passage, motivation and personality are united. Again, personality is the container, motivation is the contained; at least, so it seems. This is the key passage that shows the crucial influence of Goldstein on Maslow. Both self-actualization and needs are clearly stated in the context of an organism that has a definite set of potentialities that correspond to its form. From what I have explicated about Maslow's typology of security and self-esteem, it is not difficult to see how he moved from Goldstein's abstract form of life to the ideal type of the musician, artist and poet. It is easy to imagine that Goldstein remained safely abstract, while Maslow jumped into the perilous active of assigning definite qualities to the prototype nature of the organism. However, there is little recognized passage in *The Organism* that mirrors Maslow's passage closely. It is remarkable because it appears suddenly and unexpectedly in the text; it is an anomaly: "we can distinguish between three principle forms of human behavior, which we recognize in the prototypes: the thinker, the poet, and the man of action."⁶² Goldstein continues to describe the types as interrelated and constitutive of an individual personality. When "one aspect [of the type] usurps" the other, then an individual is sick. But when properly balanced, an individual can experience a kind of centering that is closer to the way Maslow described the experience of self-actualization. Consider this passage of Goldstein's:

The highest form of centering manifests itself in a number of formal attributes that ultimately represent *one and the same thing* but that are, as a rule, *named differently*: freedom, meaningfulness, *action springing from the whole personality*, productivity, capacity to meaningful actions, capacity to adequate shifting in attitude, capacity to absorb milieu expansion or modifications.⁶³

mechanics. This is an important overarching epistemological paradigm that structures Maslow's entire body of work.

⁶² Goldstein, *The Organism*, 371.

⁶³ *Ibid.*, 372.

The idea of “formal attributes that represent one and the same thing but that are, as a rule, named differently” is equivalent to Maslow’s attempts describe the personality attributes of food and song as “all saying the same thing.” The parallel challenge of language they faced ran deep.

However, there are significant differences between the meaning and function each author ascribed to self-actualization. Maslow acknowledges that Goldstein’s term “is being used in a much more specific and limited fashion. It refers to man’s desire for self-fulfillment, namely, to the tendency for him to become actualized in what is he potentially.”⁶⁴ It is the desire for a not-yet-musician to become a musician, a nascent poet to become a poet. For Goldstein, however, self-actualization answers the question of why the organism needs to actualize its potentialities. It is because self-actualization is a fundamental drive in life. He means this in the same way that Freud meant humans have both sexual and self-preservation drives. It should be pointed out, however, that Goldstein displays some tentativeness and unease in his description of self-actualization as a “force” or “drive”; it instead seems to operate as more as a kind of soft principle: “the tendency of normal life is toward progress and activity.”⁶⁵

On a second look at Goldstein’s passage on self-actualization, it is worth asking: why does the organism “need to actualize or realize” its potentialities by simply by virtue of having them? It is possible to imagine that an organism has potentialities but doesn’t need to realize them. And what are these potentialities specifically? This is the question that Maslow is asking and trying to answer in his work. This is why he proposes the type of the musician, the artist, and the poet. But in another sense, the organism has the need to actualize them because there is suffering and pain in the world; Nature is the source of this pain and violence for all organisms, and humans bear the additional repression and burden of culture. In a particular organism’s quest

⁶⁴ Maslow, "A Theory of Human Motivation," 382.

⁶⁵ Goldstein, *The Organism*, 162.

for a kind of inhabitation of its perfect form, it is the moments where capacity meets potentiality, where a kind of reverence is implied. For Maslow, in humans, where capacity meets potentiality, a kind of holiness and sabbath in everyday life emerges. It is a sabbath because Nature and culture, and the privation they impose, have been met; they have been brought into harmony with the self. The human being becomes capable of meeting the origins of suffering in the world. In Maslow, we can see the idea of a sabbath in everyday life most clearly. For him, this is self-actualization. In Goldstein, however, an element of suffering remains eternal because time is eternal: the organism is “by its very nature transitory and on the road to death.”⁶⁶ The reason lies in a fundamental difference between their conceptions for self-actualization; they are not the same and in some senses, wholly different. In one time is eternal in light of death, while the other is a suspension and overcoming of time in a transcendence of desire and need.⁶⁷

Holy Order: heiro-arche

An unsettled point in the idea of needs and self-actualization is that they should be arranged in a form of a hierarchy, most often visualized as a triangle (see figure 3). Where does the idea that there is a classification of ‘higher’ and ‘lower’ needs come from? Like the idea that humans have distinct categories of needs, including the need to self-actualize, Maslow obtains the notion that they are arranged in a hierarchy from *The Organism*. Goldstein has a set of

⁶⁶ Goldstein, *The Organism*, 375.

⁶⁷ Maslow later refers to this experience of an irruption of everyday reverence as “peak experience.” The concept emerges directly out of the concept of self-actualization. However, it is not clear whether one must be self-actualized to have such experience, but it is a central concept he develops later in his work. See for example *Religions, Values and Peak Experience* published in May 1970, a month before his death. It is vital piece to understand the historical dynamics at play in theories like Maslow and the broader culture. A future study that extends the analysis of this thesis to incorporate peak experience would be valuable. My analysis here is derived from Eric Santner’s *On the Psychotheology of Everyday Life*, which puts the work of Freud and Franz Rosenzweig in dialogue. I see Santner’s compelling and utterly original analysis of a suspension of an “undeadness”, the fantasies penetrating everyday living, into the “midst of life” as loosely parallel to what Maslow describes.

complicated thoughts regarding the idea of any part of life, biological or otherwise, being arranged in a hierarchy. He is cautious and wary of such arrangements, yet ultimately will approve of such an order. He quotes Goethe as the lead into his chapter, “The Nature of Biological Knowledge”:

All disputes of antiquity and modern times, up to the most recent time, are caused by the division of that which in its nature God has produced as one whole.⁶⁸

This quote could be said to stand for Goldstein’s philosophy of science of holism – it does not divide Nature. The suggestion is that, a hierarchy in Nature is such a division, and an old problem. It is in this chapter that he presents self-actualization as a “capacity of the organism to become adequate to its environmental conditions. This is a fundamental biological process by virtue of which the actualization of organisms is made possible.”⁶⁹ This is how Maslow views self-actualization in human life, but culture and society substitute for the environment. It is in this chapter, and the ones that follow, that Goldstein is at his most poetic and philosophical; it is easy to imagine Maslow finding these passages stirring and moving, perhaps inspiring his commitment to finding a new way in science.

Regarding, the ordering of the organic world, as opposed to “non-living” events, Goldstein does not think there is an inherent, fundamental structure to Nature that is hierarchical. He believes, “Within the framework of scientific method, we can and must confine ourselves to such assumptions as are requisite for making the facts intelligible.”⁷⁰ In other words, the idea that there is a criterion with which to separate and study the world of living substance is a fiction, one that leaves facts unintelligible. On the nervous system, he comments, “the brain is regarded as

⁶⁸ Goldstein, *The Organism*, 305. The quote is from Goethe’s *Analyse und Synthese* (*Analysis and Synthesis* in English. My translation.) published in 1829.

⁶⁹ Goldstein, *The Organism*, 308.

⁷⁰ *Ibid.*, 321.

the “higher” organ as distinct from the peripheral, the “lower” organs” and then warns, “we must be very cautious with these and similar hierarchic differences.”⁷¹ This process of differentiating between organs on the basis of their visible separateness and assumed isolation is known as morphology – the study of the characteristics and forms of organisms. Goldstein rejects that, based on morphology, a ranking of organs can occur. He rejects it because he indicates a new method of understanding of how the body works that focuses on functions – how things work – and not characteristics – how things look – is superior. It makes no sense that parts of the brain—the medulla oblongata, the cortex, the “old brain”—should be ranked on how they look and how their tissues are different. Rather, “the new principle of articulation tries to do greater justice to the idea of functional organization of the whole organism.”⁷² Yet, he also rejects this principle.⁷³ He believes it is merely adding, “new significance to old notions,” those of morphology, a hierarchy of systems of organs like the nervous system or the circulatory system.⁷⁴ For Goldstein it is neither characteristics of organs nor the functions of organs, their relative complexity, and their importance to sustaining the life that allows sameness or otherness to occur between organisms. The differentiation between animals and humans cannot be made on such a basis. The parallel that is being drawn between what Goldstein is doing here, mediating sameness and difference between life – animals and humans, is the same thing that Maslow is doing when

⁷¹ *Ibid.*, 364. He cites the views of Georges Cuvier (1769–1832), an important French zoologist and naturalist, who established the field of comparative anatomy as an example: “Cuvier talks of a hierarchy in which the central nervous system, as the center of the animal functions, occupies the highest level, the heart and the circulatory organs are centers for the vegetative system next below, and the lowest are the digestive organs that as the sources of mater and energy take care of the preservation of life.” 363. Goldstein rejects this view.

⁷² *Ibid.*, 364.

⁷³ *Ibid.*, 369–370.

⁷⁴ *Ibid.*, 364.

distinguishing between self-esteem and security, physiological needs and self-actualizations. They are doing the same things—creating order—though in different realms.

At this point, a relevant question is, is it possible to perform a classification of life? Is there a “hierarchic structure of life,” and if so, by what principle?⁷⁵ This is the same question Maslow asked in his articles on personality and motivation. To make the distinct Goldstein performs an analysis between voluntary and involuntary movement of the body:

[Voluntary movements] are more holistically determined and of higher functional significance for the intrinsic nature [of the organism]; [involuntary movements] are of less intimate relation to the whole, are of less functional significance; they rank lower in the functional hierarchy inasmuch as they require the initiation of the voluntary activity and belong to performances that *do not originate as much from the center of the personality*. The [voluntary] movements have a close reference to the self, the [involuntary] movements, more reference to the external world.⁷⁶

What does this mean? First, by the central term functional significance Goldstein’s means “essential to the nature of the organism.”⁷⁷ This phrase, in turn, signifies the capacities of the organism, which have been developed by a continued existence through time, and a development of its particular biological form of life despite a Nature that is murderous, pitiless and destructive towards all forms of life equally. The question then becomes how to identify specific capacities to differentiate a form from the mass of undifferentiated Nature. The marker of difference becomes the development of a “mind and individuality” or ego and the degree to which choice can be exercised in the face of the tyranny of the environment:

The influence of *the ego factor* in the apprehension of the world, and with that, render possible the emancipative distance between ego and world.⁷⁸

⁷⁵ *Ibid.*, 363. The title of the section in which these passages are located is titled, “The Hierarchic Structure to Life.” Indeed, Goldstein believes there is a way to organize nature in such a way.

⁷⁶ *Ibid.*, 367.

⁷⁷ *Ibid.*, 47.

⁷⁸ *Ibid.*, 367.

Consciousness and self – ego factor – life that is aware of itself and the degree to which that self is a distinct and emergent psychological entity from the world, – the organism’s slavery to Nature by involuntary responses to Nature’s attempts to murder it – is how Goldstein proposes to differentiate man from animal, and then the whole of the animal kingdom.⁷⁹ It is right after these passages that Goldstein describes the tripartite pattern of humans based on the principle of self-actualization: the thinker, the poet, and the man of action. He moves from abstract to concrete. Maslow picks up where where Goldstein left off; but it is in this context that Maslow’s work should be understood. These are the origins of the notion of a hierarchy, levels of freedom from Nature (physiological needs) to emancipation from Nature (self-actualization). The highest form of centering, the top of the hierarchy is “freedom, meaningfulness, and action springing from the whole personality.”⁸⁰ The other parts of the hierarchy – self-esteem, security, belongingness and love – only achieve coherence in light of this form of the hierarchy. Goldstein’s concepts order them and indeed are the origin of the hierarchy of needs. It is this emancipation from the suffering caused by Nature that is holy. Through the “grace of endowments”, the organism achieves, by its capacities, and for a time, peace in Nature.⁸¹

A final note on hierarchy in Goldstein remains. At the end of the “The Hierarchic Structure to Life,” he makes some commentary on the taxonomy of the natural world that bears importance for my analysis. While the degree of development of a mind and self – individuality – provide the rankings “higher” and “lower,” he expounds on his notion in regards to the diversity of nature. “Among living beings, the plants seem to us to be the least centered, representing the lowest level of individualization,” which seems to indicate the possibility of a

⁷⁹ *Ibid.*, 373

⁸⁰ *Ibid.*, 372.

⁸¹ *Ibid.*, 391.

taxonomic ranking of living substance, from plants to man.⁸² However, Goldstein is wary of such a classification. He does not think that a “simple, quantitative ranking” can be made on the basis of an organism’s ability to voluntarily choose its behavior. He makes a sophisticated argument that expresses his views on the science of taxonomy and classification:

There is a “world,” which is apprehended by some animals *but not by human beings*, who occupy the “highest” rank. There are so many variations regarding the patterning of individual apparatuses, as of the senses, the motor mechanisms, and so on, that a comparison *is impossible*, as long as we do not have a scaling basis that comprises all Being...such an attempt requires determination of the relative position of each creature within the realm of living beings, and this presupposes the knowledge of *that realm in its entirety*.⁸³

To Goldstein, science must be “restrained to modesty”; only a “few gifted individuals” may be inspired to see the prototype of all living creation.⁸⁴ There certainly is much to take inspiration from in Goldstein’s magnum opus.

The Most Outlandish Analogies

As I have demonstrated the heavy influence that Maslow has drawn from Goldstein, I would like to take some time to engage in a reflection on what they are doing and bring into focus my characterization of aspects of both their work as establishing sameness and otherness, as establishing order. These conceptual tools come from a reading of Michel Foucault’s *The Order of Things*. For all the problems noted about his analysis, I believe it provides the appropriate manner to understand where Maslow’s work exists in history as well as what historical process his work is apart of. Much of Foucault’s work addresses the notion of the creation of a ‘subject’ in the modern period; he points out essential to modern subjectivity is the

⁸² *Ibid.*, 373.

⁸³ *Ibid.*, 373, 375.

⁸⁴ *Ibid.*, 375. The context of the comments makes me believe he is referring to at least Goethe, though I do not know to whom else.

process of creating norms, also known as normativity.⁸⁵ Self-esteem and security structure a modern individual or subject precisely because they are normative. What my history and analysis of Maslow has shown is how this process has taken place and how a psychological theory of behavior and norms has defined what the individual is. As Foucault claims, “man” is a relatively new creation, since the end of the nineteenth-century; while I tend to agree with Harold Bloom who locates the creation of the human in Shakespeare, my process of writing this thesis has shown me how compelling Foucault’s view is. The unstable system of sameness and otherness of self-esteem, security and the hierarchy of needs – wrought in the hazards of language by a collection of analogies that have included food, abstract-child-objects, transference and song – demonstrate this weird and strange process of creating a kind of modern person. What Maslow is doing is creating:

A ‘system of elements’ – a definition of the segments by which the resemblances and differences can be shown, the types of variation by which those segments can be affected, and lastly, the threshold above which there is difference and below which there is similitude – is indispensable for the establishment of even the simplest form of order.⁸⁶

What is important to recognize is that in the process of creating the order of the self-actualized self, norms are *the* essential part. That self-esteem was described as the difference between ‘modest’ and ‘more masculine’, ‘conservative’ and ‘freer personality expression’ is evidence of this, but also points to a deeper dynamic of structuring female sexuality in the twentieth-century. His analysis of women’s sexual behaviors and habits led directly to his categorization and bifurcation of high-dominance (high self-esteem) and low-dominance (low self-esteem). He surveyed such sexual statuses and habits as virginity, masturbation, sex drive, sex attitude and

⁸⁵ He makes these specific arguments on normativity in his volumes on the *History of Sexuality*, which is most relevant to Maslow’s work on female sexuality. *Discipline and Punishment* is another source of arguments on normalizing judgment.

⁸⁶ Foucault, *The Order of Things*, xx.

established mathematical and statistical correlations such as ‘promiscuity index of masturbators’ versus ‘promiscuity index of non-masturbators’ and ‘virgins’ versus ‘non-virgins who masturbate’. See the figures 3–7 for examples of tables of how female sexuality was categorized, correlated and analyzed according to these sexual habits and statuses. The tables are disconcerting because they seem strange and inappropriate in their incongruity – even stranger so that studies of primates led to the category of dominance. It is this type of analysis led Maslow to the ability to state, “we can know much about a women’s self-esteem in general simply by her choice of clothes.”⁸⁷ What is normal about self-esteem is in turn defined by what is normal sexually. So normativity and sexuality merge and we can see this process in Maslow’s work.

It is the system of resemblances, the system of classification of what is normal – and how it has changed – that is part of constructing modern subjectivity. In large part that has to do with the changes occurring in biology and science, which Goldstein's work brings into view. Order, the reconciliation of sameness and otherness, occurs in:

The fundamental codes of a culture – those governing its language, its schemas of perception, its exchanges, its techniques, its values, *the hierarchy of its practices* – establish for every man, from the very first, the *empirical orders* with which he will be dealing and within which he will be at home. At the other extremity of thought, there are *the scientific theories* or the philosophical interpretations, which explain why order exists in general, what universal law it obeys, what principle can account for it, and why this particular order has been established, and not some other.⁸⁸

What is remarkable is that Maslow is fully aware of the linguistic traps of creating sameness and otherness; he realizes his analogies are strange. He, in fact, sees the English language as a fundamental problem in his enterprise; and even more remarkable, he ties his criticism of the English language *as an analogy* to his criticism of mathematics as representative of a world:

⁸⁷ Maslow, *Motivation and Personality*, 35.

⁸⁸ Foucault, *The Order of Things*, xx (my emphasis).

Atomistic mathematics or logic, is, in a certain sense, a theory about the world, and any description of it in terms of this theory *the psychologist may reject* as unsuited to his purposes. It is possible to extend these remarks to the English language itself. This too tends to reflect the atomistic world theory of our culture. It is not to be wondered that in describing our syndrome data and syndrome laws we must resort to *the most outlandish analogies*, figures of speech and various other twistings and turnings. We have the conjunction *and* to express the joining of two discrete entities, but we have not conjunctions to express the joining of two entities that are not discrete and that when joined form a unit and not a duality.⁸⁹

I do not think it is ironic that he uses mathematics to study and describe female sexuality. He is aware of the contradiction. He is searching for a “better-articulated” language with which to conduct empirical and scientific research; I do not know if he ever considered that such a language was an impossibility.⁹⁰ The problems of language in the mid-twentieth-century and their relationship to science were of concern to many philosophers and scientists. Goldstein is one of these scientists and I place him in that context in the next chapters.

During this chapter I began to see a difficult relationship between science, taxonomy, biology, psychology, and language, especially when examining the concept of a hierarchy. The idea that humans are at the top of the food chain, or even that there is such a food chain, is a familiar idea. But the questions my analysis allows and demands: is there really a food chain? Or is it just another mode of classification based on the ability to eat bigger things faster, like that of a hierarchy of “higher” and “lower” life forms based upon the degree of emancipation of the ego from the environment. The fact that quotations, “ ”, on higher and lower are even necessary demonstrates my point. The issue goes further into the heart of scientific enterprise.

Darwin, in his response to the arguably the first taxonomist, Carl Linnaeus, moved from classifying species, not by what looks similar about them as Linnaeus did—their characteristics—but by how separate biological functions evolved to help species survive.

⁸⁹ Maslow, *Motivation and Personality*, 60–61,

⁹⁰ Foucault, *The Order of Things*, xix.

Taxonomy moved from describing characteristics of forms of life to asking and answering questions about what functions had evolved to help a species survive: what purposes do certain behaviors serve, what aims are behaviors directed towards, or *what motivates* a species to survive. This system of classifying animals by their function, the answer to the question what makes them different yet the same seems clear enough: dogs are dogs and cats are cats. But once one begins to draw a separation between things, the clear notion becomes problematic.

One might ask: what are the differences between an English Greyhound, a Chinese Kunming Wolfdog and a Middle Russian Forest Wolf? The wolf is wild and likely cannot interbreed with the two domestic animals; they are all from different parts of the world; yet they are similar somehow. They all have fur, four legs and eat meat. They are part of the same genus *Canis*. But how are they different from a Siamese cat, a British Shorthair cat, or a South American Wild Ocelot—genus *Felis*? Cats have those same things: fur, four legs and eat meat. What makes them different? Linnaeus established taxonomy of difference in his *Systema Naturae* published in 1759; he separated cats from dogs and “made” them biologically distinct. He did so based on the difference in their characteristics, how they looked similar or different. As biological understandings of taxonomy still with us today shifted from Linnaeus’ method of classification based on similarity and difference of characteristics, to Darwin’s method based on evolution of survival function, the problem of sameness and difference was not solved. Again, what is the taxonomic difference between cats and dogs from a so-called objective, unbiased, incontrovertible point of view? Appeals to genetics and morphology are one option and the current methods of evolutionary biology do focus on those methods and epistemologies to classify animals. However, the matter as well the adequacy of the mode of inquiry is far from settled. Producing a genetic tree of classifications based on DNA—a hierarchy of natural life—

by computational phylogenetics is a task that still involves a method of establishing homologues—a structures of the body that are similar across taxonomic categories and are posited to descend from a common ancestor— which involves criteria of sameness and difference, like weight, sizes of bones, or behaviors. A person has to make those decisions and as such operates within existing paradigms of knowledge—empirical, cultural and scientific—of what is a marker of otherness and sameness. Determining which characteristics to code in assembling a homologue is a method fraught with uncertainty and lack of clear guidelines. How to determine the differences in behavior—to even recognize differences in human categories like sexual, emotional, social—is an enterprise subject to theorization based on understanding of what the behavior means and is for. This activity of “scientific” classification what Maslow and Goldstein are expressing hesitancy and ambivalence toward because the activity requires “the knowledge of that realm in its entirety.”

In other words, what is perceived as the cause of behavior—the theory of motivation—necessarily involves human judgments of what things are doing and why. For however, “unscientific” the hierarchy of needs appears, a hierarchy of natural groupings of Nature—plants, animals, even minerals—is less “natural” than supposed. Within these taxonomies the problem of a principle of classification remains; that they are “real” is far from settled. But if we accept the taxonomic ordering of the natural world as coherent and valid, the hierarchy of needs in this sense—and holism with it—can be thought of as something more than purely subjective, in that it was an attempt at a systematic engagement with the natural world of human psychology. To dismiss, Maslow’s work, holism, and work like it as unscientific misses the point; psychology occupies a unique place in the engagement with nature in that it mediates the non-distinct world

of Nature, the world of body, and the world of mind. It is not clear what the “real” is in psychology, and often not in the study of Nature itself.

In closing, one of my central claims in this thesis is that Goldstein’s influence on Maslow was much greater than has been recognized; to the degree that this is true I have provided considerable textual evidence and analysis to support it. What I did not expect to find is that Goldstein’s importance extended directly to *The Order of Things*. In fact, it seems he plays quite an important role in the text, which in turns adds significant weight to my historical argument that Maslow’s work representing a system to interior order that is in a specific sense modern. There is a passage in the preface of *The Order of Things* on aphasics, those that have lost the ability to either use or understand speech or both. It is taken directly from *The Organism*, though Goldstein is not credited for the example. To my knowledge, very few Foucault scholars have made this connection and understood its depth.⁹¹

Goldstein was a psychiatrist and medical doctor as well as biologist and theorist of science. This adds a certain credibility to his work, even more so that he was not merely a medical doctor in name only but was the head of neurology at a state hospital. He treated patients struck with aphasia. One of the tests he would perform on them was to lay skeins of different colored wool on a table and ask patients to select all the red ones. They could not perform the task as requested but instead arranged them along the color spectrum from darkest to brightest. While all the red skeins would be together, the patient could not pull them out as a separate pile.

⁹¹ For example, Goldstein’s importance is not recognized in *The Cambridge Companion to Foucault*. I don’t believe he is even mentioned. See Gary Gutting, editor, *The Cambridge Companion to Foucault*, (Cambridge: Cambridge University Press, 2007). In fact, Goldstein’s work made important contribution to both not only to *The Order of Things*, but also Foucault’s first book, *Mental Illness and Psychology*. For a work that does recognize Goldstein’s important contributions, see Matteo Pasquinelli, "Introduction" in *Alleys of Your Mind: Augmented Intelligence and Its Traumas*, ed. by Matteo Pasquinelli, (Lüneburg: Meson Press, 2015), 7-18.

They could not “understand.” Their language and their world were fundamentally disordered. Foucault uses this same example to demonstrate how the destruction of language disturbs the idea of order in the world, that things necessarily hold together as scientific theories claim.⁹² That he uses this in the preface to *The Order of Things* is significant.

But where Goldstein’s importance lie in *The Order of Things* is in a small reference in the chapter, “The Human Science.” At a grossly overly simplified level, Foucault is drawing his conclusion in this chapter about the place of human sciences in the world of inquiry – it is that the human sciences have their own positivity; and positivity is not the strict territory of the natural sciences – and he draws three epistemological regions: biology, economics and philology.⁹³ His main claim is that they are new disciplines that have emerged out the two preceding periods in history he has demarcated, The Classical Age (beginning appropriately mid way through the seventeenth-century) and the modern period (beginning of the nineteenth-century). I do not intend to analyze Foucault’s historical argument of a new period in history, but merely point out that it is Goldstein he cites in which we see this transition.⁹⁴ And he links the new biology as defining the new region of psychology.⁹⁵ What he claims as descriptive of this transition is the movement of epistemology that orders things in ‘functional’ terms to ‘normative’ terms. Goldstein, through treating and studying the sick, presents a sustained examination of what is healthy, what is normal. In Maslow, we see this idea of health and normality, and how it is constructed, reach a full expression.

⁹² See Goldstein, *The Organism*, 39 and Foucault, *The Order of Things*, xviii for the passages.

⁹³ Foucault, *The Order of Things*, 355.

⁹⁴ Foucault, *The Order of Things*, 360.

⁹⁵ *Ibid.*, 355.

Figure 1 – The Security Syndrome⁹⁶

<i>Insecurity</i>	<i>Security</i>
1. Feeling of rejection, of being unloved, of being treated coldly and without affection, of being hated, of being despised.	1. Feeling of being liked or loved, of acceptance, of being looked upon with warmth.
2. Feelings of isolation, ostracism, aloneness or being out of it, feelings of "uniqueness."	2. Feelings of belonging, of being at home in the world, of having a place in the group.
3. Perception of the world and life as dangerous, threatening, dark, hostile or challenging; as a jungle in which every man's hand is against every other's, in which one eats or is eaten.	3. Perception of the world and life as pleasant, warm, friendly or benevolent, in which all men tend to be brothers.
4. Perception of other human beings as <i>essentially</i> bad, evil, or selfish; as dangerous, threatening, hostile, or challenging.	4. Perception of other human beings as <i>essentially</i> good, pleasant, warm, friendly or benevolent.
5. Constant feelings of threat and danger; anxiety.	5. Feeling of safety; rare feelings of threat and danger; unanxious.
6. Feelings of suspicion and mistrust; of envy or jealousy toward others; much hostility, prejudices, hatred.	6. Feelings of friendliness and trust in others; little hostility; tolerance of others; easy affection for others.
7. Tendency to expect the worst: general pessimism.	7. Tendency to expect good to happen; general optimism.
8. Tendency to be unhappy or discontented.	8. Tendency to be happy or contented.
9. Feelings of tension and strain and conflict; together with various consequences of tension, e.g., "nervousness," fatigue, irritability, nervous stomach and other psychosomatic disturbances; nightmares; emotional instability; vacillation, uncertainty and inconsistency.	9. Feelings of calm, ease, and relaxation. Unconflicted. Emotional stability.
10. Tendency to compulsive introspectiveness, morbid self-examination, acute consciousness of self.	10. Tendency to outgoingness.
11. Guilt and shame feelings, sin feelings, feelings of self-condemnation, suicidal tendencies, discouragement.	11. Self-acceptance, tolerance of self, acceptance of the impulses.
12. Disturbances of various aspects of the self-esteem complex, e.g., craving for power and for status, compulsive ambition, overaggression, hunger for money, prestige, glory, possessiveness, jealousy of jurisdiction and prerogative, overcompetitiveness; and/or the opposite: masochistic tendencies, overdependence, compulsive, submissiveness, ingratiation. Inferiority feelings, feelings of weakness and helplessness.	12. Desire for strength, or adequacy with respect to problems rather than for power over other people. Firm, positive, well-based self-esteem. Feeling of strength. Courage.
13. Continual striving for, and hunger for safety and security, various neurotic trends, inhibitions, defensiveness, escape trends, ameliorative trends, false goals, fixations on partial goals. Psychotic tendencies, delusions, hallucinations, etc.	13. Relative lack of neurotic or psychotic tendencies.
14. Selfish, egocentric, individualistic trends.	14. "Social interest" (in Adlerian sense); cooperativeness, kindness, interest in others, sympathy.

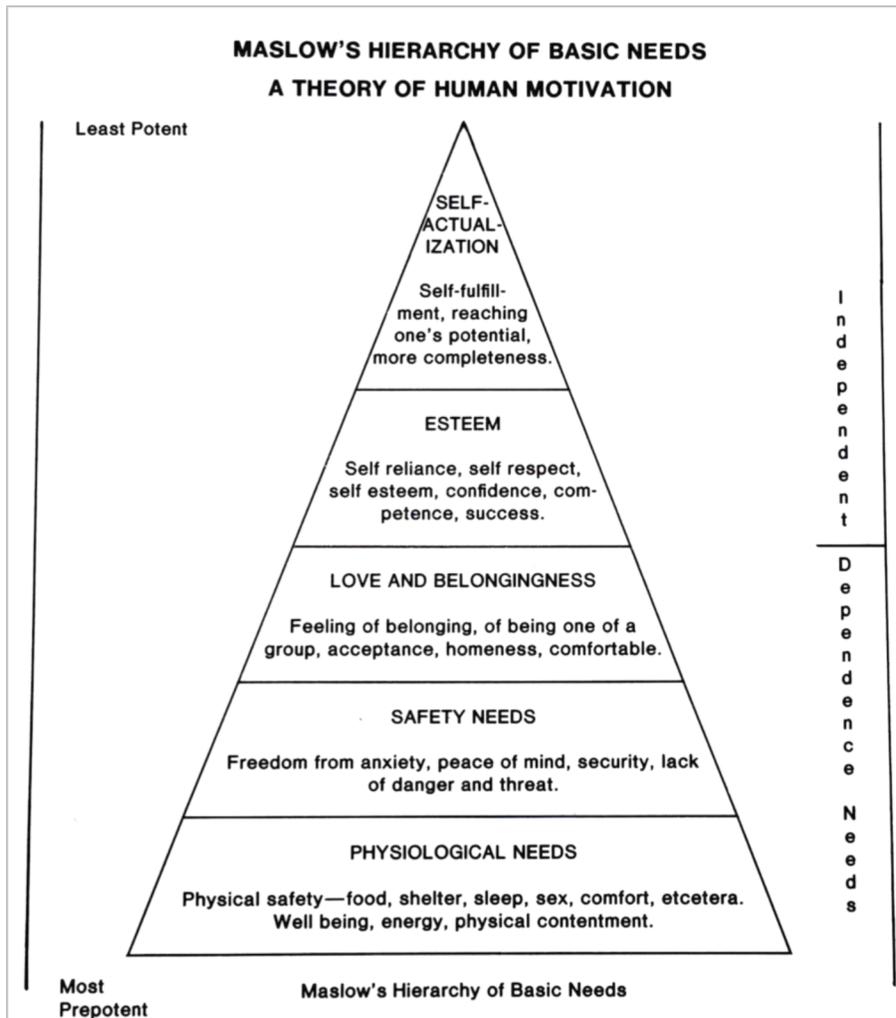
⁹⁶ Abraham Maslow, "The Dynamics of Psychological Insecurity-Security," *Character and Personality* 10 (1942), 334–35.

Figure 2 – The Self-Esteem Syndrome⁹⁷

TABLE 1	
SOME PERSONALITY VARIABLES THAT MAKE UP ONE ASPECT OF THE DOMINANCE-FEELING SYNDROME	
High dominance-feeling	Low dominance-feeling
Self-confident	Timid
Socially poised	Shy
Relaxed	Embarrassable
Extroverted	Self-conscious
High self-esteem	More inhibited
Self assured	Modest
Feeling of general capability	Neat
Unconventional	Reliable
Less respect for rules	More honest
Tendency to "use" people	Prompt
Freer personality expression	Faithful
Somewhat more secure	Quiet
Autonomous code of ethics	Introverted
More independent	More inferiority feelings
Less religious	Low self estimate
More masculine	Somewhat less secure
Less polite	Retiring
Love of adventure, novelty, new experience	More feminine
	More conventional
	More conservative
<i>Variables Relatively Uncorrelated with Dominance-Feeling</i>	
Brooding, worrying, moodiness	
Weeping	
Nervousness and "nervous" habits	
Jealousy	
Anxiety	
Happiness	
Neurosis and maladjustment	
Intelligence	

⁹⁷ Abraham Maslow, "Self-esteem (Dominance-Feeling) and Sexuality in Women," *Journal of Social Psychology* 16 (1942), 261.

Figure 3 – The Hierarchy of Needs⁹⁸



⁹⁸ Carol Tribe, *Profile of Three Theories: Erikson, Maslow, Piaget* (Dubuque: Kendall Hunt Publishing Company), 1982, 45.

Figure 4 – Intercorrelation of Dominance and Sexuality⁹⁹

	Dominance test score	Sex drive	Sex attitude	Virginity	Masturbation
<i>Criterion group</i>					
Dominance rating from interviews	.90	.20	.85	— .81	.53
Dominance test score		.17	.71	— .66	.41
Sex drive			.43	— .36	.51
Sex attitude				— .89	.68
<i>Total group</i>					
Dominance rating from interviews	.89	.14	.83	— .73	.42
Dominance test score		.10	.72	— .60	.30
Sex drive			.34	— .24	.25
Sex attitude				— .82	.55

⁹⁹ Abraham Maslow, "Self-esteem (Dominance-Feeling) and Sexuality in Women," *Journal of Social Psychology* 16 (1942), 269.

Figure 5 – Masturbation and Dominance Groupings¹⁰⁰

TABLE 3
PERCENTAGE OF MASTURBATORS IN EACH DECILE OF DOMINANCE-FEELING AS MEASURED BY THE SOCIAL PERSONALITY INVENTORY WITH A CORRECTED PREDICTION OF MASTURBATORS IN THE THEORETICAL POPULATION AT LARGE
 (See text for explanation of this corrected prediction.)

Dominance scores arranged in deciles (highest scores at top)	Percentage of Masturbators			
	Criterion group %	N	Total group %	N
61 - 182	64%	25	70%	44
32 - 60	50%	6	54%	13
16 - 31	75%	4	71%	7
1 - 15	33%	6	50%	8
0 - -12	25%	4	57%	7
-13 - -28	40%	5	62%	8
-29 - -40	33%	3	20%	5
-41 - -58	50%	2	20%	5
-59 - -81	0%	3	29%	7
-82 - -145	17%	6	30%	10
Predicted estimate of per- centage of masturbators in a general population com- parable to ours (obtained by averaging the percent- ages for all the deciles).	38.7%		46.3%	

¹⁰⁰ Abraham Maslow, "Self-esteem (Dominance-Feeling) and Sexuality in Women," *Journal of Social Psychology* 16 (1942), 270.

Figure 6 – Promiscuity Index¹⁰¹

TABLE 4
AVERAGE PROMISCUITY INDEX AND PERCENTAGE OF VIRGINITY IN EACH DECILE OF
DOMINANCE-FEELING, AS MEASURED BY THE SOCIAL PERSONALITY INVENTORY,
WITH A CORRECTED PREDICTION OF VIRGINITY IN THE THEORETICAL
POPULATION AT LARGE

Dominance scores arranged in deciles (highest scores at top)	<i>Criterion group</i>			<i>Total group</i>		
	% of virgins	Promiscuity	N	% of virgins	Average promiscuity	N
61 - 182	35%	6.5	26	41%	4.4	51
32 - 60	29%	2.6	7	33%	3.5	15
16 - 31	25%	3.5	4	50%	1.9	8
1 - 15	33%	2.0	6	40%	1.8	11
0 - -12	80%	2.4	5	75%	1.6	8
-13 - -28	80%	1.4	5	80%	1.0	10
-29 - -40	100%	0.0	3	100%	0.0	6
-41 - -58	100%	0.0	4	100%	0.0	9
-59 - -81	100%	0.0	4	100%	0.0	8
-82 - -145	83%	0.2	6	85%	0.2	13
Predicted estimate of per- centage of virgins in a general population com- parable to ours (obtained by averaging the percent- ages for all the deciles).			66.5%		70.4%	

TABLE 5
RELATION OF PROMISCUITY TO PRESENCE OR ABSENCE OF MASTURBATION; PROM-
ISCUITY INDEX EQUALS NUMBER OF MEN WITH WHOM SEXUAL RELATIONS
HAVE BEEN HAD

<i>Criterion group (N = 71)</i>		
Average promiscuity index of masturbators	7.8	(N = 37)
Average promiscuity index of non-masturbators	0.3	(N = 34)
<i>Total Group (N = 124)</i>		
Average promiscuity index of masturbators	5.3	(N = 73)
Average promiscuity index of non-masturbators	0.5	(N = 51)

¹⁰¹ Abraham Maslow, "Self-esteem (Dominance-Feeling) and Sexuality in Women," *Journal of Social Psychology* 16 (1942), 271.

Figure 7 – Virginitv and Masturbation¹⁰²

TABLE 6			
RELATION OF VIRGINITY TO PRESENCE OR ABSENCE OF MASTURBATION			
	Masturbation	Non-masturbation	
	<i>Criterion group (N = 71)</i>		
Virgin	24%	76%	N = 37
Non-virgin	82%	18%	N = 34
	<i>Total group (N=127)</i>		
Virgin	42%	58%	N = 69
Non-virgin	78%	22%	N = 58

¹⁰² Abraham Maslow, "Self-esteem (Dominance-Feeling) and Sexuality in Women," *Journal of Social Psychology* 16 (1942), 271.

PART II – BRAIN

Chapter 2

The Crises of Mind and Brain, Culture and Science

I can readily imagine, Holy Father, that as soon as some people hear that in this volume, which I have written about the revolutions of the spheres of the universe, I ascribe certain motions to the terrestrial globe, they will shout that I must be immediately repudiated together with this belief.

— Copernicus, *De Revolutionibus* 1543 C.E.

In science, crisis precedes revolution. Or, contrarily, crisis provokes suppression. The Copernican and Galilean moments remind of us of the often tenuous nature of scientific advance. The German-Jewish neurologist and psychiatrist Kurt Goldstein experienced crises, scientific and political, rooted for him, and many other Germans, in the spiritual anxieties of post-World War I Weimar Germany.¹ These feelings of inner unrest disturbing the peoples of Germany had existential dimensions of which Goldstein was aware and suffered himself. Eventually these collective anxieties would serve as the justification for the “repudiation” by the Third Reich of scientists like Goldstein and the suppression of a philosophy of science called Holism.

Holism was more than a philosophy of science. It was a challenge to the dominant scientific paradigms, large and small, that originated in *fin de siècle* Germany—and a serious challenge as I hope to show. Holism was composed of scientific methodologies, empirical findings, and epistemological foundations that its advocates argued better described certain phenomenon—in Goldstein’s case, the brain—than dominant theories of science available in early twentieth-century Germany. Their arguments were persuasive, especially the arguments

¹ See Detlev Peukert, *The Weimar Republic: The Crisis of Classical Modernity*, trans. Richard Deveson (London: Allen Lane The Penguin Press, 1991), 242: “There was a widespread search for new foundations and new values, a hunger for strong feelings and grand objectives.”

Goldstein crafted in his masterpiece, *The Organism*. Published in German in 1934, *The Organism* is a romantic work of science; yet a work of science nonetheless. It reveals a vision, struck through with stoic passion, of how to inquire into the broad phenomena that is life. The organism Goldstein parturiates is at times human, at times animal; at others, the world itself.² The way this polydimensional organism is known by science is by discovering its essence. The way the essence of this world-embedded organism is known is by “seeing” phenomenologically the organism as united within both itself and with the world.³ What makes this “seeing” scientific is its grounding in an approach to the study of phenomena that restrains theoretical bias; the use of empirical methods to observe phenomena as they appear *as part of the world*; the careful scrutiny and testing of the observations to make sure relevant data has not been excluded; and, most importantly, conclusions that accurately describe the phenomena’s place in nature. Goldstein’s science is a passionate engagement with the world that, through that very engagement, creates knowledge as I hope to show.

This unique type of engagement with the world as a means of discovering knowledge would appeal strongly to Abraham Maslow in the early 1940s when he read the English translation of *The Organism*. Maslow had long held interests in philosophy and humanism, even though he had trained in experimental-behavioral psychology at the University of Wisconsin–Madison. In his mid-30s and just established in an academic post, Maslow had become vexed by

² He refers to the world poetically as “the entirety of living creation.” Kurt Goldstein, *The Organism* (New York: Zone Books, 1995; First published in English by American Book Company, 1939), 388, 392.

³ Goldstein equates this phenomenological method with Goethe’s “Schauen”, which he refers to as, “a procedure that springs continually from empirical facts and never fails to be grounded in and substantiated by them.” Goldstein, *The Organism*, 307. See Also Hjalmar Hegge, "Theory of Science in the Light of Goethe's Science of Nature," in *Goethe and the Sciences: A Reappraisal*, ed. by Harvey Wheeler, Francis J. Zucker and Amrine Frederick (Dordrecht: D. Reidel Pub. Co, 1987), 213.

the censures of experimental psychology against inquiry into such topics as values and the purpose of science. He became alienated and isolated from his colleagues.⁴ More importantly though, I suggest his alienation went deeper than professional isolation: he wanted to find meaning and order in the world. He sought to save himself from his own suffering; a suffering that, at its origins, provoked an angry apostasy as a teenager and his indignant turn to science.⁵ Like many famous in the field of psychology, personal discontents and professional isolation, a mixture of psychological suffering and the political concerns merge into one concern, one impulse that sets the bounds and guides the course of their work and career.⁶ Goldstein's science, one conceived in the spiritual crises of war, would be one revelation to Maslow that made suffering ordered within life and salvation seem possible. And what I aim to show is that Goldstein's work, while having such emotional, even spiritual appeal, lay clearly within the bounds of empirical science—rational and committed to evidence to make claims of facts. This underlying structure to Goldstein's compelling, well-defined philosophy of science allows us to see Maslow's work in a new light that helps explain why his idea of the hierarchy of needs achieved such widespread popularity.

⁴ Edward Hoffman, *The Right to Be Human: A Biography of Abraham Maslow* (Los Angeles: Jeremy P. Tarcher, Inc., 1988), 161.

⁵ Hoffman, *The Right to Be Human*, 20.

⁶ "These are the psychologues who would transform our emotions into ideas, who would spin new universes of discourse out of their own seething discontent", Phillip Reiff, *The Triumph of the Therapeutic: Uses of Faith after Freud* (Chicago and London: University of Chicago, 1987), 39. See also Carl E. Schorske, *Fin-de-siècle Vienna: Politics and Culture* (New York: Vintage Books, 1981), 3–23, for the famous essay "Politics and Patricide in Freud's *Interpretation of Dreams*," which describes Freud's process of developing a psychology to neutralize political conflicts and overcome oedipal frustration with his father. Contrary to much scholarship on as well as popular belief about Maslow, he had enormous respect for Freud. Interestingly, one interpretation of Maslow's psychology parallels that of Schorske's in that he had an unresolved oedipal conflict not with his father, but rather, with his mother, Rose. However, Maslow seemed unable to find resolution of his hatred of her and, I believe, suffered greatly for it; in other words, he perhaps failed to commit the psychological matricide necessary for a freedom from the suffering he seemed to carry through his life.

War and the Theory of the Brain

The story begins in the early part of twentieth-century, when Goldstein treated Germany's World War I veterans with fragmented minds, broken under the traumatic weight of brain injury. He watched a fractured, humiliated Germany struggle to heal penetrant wounds to the social body. He witnessed his soldiers lost in worlds of disturbances to speech and language so at the heart of the idea of German nationality;⁷ he worried over the fate of “democratic values of reason and individual freedom” in Germany's present and future.⁸ He also felt especially attuned to the intellectual and spiritual lacerations of the war and their relationship to natural science. He wrote in 1913, one year before the outbreak of the war:

Preoccupation with natural science especially has wielded a further *disastrous influence* in that the whole of thought has become predominately directed towards external nature. This has led to an overvaluing of the external, the material and to *an undervaluing of the intellectual and the spiritual*.⁹

After the war Goldstein found an intellectual focal point for his discontent with natural science: the dominant scientific theory of brain function known as localization. It was the paradigm for both researching the brain as well as administering to patients in neurology clinics throughout Germany.¹⁰ The theory of localization posits, “that circumscribed centers controlled...particular functions,” in the brain; in other words, the theory conceptualizes the brain as composed of distinct anatomical regions that correspond to bodily and mental functions

⁷ See E. J. Hobsbawm, *Nations and Nationalism Since 1780: Programme, Myth, Reality* (Cambridge: Cambridge University Press, 1992), 37–38 for language as a source of nationalism.

⁸ Anne Harrington, *Reenchanted Science: Holism in German Culture from Wilhelm II to Hitler* (New Jersey: Princeton University Press, 1996), 156 and *passim*. I am deeply indebted to Harrington's book. It provided the historical foundation to understand the German Holism from multiple vantage points. I rely heavily on her text through out the chapter.

⁹ Quoted in Harrington, *Reenchanted Science*, 143 (my emphasis).

¹⁰ See Harrington, *Reenchanted Science*, 15–17, 79–81, and 152; and Walther Reize, *A History of Neurology* (New York: MD Publications, Inc., 1959).

like movement, sight, and, most importantly for Goldstein, speech (see figure 8).¹¹ Localization theory, also referred to as the classical doctrine, articulates a one-to-one relationship between isolated areas of brain matter and behaviors known as “performances”¹² as demonstrated by cortical injury that produces disorders:

The theory that the structure of the nervous system is based on a number of separate mechanisms, each functioning independently, led to the supposition that circumscribed injuries would result in disorders specific to the mechanism involved.¹³

The disputation and displacement of localization theory was of the first importance to Goldstein; he begins on the first page of the first chapter of *The Organism* to dismantle what he believed was a scientific dogma that denied life an essence, robbed nature of *its nature*, something that Maslow would also feel.

Goldstein’s mentor and dissertation supervisor, Carl Wernicke, developed the classical doctrine into its mature and popular form in Germany in 1874.¹⁴ Goldstein’s break from the classical doctrine adds an oedipal dimension; however, the resolution of the conflict took a form different than the traditional one: Goldstein remained loyal to his mentor through out his life.¹⁵ Indeed, he credits Wernicke with, “the wonderful detailed method of examination...for [the conceptualization] of my model.”¹⁶ Here, however, he stresses the use of Wernicke’s *method*, not Wernicke’s model; indeed he would combine Wernicke’s analytical method of

¹¹ Goldstein, *The Organism*, 33.

¹² Goldstein defines performances as follows: “We call performance of an organism any kind of behavior, activity, or operation as a whole or in part that expresses itself overtly and bears reference to the environment. Hence physiological processes, events within the nervous system, mental activities, attitudes, and affectivities are *not* performances so long as they do not manifest themselves in some overt action – any disclosable outward behavior,” *Ibid.*, 42 (my emphasis).

¹³ *Ibid.*, 36.

¹⁴ Harrington, *Reenchanted Science*, 16, 141.

¹⁵ See for example Kurt Goldstein, “Autobiography. Edited by Walter Reise,” *A History of Psychology in Autobiography*, ed. by E. G. Boring and G. Lindzey, 5 (1967): 147–60.

¹⁶ Kurt Goldstein, “Notes on the Development of my Concepts,” *Journal of Individual Psychology* 15, no. 1 (May 1959): 5.

studying biology and physiology with his holistic method in creating his analysis of the organism. Wernicke's model of the brain is largely based on the study of aphasiac patients due to brain injury, which he published in *The Aphasic Symptom Complex* in 1874.¹⁷ The history of the development of the classical doctrine, located in both the history of brain science as well as the history of science in general, provides a useful framework understanding Goldstein's model of the organism, his vision of science, and their later implications for how Maslow conceptualized the hierarchy of needs.

Mind into Brain: Associationism and Localization

One hallmark in the history of brain science is the interrelated and iterative process between theories of mind and brain function. In the case of localization, a theory of mental organization known as "associationism" serves as the antecedent counterpart to the theory of localization. Associationism described the mind as a nondimensional space, in which "*basic units of mentation*" were joined in more complicated units according to various fixed "laws," such as "continuity," "similarity," etc." The notion of the mind as a "space" akin to a dimensional universe locates associationism in the history of the scientific revolution of Newtonian physics; the "basic units of mentation" are physical atoms that combine to form the mind and create consciousness according to the laws of both physics *and* mind.¹⁸ The mind is a place without matter so to speak – a kind of universe without mass. The embedding of theories of mind and consciousness into a world and universe described by physics and that operate by casual laws of atomic interaction is a key historical event in the how theories of mind would evolve throughout

¹⁷ Carl Wernicke, *Der Aphasische Symptomencomplex: Eine psychologische Studie auf Anatomischer Basis* (Breslau: M. Cohn & Weigert, 1874).

¹⁸ Harrington, *Reenchanted Science*, 14.

the nineteenth-century, one that continues into the present.¹⁹ Associationism had connections to an empirical epistemology known as sensationalism, which British empiricists in the seventeenth-century had developed. Harrington provides a lucid summary of the connections between sensationalism and associationism:

Sensationalism...believed there is nothing in the mind other than what comes in through the special senses. Hence, associationism held that all mental atoms were derivative but reliable *packets of sensory data*, variously defined by the associationists as “copies,” “pictures,” or “representative images” of direct experiences.²⁰

The packets of sensory data or mental atoms organized themselves in a mechanical fashion determined by the laws of associationism (i.e., continuity between images, similarity of images, etc.). Images, derived from the senses, would be conceived of by Wernicke as a kind of physical memory that marks a specific locality of the brain—the spatial place that associationism had lacked: the matter of the mind. And image-memories of various types would become bound into flesh as those “circumscribed centers controlled...particular functions.”²¹ Association psychology mapped onto, and some senses, created the physiology and anatomy of the brain—the movement of mind *into* the brain.

¹⁹For example, Freud was deeply influenced by the first law of thermodynamics in the creation of his drive theory. Also known as the law of the conservation of energy, it holds that energy in a closed system cannot be lost and must be accounted for as it transforms in the system. Freud postulates that consciousness and mind emerge from excitation and discharge of quantities of psychical energy via emotion, thought and action. See, for example, Sigmund Freud, *The Standard Edition of the Complete Psychological Works of Sigmund Freud*. ed. by J. Strachey. trans. by J. Strachey (London: Hogarth Press, 1981), *Studies on Hysteria*, II:166–67. Goldstein comprehensively addresses the excitation of the nervous system, as opposed to the mind, in the third chapter of *The Organism* entitled, “Theoretical Reflections on the Nervous System,” 95–114. See Aikaterini Fotopoulou, *From the Couch to the Lab: Trends in Psychodynamic Neuroscience*, (Oxford: Oxford University Press, 2012) for present day usage of energy dynamics and affect regulation in theories of mind.

²⁰ Harrington, *Reenchaned Science*, 14 (my emphasis).

²¹ Goldstein, *The Organism*, 33.

This kind of loose transubstantiation from mind into brain is exemplified by the British clinician, W. H. Broadbent and his dynamic perceptive “centres.” As research into what the brain was and did expanded dramatically in the nineteenth-century, Broadbent used associationism and packets of sensory data he called “impressions” to explain how the brain operated to create objects, and human consciousness, that are symbolically represented by words: “all these impressions are *associated*, and the word is employed as the symbol for the resulting idea of the object.”²² He would postulate how these impressions emerge from the anatomical structure of the brain to form consciousness: it begins with the entry of the raw sense “data” or primary impressions from the sense organs to the “perceptive centres” of brain: “In the perceptive centres the primary impressions made upon the organs of sense are converted into ‘perceptions proper’; that is to say, they receive their intellectual elaboration.”²³ The intellectual elaboration refers to a process of transformation of the primary impressions, or the raw particle material coming into the brain, into ‘perceptions proper’ that blend into the existing world of word-idea-objects in the mind based on the laws of association. And here is the important point that Goldstein would later dispute: the associationist framework allows Broadbent to “make” the brain by postulating the existence of cellular and fiber networks that actuate the intellectual elaboration that takes place in the lawful, determined associationist mind:

²² Quoted in Reise, *A History of Neurology*, 110 (my emphasis). Interestingly, the expansion of interest in the brain in the nineteenth-century, and the attempts to explain it, finds location in the history of the science of electricity. Electricity went through a paradigmatic shift in the mid-eighteenth-century following the Newtonian scientific revolution. This shift allowed recognition of the electric and conductive properties of the brain and nervous system, which became a focal point of interest in investigating the brain. This development also parallels notions of thermodynamic energy used to explain psychological phenomena mentioned above. See Thomas S. Kuhn, *The Structure of Scientific Revolutions*, 3rd ed. (London: The University of Chicago Press, 1996), 106.

²³ Reise, *A History of Neurology*, 109.

This elaboration *implies* an intimate cell and fiber communication between each perceptive centre, and every other perceptive centre, since *one of the principal features of a perceptive act is, that it tends to associate, as it were, into one state of consciousness.*²⁴

The intellectual elaboration implies the biology. The elaboration process is law-abiding, rational, mechanical and determined; and it takes place without the agency and direction of the individual of whose consciousness it is—a rational mind absent of freedom of rational choice—the very quality Goldstein would say is the essential characteristic of human nature.²⁵

Here we see how the explosion of research into what the brain was in the nineteenth-century left a vacuum in the explanation of how the brain operated.²⁶ Broadbent relied on an older philosophical conception of mind to make sense of new biological phenomena lacking explanation. It is in this same new biological universe of the brain that other scientists like Goldstein came to new, global understandings of the not only the brain, but human beings and life itself that were rooted in cultural and ethical commitments.²⁷ Goldstein would explicitly point to association psychology, and specifically motor-speech images, in his rebuttable of localization theory; he would claim that association psychology led investigators of brain function awry because it led them to ask aphasic patients the wrong questions in determining their symptoms:

These “questions” are not fortuitous but are dictated by the investigators fundamental ideas about the phenomena being studied...Actually *such explanations [of symptoms]*

²⁴ *Ibid.*, 109 (my emphasis).

²⁵ Goldstein, *The Organism*, 384 and 392.

²⁶ See Reise, *A History of Neurology*, 73–117, for a narrative on the rise of neurology. See Webb Haymaker and Francis Schiller, eds., *The Founders of Neurology*, 2nd ed. (Springfield, Illinois: Charles C. Thomas, 1970) for a history of the rise of neurology and brain science via individual biographies of its founding members.

²⁷ This vacuum also led Freud away from neurology and into the attempt to provide a purely psychological description of psyche phenomena, which became the structural theory of mind. See Oliver Sacks, "Sigmund Freud: The Other Road," in *Freud and the Neurosciences: From Brain Research to the Unconscious*, ed. Inge Scholz-Strasser and Giselher Guttman (Vienna: Österreichischen Akademie der Wissenschaften, 1998), 11–22.

were merely the outcome of a theoretical preconception, merely an interpretation of the phenomena in terms of a special theory, namely, association psychology.²⁸

Goldstein claims the classical model is a failure of science because it does not describe aphasia specifically, and brain injury in general, accurately; and, as we will see in chapter 3, this criticism would also expand to include materialist and mechanistic descriptions of nature with large consequence: a science that does not describe nature accurately in light of an alternative theory is a failed organization of reality. It is Goldstein's claim of a fatal collapse in the dominant scientific paradigm that Maslow would also adopt on his way to the hierarchy of needs.

In Crisis: The Scientist and The Science of Localization

Goldstein wrote *The Organism* amidst crisis. He almost did not escaped long-term imprisonment, brutalization, and execution by the Nazis. *Sturmabteilung* troops arrested Goldstein in his examining room in Moabit Hospital on April 1, 1933. He was then jailed and beaten with sand-filled rubber hoses. He was spared only through an appeal for release by his colleague, the psychiatrist Eva Rothmann (who later became his second wife), to her colleague Matthias Göring, a psychiatrist, Adlerian psychotherapist and cousin to Hermann Göring, the high Nazi official and one-time successor to Hitler. As a condition of his release, Goldstein had to leave his beloved Germany forever.²⁹ He eventually found residence in Amsterdam where he feverishly dictated his masterpiece in five weeks.³⁰

The crisis that Goldstein addresses in the opening pages of *The Organism* was not one of politics but of science. Yet, the language is impassioned and personal; the echoes of his tragedy are there. He depicts an individual—the scientist—in crisis and imprisoned:

²⁸ Goldstein, *The Organism*, 36 (my emphasis).

²⁹ Harrington, *Reenchanted Science*, 164–65.

³⁰ Goldstein, *The Organism*, 9.

The real crisis arises when, even in the face of new findings, the investigator cannot free himself from the former theory; rather, the scientist attempts to preserve it and, *by constant emendations*, to reconcile it with these new facts instead of replacing it by a new theory fitted to deal with both the old and the new facts. This error has not been avoided in the evolution of classical doctrine.³¹

Goldstein is eloquent here and provides a lucid, summative account of the dynamics of scientific revolution that Thomas Kuhn would later describe. Importantly, Kuhn recognized the merging of political and cultural concerns into the evolution and revolution of scientific theory.³² And on a more fundamental level in the experience of existence, scientific paradigms draw the region of community life, the evolutionary and moving boundary between the true and the false—the new and the old facts—that allow for peoples to understand themselves and their place in nature. Crises in science then not are simply crises in facts, the nature of Nature, or the spectrum of the real; they are uncontrolled, and uncontrollable, conflicts “between incompatible modes of community life.”³³ The Copernican and Galilean moments centuries before and the violent repression of Goldstein by the National Socialist Party bear out this dynamic. It is vitally important to understand this dynamic when considering the history and fate of localization theory. Versions of this dynamic would also take place in how Maslow’s work on the hierarchy of needs was used in America during the 1960s. Recognizing the role of scientific crises in defining community boundaries adds understanding to why his theory found appeal among Americans grappling with societal upheaval and political crisis.

Keeping in line with the idea that political, cultural and intellectual events guide scientific theory and the determination of facts, the emergence of localization theory in both France and later in Germany is linked with both political affiliation and nationalism. In nineteenth-century

³¹ Goldstein, *The Organism*, 35 (my emphasis).

³² See Kuhn, *The Structure of Scientific Revolutions*, 93.

³³ *Ibid.*, 94.

France, cerebral localization was linked with republicanism. And in Germany, the doctrine greatly expanded in the environment of post-war nationalism that arose at the end of Franco-Prussian War in 1871, which resulted in German unification. Wernicke published *The Aphasic Symptom Complex* in 1874, which would mark the beginning of the dominance of classical doctrine in Germany.³⁴ By and large, localization developed between English, French and German brain researchers that investigated from a variety of disciplines such as neuroanatomy, experimental neurophysiology, experimental neurosurgery and clinical neurology and topics of clinical concern such as intelligence, aphasia, agnosia, apraxia and the dual character of brain.

But from the first, localization is linked with questions of morality and individual character. The phrenology of Franz Joseph Gall played a key role in conceptualizing the brain as composed of distinct organs that correspond to distinct faculties, moral or intellectual, that constitute mind (see figure 9).³⁵ These moral faculties could be “read” via examination of the skull to determine what kind of personality a person had and a popular phrenological movement arose in Europe and the United States in the nineteenth-century. In fact, self-esteem is one of those distinct faculties, which then demonstrates a loose historical linkage from phrenology to the hierarchy of needs via conflicts over brain and biology. Like associationism, the phrenological theory of mental faculties provided the key to unlock and explicate the anatomy of brain, and it led to the first anatomical breakthrough and physical evidence that suggested the localization of mental functions.

Loss of normal speech known as aphasia had been of particular interest to a generation of neurologists in mid-nineteenth-century Europe. The French surgeon and anthropologist Paul Broca provided the first concrete demonstration in 1861 in Paris via two patients, Leborgne and

³⁴ Reise, *A History of Neurology*, 102.

³⁵ *Ibid.*, 91–117.

Lelong, that damage to a particular area of the brain, the third frontal convolution of the left hemisphere, resulted specifically in disturbances to speech. The form of the disturbance, however, was only to “expressive speech,” the ability to articulate language. They remained able to understand speech, and Lelong in particular, could understand practically everything.³⁶ Thus, via the identification of the disease of aphasia, the idea of distinct mental faculties theorized by phrenology found neurological support. Important for German neurology, the experimentalists Gustav Fritsch and Eduard Hitzig added evidence to localization theory via electrical experiments on the brains of dogs in 1870. They stimulated the cerebral cortex with an electric current in particular areas and produced distinct bodily movements. This suggested that a cortical area of the brain was responsible for controlling a specific movement of a specific body part.³⁷ In addition to Broca, Fritsch and Hitzig would serve as a necessary step for Wernicke to conceptualize the locationist model of the brain that achieved such popularity and success in German neurology—the model that Goldstein would deny and passionately reject, the model of his mentor.

Wernicke was born in May of 1848 in Tarnowitz in Silesia (now Poland), which is approximately 15 miles from where Goldstein was born in Katowice 30 years later. They both attended and graduated from Breslau University with medical degrees, Wernicke in 1870 and Goldstein in 1903. Later, Wernicke, the chair in psychiatry at Breslau, taught and mentored Goldstein in the completion of his medical degree.³⁸ That they shared backgrounds of Silesian

³⁶ Antonio E. Puente and Joseph M. Tonkonogy, *Localization of Clinical Syndromes in Neuropsychology and Neuroscience* (New York: Springer Pub., 2009), 2.

³⁷ Harrington, *Reenchanted Science*, 15–16.

³⁸ Carl Wernicke, *An Outline of Psychiatry in Clinical Lectures: the Lectures of Carl Wernicke*. ed. by Robert Miller and John Dennison, trans. by John Dennison and Robert Miller (Heidelberg New York Dordrecht London: Springer, 2015), xvii. See also Harrington, *Reenchanted Science*, 140–42.

culture and an educational pedigree at Breslau probably laid the basis for degrees of affection between them that contributed to Goldstein's personal loyalty to his mentor despite his intellectual rejection of the classical doctrine for which Wernicke became famous.³⁹ After Broca had published his findings in 1861 on the disturbances of speech resulting from damage in the frontal lobe, the notion that distinct and isolated mental faculties originated from distinct physical centers in the brain had become plausible.

In the formulation of his model, Wernicke went one step further than Broca while using the same approach Broca had employed. He made his case for localization based on patients with brain lesions that also had speech disturbances and, like Goldstein, his initial sensitivity to language disturbances came via brain injured soldiers from the Franco-Prussian war in which he served as a surgeon in 1871.⁴⁰ Wernicke presented ten case studies in *The Aphasic Symptom Complex* in which patients had disturbances in their capacity to understand speech, what he termed *sensory aphasia*, as opposed to loss of the capacity to express language, which he would refer to as *motor aphasia*. Sensory aphasia related to the loss of the memory of how to hear and see speech—to use sense organs like ears and eyes, so to speak—and decipher language, while motor aphasia related to the loss of how to form words, either written or spoken—to work the mouth and the body mechanically like a motor. In distinction to Broca's finding, which he understood as motor aphasia resulting from damage to the frontal lobe, Wernicke's patients had damage to their temporal lobes, specifically the first convolution, which he believed led to sensory aphasia. This location became known as Wernicke's area and still is today. Now that two

³⁹ See Haymaker and Schiller, *The Founders of Neurology*, 531–35 for a mini-biography on Wernicke that Goldstein wrote. Goldstein's affection for him is clear when he remarks, "We could never forget him," despite that he also describes him as "taciturn" and "not easy to deal with."

⁴⁰ Wernicke, *An Outline of Psychiatry in Clinical Lectures: the Lectures of Carl Wernicke*, xvii.

clinical findings supported provided strong support to the notion that a key capacity of human consciousness—language—located in a specific area of the brain, Wernicke was in a position to create a theory of both brain physiology and human consciousness.

Yet, to accomplish his model of the brain, he would need a model of mental functioning to extrapolate the mechanics of language to other capacities of human life, like seeing and moving. He did not have the physical evidence to demonstrate how people see and move. He turned to association psychology to “make” the brain—a psychology believed to operate according to laws, much like the causal and deterministic laws of Newtonian physics. Deploying logic like the logic Broadbent used to craft “perceptive centres,” Wernicke postulated that the brain created and used “images”—memory encoded in tissues created by sense or motor experiences—to generate consciousness and actuate behavior. The memory of how to move a leg or arm was located in a specific part of the brain as opposed to a distributed function of the whole brain. There were motor-images and sensory-images places he abstractly called “projection fields” which together determined speech. Throughout a human’s life as stimuli made contact on the body as external sensations—the atoms of optics and sound, taste and touch and odor—they transformed from raw particle material into both physical, cellular structures in specific brain localities—Broadbent’s “perceptions proper”—that when functioning simultaneously, produced consciousness. Additionally, bodily movement *in reaction* to the environmental stimuli “entering” the brain via the senses laid down the layers of anatomical structure of motor-images—the body moving to respond to the demands and challenges of the environment. Thus, conceived like the physical universe, governed by laws based on Newtonian principles as well as the so-called laws of associationism, the brain and consciousness became mechanical entities. Further, brain and consciousness were doubly determined: first by the laws

of physics in the creation of the brain's anatomy and physiology and second by the demands of an environment impinging upon brain in the creation and operation of consciousness. No longer was there body, mind, and soul; but rather—universe, brain, and consciousness, in all their emptiness, in all their order.⁴¹

The Third Way

To Goldstein, and later Maslow, materialist explanations for consciousness and personality—and indeed, human life itself—were radically incomplete. Yet, the alternative option for articulating the shape of consciousness, personality, and human nature seemed to involve the injection of metaphysical principles, like Henri Bergson's *élan vital* or the classical Greek *pneuma*—concepts that the Enlightenment program of materialist study and description of the natural world had waged war against. As a scientist and physician, Goldstein looked for a third way to study the world, one that existed not so much between science and religion, but rather between science and metaphysics. In some senses, the conflict between philosophy and science animated his entire life from his young days as a student into his mature adult life. This was equally true for Maslow who revered Spinoza and struggled with the aspects of science that did not permit deeper inquiry into human life.⁴² Bearing this impulse in mind, Goldstein attacked localization theory along three main lines: methodological, empirical, and epistemological.

His methodological criticism focused on how clinicians identified and interpreted brain damaged and psychiatric patients' symptoms and the diagnosed conditions like aphasia.⁴³ He claimed that:

⁴¹ Wernicke, *An Outline of Psychiatry in Clinical Lectures: the Lectures of Carl Wernicke*, Lecture 1: 3–7, Lecture 2: 9–13.

⁴² See Hoffman, *The Right to Be Human*, 40–41, 52–54.

⁴³ Other conditions Goldstein refers to throughout *The Organism* raise philosophical and linguistic questions as well. They include: auditory verbal agnosia (word-deafness, or the

In the descriptions of symptoms given by the so-called classicists on the subject of aphasia...we find that their characteristic tendency, their reference to a hypothetical “primary symptom,” renders a given symptomatology plausible. In motor-speech disturbances, for instance, an impairment of the “motor-speech images” was regarded as the primary symptom.⁴⁴

Goldstein asserts here that based on an examination of the brain injured patient using certain methods to test the articulation and comprehension of speech to determine the symptoms, classicist *postulate* a lesion to the “motor-speech image” center of the brain as the cause of aphasia; or rather, the classicists ““questions” are not fortuitous but are dictated by the investigator’s fundamental ideas about the phenomena being studied.”⁴⁵

In other words, the theory of localization guides diagnosis of the “primary” symptom, to which all other “secondary” symptoms are subordinated, and leads to the “supposition that circumscribed injuries would result in disorders specific to the mechanisms involved.”⁴⁶ He believes this procedure is too simplistic, however reasonable, and ignores and purifies itself of incompatible facts because they do not fit the theoretical paradigm of localization. He argues that, at best, initial phenomena observed related to the injury merits the “position of a crude working hypothesis” and asserts that:

In making these distinctions [between primary and secondary symptoms], the investigator is commonly prejudiced by theoretical viewpoints that have proved useful in other fields of research and that he judges – usually without testing their qualifications – to be adequate for the material at hand.⁴⁷

This last point will form a key part of his criticism of the epistemology of localization and, as we will see in chapter 3, the large scientific enterprise of the natural and biological sciences. It

inability to comprehend speech), visual agnosia (mind-blindness, or the inability to recognize objects), and apraxia (the inability to perform purposeful movements).

⁴⁴ Goldstein, *The Organism*, 34.

⁴⁵ *Ibid.*, 36.

⁴⁶ *Ibid.*, 36.

⁴⁷ *Ibid.*, 36.

should also be noted that the distinctions between methodology, epistemology, and empirical facts are useful analytical concepts, when in practice, the distinctions between them are not bright; and in the case of Goldstein's protest, they assemble together in a kind of unitary conceptual structure erected out of the same impulse of reconciling science and philosophy. But methodology and empirical facts are especially of a piece, acting in a dialectic fashion of conceptual validation.⁴⁸

Goldstein's empirical criticism focused on the conclusions made about the "facts" of brain anatomy and physiology by practitioners of the classical doctrine that flowed from the methodology they used to understand symptoms. However, Goldstein showing loyalty to his mentor as well as basic scientific probity, recognizes the finding that lesions in localities like Wernicke's Area *do* disturb specific functions like language; he agrees that motor and sensory fields exist because of the tissue stratification, differentiation and interrelation in the brain; and that these related fields "point emphatically to differences in function." He's clear in his belief that, "the differences of symptoms, when the lesions are localized in different places, are much too convincing."⁴⁹ Yet, he goes on to dispute localization strongly and present convincing empirical evidence that significantly undermines the structure and explanatory power of the theory. He continues his scientific probity in not accepting that a globalized understanding of brain and mind is a logical conclusion even if localization is a false scientific paradigm: "we cannot simply regard the mental activity as the expression of a functioning of the total cortex." All facts and phenomena must reconcile adequately in a scientific paradigm in order to have an adequate model of brain and – as will be important later to the theory of holism – of nature.⁵⁰

⁴⁸ *Ibid.*, 34–37.

⁴⁹ *Ibid.*, 204.

⁵⁰ *Ibid.*, 200–04.

He begins by disputing the anatomical facts by asking rhetorically, given that there is, in fact, tissue stratification, differentiation and interrelation that have some special relevance to mental functions and performances like language, “how much beyond this is really ascertained?” He then points out that little is known beyond the idea that the brain cortex is made of heterogeneous tissues. The fact of heterogeneity of tissue and anatomical differentiation simply does not allow the strong conclusion that the mind is organized by distinct faculties. The histologist “gives us hardly any essential information,” he charges. To understand the relationship between mentality and physicality, he asserts that discernable performances by the brain-injured patients must be compared to brain physiology to arrive at any conclusions. But the use of brain maps (see figure 8) obscures investigators’ understanding of patients’ performances and symptoms as well as the underlying brain pathology; and the psychological theory of association that had created the brain leads to an incorrect understanding of the symptomology of the patient and his disorder.

He points to several anomalies that serve as evidence for his claim. Instances occurred in which lesions were diagnosed but none existed. The false diagnosis was based on a misapprehension of performances due to the application of the brain maps as a diagnostic tool. And the reverse was true as well: lesions existed in areas supposedly related to specific mental functions that did not show a disturbance to that function. In other words, both false-positives and false-negatives severely impugn the claim of localization of brain function. There were also differences in symptoms between patients despite the fact that the lesions of the same location were of the same size. These anomalies are strong claims against the classical doctrine and allow

Goldstein to claim, “it is impossible to regard the presence of symptoms as simply depending on the locus of the injury.”⁵¹

He then offers a startling and powerful yet simple critique by an appeal for honesty in regard to what is truly known and firmly established between the mental performances—read consciousness—and a specific anatomical condition. To quote at length:

The inaccuracy of the judgment regarding the anatomical facts is increased because we really do not know the relation between a specific state of an anatomical condition and a specific performance. We are far from being able to decide whether the preserved tissue is still functioning sufficiently to allow for a certain performance. We have no definite criteria for this decision. *We do not even know the functional significance of the cortex in general* and its various strata in particular for various performances. We do not know which performances are connected with fine association fibrils and the subcortical tissue. We do not know to what extent each of these areas must be intact to maintain normal functioning. We are facing here a methodological difficulty that, as far as I can see, can scarcely be overcome at all. *We shall probably never get beyond conjectures; yet only a definite knowledge, in this direction, can offer a basis for a solution of the problem of localization. Many errors and controversies are caused simply by this uncertainty, which in a given case is so conducive to opinionated judgments.*⁵²

The subtext to this paragraph is that localization is a problem that cannot be solved and nor is it worthy of further consideration; it is mere conjecture—a conjuring of scientists who had committed themselves to a thoroughly materialist understanding of the body and mind, one that proved inadequate for the study of biology. Theories of the natural world that operate on strict principles of causality like those used to describe the universe in Newtonian physics fail in the description of the phenomena of mind and brain; in fact, mechanistic understandings of biological entities led these scientists astray, and far into the worlds of conjecture that were not science, however much they claimed their work to be. The argument he made was clear: the response by classicist to anomaly was to create ad hoc explanations of facts that contradict the theory as well as through constant emendations of the classical doctrine – the state of a science in

⁵¹ *Ibid.*, 204.

⁵² *Ibid.*, 205 (my emphasis).

crisis. The brain maps used by adherents of the classical doctrine no longer functioned; wrought with damage, like the patient's brains to whom they supposedly applied, they led to a confused wilderness of mind and science.⁵³

The Brain in Shock: Diaschisis, Evolution and Hierarchy

Goldstein continues his disassembly of the locationist claim by using the analysis of the significance of brain dysfunction after brain damage by Russian-Swiss neurologist, Constantin von Monakow. Monakow is a character of considerable fascination in the history of neurology in that he made considerable scientific contributions to its founding similar to Freud;⁵⁴ yet, as his thought matured, he found himself in crises spiritual and moral after the First World War that led him to into the realms of mysticism and mountaintop religious experiences that emerged prophetic dimensions to his life and mind similar to those of Jung.⁵⁵ Along with Goldstein, he is

⁵³ *Ibid.*, 200–04. Identification and reconciliation of anomaly is a key process in the maintenance of scientific paradigms; their incorporation is a muted process of scientific discovery. When enough anomalies of sufficient impact accumulate and the process of reconciliation fails, a paradigm falls in to crisis. Kuhn's *The Structure of Scientific Revolution* presents this view. Maslow read Kuhn and believed in fact that holism and humanistic psychology were scientific revolutions. See Abraham Maslow, *The Journals of A. H. Maslow*. ed. by Richard J. Lowry, (Monterey, Calif.: Brooks/Cole Pub. Co., 1979), 420–425.

⁵⁴ Before his psychoanalytic turn, Freud wrote a well-regarded neurological work, *On Aphasia*, which contributed substantially to the neurological study of aphasia and also took an anti-locationist stance. He used the work of Hughlings Jackson, who espoused an evolutionary and hierarchical organization of the brain, to argue that different levels of speech and different layers neuroanatomy are necessary to understand aphasia. See Oliver Sacks, "Sigmund Freud: The Other Road," 13–16.

⁵⁵ Jung and Monakow knew each other directly through the Zurich "Monakow circle," later renamed the *Psychiatric-Neurological Society*, where new issues, intersections and directions for both growing fields were discussed beginning in 1898. The comparison to Freud's *Wednesday Psychological Society* operating roughly at the same time is apt. Harrington also notes the comparison to Jung. See *Reenchanting Science* 78–79 for Jung's involvement with the Monakow circle and 92 for the comparison to Jung as prophet. Peter Homans offers a fascinating recounting and interpretation of one of Jung's dreams where he becomes a Christ-figure who, following an arctic devastation of the earth, plucks grapes from a tree of life transformed from frozen leaves, and gives them to humanity, thus recalling Christ's feeding of five thousand with five loaves of bread and two fish in the gospel of Matthew. Jung had two other versions of this

considered one of the key figures in the development of German holism and the theory of the organism. He offers us a view of a different set of intellectual and medical ideas developed to metabolize the emotional crises of the war than the ones that Goldstein created. While Goldstein's work had transcendental aspects linked to an existentialist cast of the organism confronting nature, Monakow's work had a distinct engagement with the supernatural and metaphysical.

Monakow's clinical work with patients with permanent brain damage made plain one obvious and serious criticism to localization: patients recovered functions supposedly lost due to brain lesion that should have been impossible if the areas responsible for that brain function were indeed permanently damaged and inoperative. Monakow and Goldstein's question to the classicists was: how is it possible that an aphasic patient who could not speak, could speak again if their speech centres or fields were anatomically destroyed? In other words, the fact of healing disturbed the machinery in and of the brain. The inability of the classical doctrine built on mechanistic and deterministic principles to explain this phenomenon served to Goldstein as a fatal flaw—an anomaly without possibility of reconciliation:

The fact that mental performances, in cases of circumscribed lesions, are in principle subject to regeneration proves that they are not limited to the function of certain places of the brain but that much more extended parts of the nervous system correspond to them,

dream in April and May of 1914 leading up to the final version in June 1914 where he becomes savior and prophet. Jung directly attributes these dreams as foreshadowing the breakout of the World War I in August. Jung's psychological disturbance offers another glimpse into the intensity with which psychological thinkers like Monakow and Goldstein engaged in response to world traumatic events, especially in their similarity and difference. As I previously described, Maslow would assign himself the role of savior-as-peacemaker just after the advent of World War II, also having a daylight vision for his psychology as a foundation for peace. See Peter Homans, *Jung in Context: Modernity and the Making of a Psychology*, 2nd ed. (Chicago: The University of Chicago Press, 1995), 79. For Jung's recounting of the dream see his autobiography, *Memories, Dreams, Reflections*, rev. ed., ed. by Aniela Jaffe, trans. by Richard and Clara Winston (New York: Vintage Books, 1989), 176.

which are only temporarily incapacitated by a focal lesion, by the so-called function diaschisis.⁵⁶

Monakow developed the theoretical concept of ‘diaschisis’ in 1911. Diaschisis described the state of the brain after brain injury as in a *condition of total shock*—Goldstein would also later use the term shock but in a larger philosophical and existential sense—and the presence of symptoms far beyond those ascribed to the specific site of brain damage. In other words, diaschisis happened when a person experienced a head injury that damaged a particular part of the brain, and the impairment of their cognitive and physical functioning exceeded what it should be based upon the actual damaged area. Monakow noticed in his clinic that these symptoms not associated with the damaged localized area would subside after a period of adjustment and healing by a patient. He saw this as a dynamic and evolving process that took the form of a principle in neurology: “diaschisis is the basic dynamic principle, it forms the bridge between those phenomena which can be localized distinctly and those which cannot.”⁵⁷ To Goldstein, the important point he emphasized beyond the dynamic principle was the “great importance of the condition of the rest of the brain and *even the whole organism*.”⁵⁸ Anatomically, and now psychologically and epistemologically, Goldstein broadens how brain damage should be considered and intimates his coming conception of the organism. It was not enough to consider just the brain. The world in which the organism lived, the state of the organism in that world, and the “essence” of the organism all had ultimate bearing on the significance of brain damage and the possibilities of new life after injury. These are the very same views of science that Maslow adopted; it is in these debates over the brain and brain injury that we can find the roots of Maslow’s ideas.

⁵⁶ *Ibid.*, 206.

⁵⁷ Quoted in Harrington, *Reenchanted Science*, 79.

⁵⁸ Goldstein, *The Organism*, 205 (my emphasis).

Importantly, Monakow presented the idea that the relationship between the areas that can be localized and “those which cannot” was determined by the hierarchical anatomical organization and functioning of the brain that was in turn created through the evolution and differentiation of species—a conceptualization that had great, direct consequence for the development of the hierarchy of needs.⁵⁹ The most recognized source of the conception of a hierarchy of brain anatomy that developed through evolution is British neurologist Hughlings Jackson, though Monakow claims to have developed diaschisis before he encountered Jackson’s work. Jackson postulated that three levels of brain existed, “together representing an archaeological record of a species’ biological history.”⁶⁰ He held that the “lowest” level included the spinal cord, the medulla oblongata and the pons; the middle level included the rolandic region now known as the primary motor cortex; and the highest level comprised the prefrontal cortex. Jackson held that in the process of evolution the different layers of the brain emerged as adaptations to the environment, which resulted in more complex nervous systems capable of directing the movement of the organism’s body at the organism’s intention as opposed to a nervous system that reacts automatically to stimuli bombarding the organism from the environment. The anatomy acts as kind of evolutionary record and memory of the life and particular form of a species. The broad idea of the brain having a basic anatomical level of function that proceeds anatomically to “higher” level functioning mirrors the idea that the human personality and mind have levels of basic needs and higher needs. In other words, the brain is organized hierarchically and so is human motivation.

⁵⁹ See Harrington, *Reenchanted Science*, 79–82 for the history of diaschisis and chapter 3 covers Monakow comprehensively.

⁶⁰ Harrington, *Reenchanted Science*, 81.

In the case of diaschisis, the parts of the brain associated with higher level functioning, like abstract thinking, that the species acquired later in its evolutionary history or that the individual acquired later in their individual history, remained damaged and did not heal. However, more primitive functions, like articulation of simple speech, acquired earlier in evolutionary or individual history remained intact after a period of healing.⁶¹ With this theoretical construction of complex and less complex levels of the brain and the phenomenon of healing, Goldstein asserts:

This effect of diaschisis, by its very nature, can be restored in various ways. The more complex and less used the functional connections are, the longer they remained disturbed through diaschisis. Above all, the effect depends on the nature of the disease, on the vascular supply, and *on the condition of the entire brain*...thus a proper evaluation of the connection of a syndrome with a circumscribed lesion cannot be referred to simply as the locus of a lesion.⁶²

Thus, unlike machines, brains evolve and change over time, seen especially in light of pathology. And again, to understand the nature of disease, the condition of the entire brain would also require consideration, which Goldstein eventually transforms to include the consideration of the the entire organism, psychological and physical, when seeking to understand the nature of disease. More and more, Goldstein would relate the struggle against disease and for restoration not simply as the battles of pathology, but as a struggle with the environment or nature and the attempts to overcome them in full realization or actualization of the essence of the organism. More and more, the transformation from insights into the human condition grasped via observation and study those with traumatic injury would lead to the formulation of a new theory of scientific study as well as general worldview that was by turns tragic and hopeful.

⁶¹ Webb Haymaker and Francis Schiller, eds., *The Founders of Neurology*, 2nd ed. (Springfield, Illinois: Charles C. Thomas, 1970), 458.

⁶² Goldstein, *The Organism*, 206–07 (my emphasis).

Goldstein's epistemological criticism focused not only on the theory of localization, but also broadly on scientific epistemologies like materialism and atomism while at the same time stressing the importance of empirical data. Eventually his critique focused on what it *meant* to engage the world in the pursuit of natural science. And again, this critique can be understood as Goldstein's attempt to mediate the conflict between natural science and metaphysics. In the search for alternative epistemologies with which to unwire the brain, to give life to concept of the organism, Goldstein turned to Hughlings Jackson's work. Jackson's hierarchical vision of the brain is a foundational concept in the development of the theory of the organism; indeed Goldstein revered Jackson throughout his life. Jackson's work also had a profound effect on the development of psychoanalysis, especially in regards to the topographical theory of mind.⁶³ As I have indicated, Jackson's influence in the development of the hierarchy of needs runs deep in that Maslow responded to both holism and psychoanalysis in creating his vision of self and mind as organized as a hierarchy. To my knowledge, this influence has not been recognized by scholars to date.

Now that the specific criticism of the theory of localization – a mini-scientific paradigm so to speak – Goldstein lodged has been articulated, we are in a position to understand Goldstein's larger criticism of materialism and mechanism in natural science and how he dialectically recast the human brain, body and being anew as he created an alternative approach to science. But before I take the next step to describe the evolution of his alternative approach to

⁶³ A parallel can be drawn between the hierarchy of needs and the topographical theory of the mind where id maps to the basic needs and ego maps to higher levels of the hierarchy. The parallel is apt because of Hughlings Jackson's theory of a hierarchically organized brain had a similar profound influence on Freud. Freud frequently acknowledged his debt Hughlings Jackson's work. In this sense, there is a distant impact of Darwin's work on Maslow as both Jackson and Freud independent of Jackson deeply admired Darwin's work. See Oliver Sacks, "Sigmund Freud: The Other Road", 12–14, and *passim*.

science, I would like to turn back to Goldstein's scientist in crisis to offer an interpretation: localization theory, confronted with findings that do not conform to paradigm predictions, chains the brain scientist to his version of the brain's epistemology. Under the lash of scientific anomaly, the *idée fixe* of the brain becomes an oppressive organ; it demands consolation, in the form of obsessional modifications, from what is irreconcilable.

Goldstein's scientist, viewed with a kind of pity accorded to one who can't face facts, is lost, wandering amidst meaningless facts that have no home in knowledge. His science is as impoverished as his imagination: the scientist cannot bring order and meaning to nature without organizing symbols and concepts that make nature and the living world intelligible. He cannot create. He cannot see life. He deceives himself about the foundations of his enterprise; that it knows no faith, no greater convictions, no principles. He cannot see the answer in Nietzsche's question to him, the answer that science, faith and knowledge radiate together:

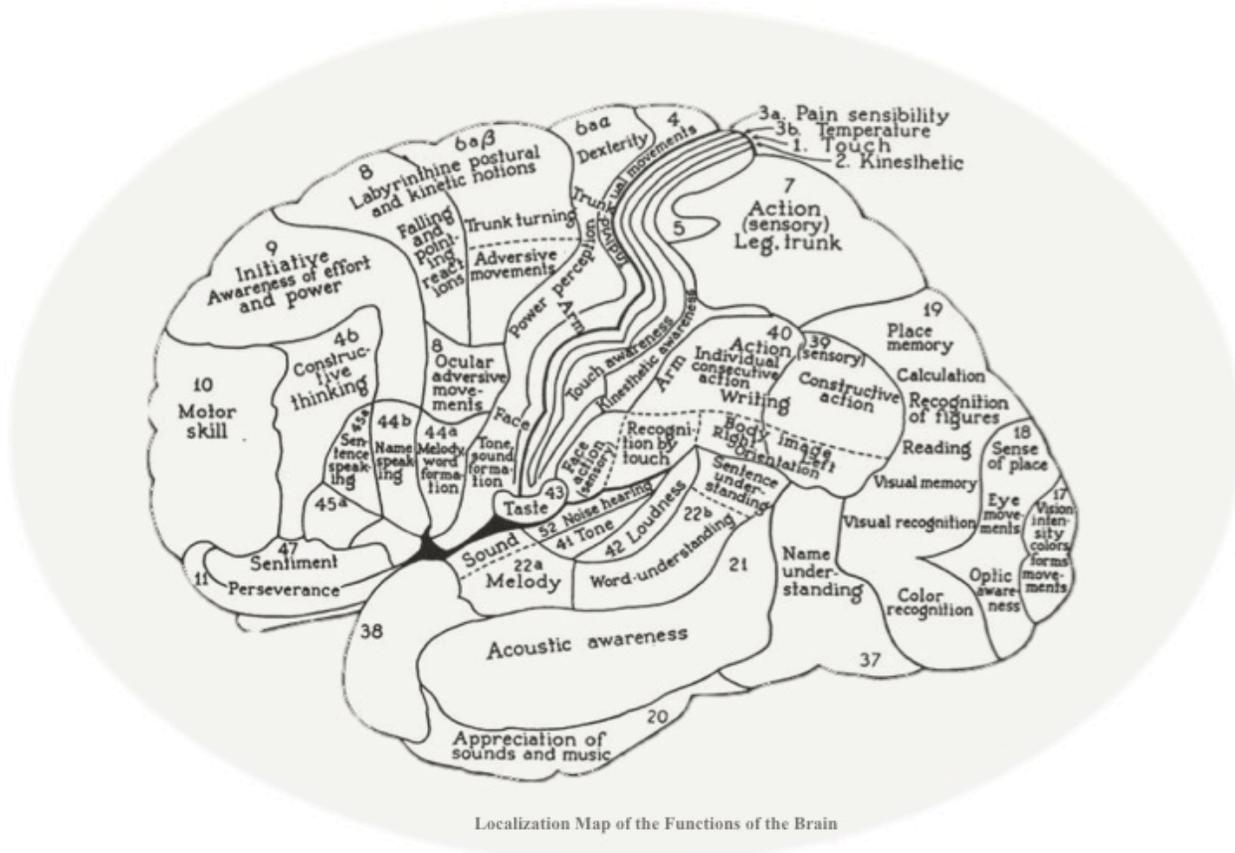
Thus the question "Why science?" leads back to the moral problem, "For what end any morality at all" if life, nature, and history are "not moral"?... But one will have gathered what I am driving at, namely, that it always remains a *metaphysical faith* upon which our faith in science rests—that even we devotees of knowledge today, we godless ones and anti-metaphysicians, still take *our* fire too from the flame which a faith thousands of years old has kindled: that Christian faith, which was also Plato's faith, that God is truth, that truth is divine...⁶⁴

Goldstein's criticism of localization would share Nietzsche's sentiment that science operated with a kind of faith and art at its core. For Goldstein, this faith included classical virtues like courage and reason as well as artistic ones like creativity, something that proponents of localization—godless ones and anti-metaphysicians—could not recognize. And this 'lack of seeing' resulted in bad scientific theory neither fitted to facts nor accurate in its description of nature. Maslow too shared these sentiments and built his own version of American psychological

⁶⁴ Friedrich Nietzsche, *The Gay Science, The Portable Nietzsche*, ed. by Walter Kaufmann, trans. by Walter Kaufmann (New York: Penguin Books, 1976), 450.

holism; indeed, he quotes in his most important essay on self-actualization Nietzsche’s exhortation to “Become what thou art!”⁶⁵

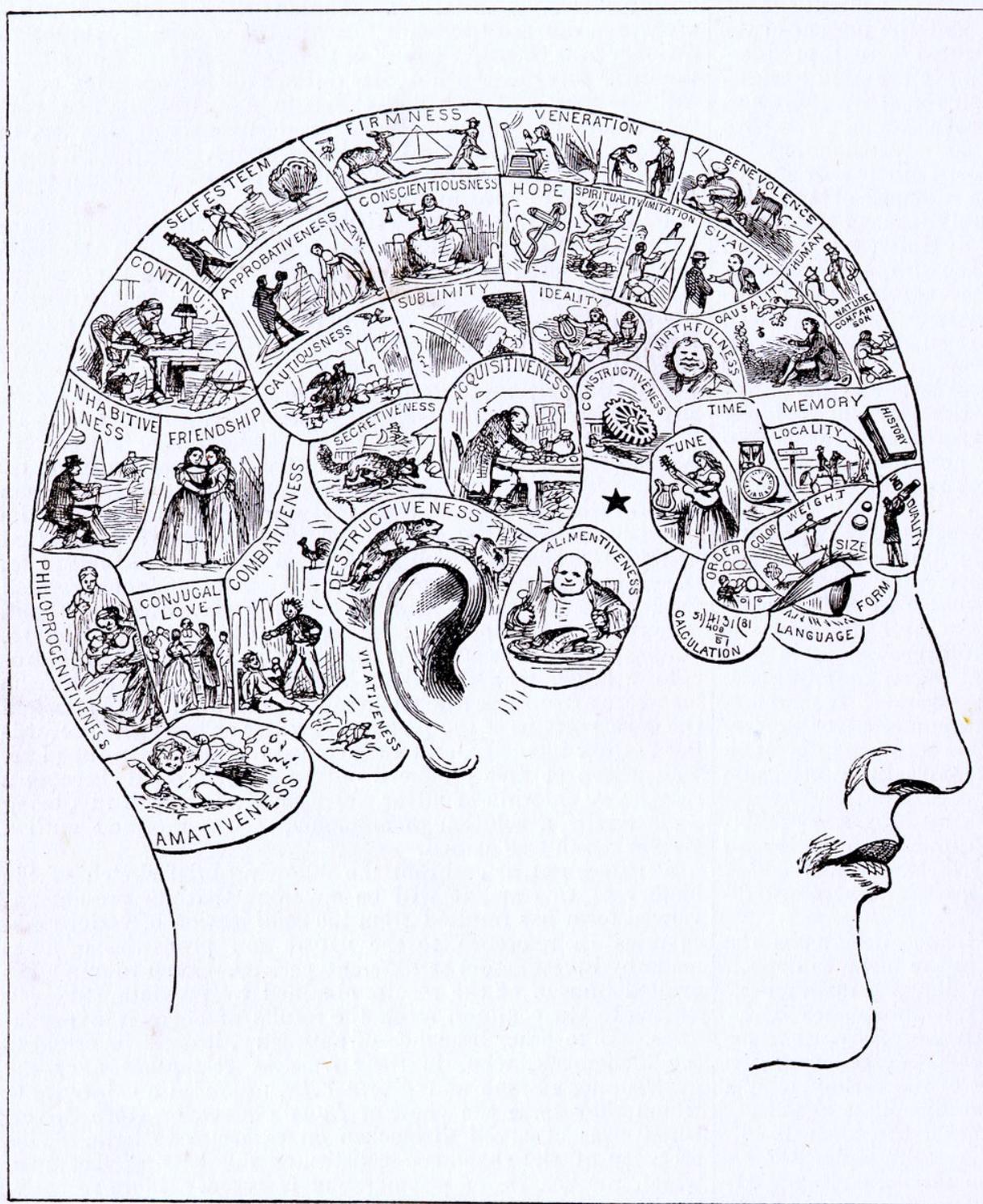
Figure 8 - Localization Theory Model of the Brain⁶⁶



⁶⁵ Maslow, *Motivation and Personality*, 201. Maslow attributes this quote to *Thus Spoke Zarathustra* and I believe this to be in error. In fact, the quote comes from *The Gay Science*. This is relevant because the *Gay Science* is Nietzsche poetic celebration of science and the creative artist as scientist, something Maslow would have related to and sought to embody in his life. See Friedrich Nietzsche, *The Gay Science: With a Prelude in Rhymes and an Appendix of Songs*, trans. by Walter Kaufmann (New York: Vintage Books, 1974), 219, A270. The quote reads: “You shall become the person you are.”

⁶⁶ English version of the localized model of the brain by Karl Kleist. Photo is sourced from is public domain and is fair use.

Figure 9 – Phrenological Map of Moral Faculties on the Skull⁶⁷



Phrenological Chart of the Faculties.

⁶⁷ Photo is sourced from is public domain and is fair use.

Chapter 3

The Creative Science

“Being” cannot be derived from higher concepts by definition, nor can it be presented through lower ones. But does this imply that ‘Being’ no longer offers a problem? Not at all. We can infer only that ‘Being’ cannot have the character of an entity. Thus we cannot apply to Being the concept of ‘definition’ as presented in traditional logic, which itself has its foundation in ancient ontology and which, within certain limits, provides a justifiable way of characterizing “entities.”

— Heidegger, *Being and Time*, 1927

Atoms are not things, electrons are no longer things in the sense of classical physics...when we get down to the atomic level, the objective world in space in time no longer exists, and the mathematical symbols of theoretical analysis refer merely to the possibilities not to facts.

— Werner Heisenberg, 1927

In 1927, seven years before Goldstein wrote the *The Organism* in exile, a German scientist and a German philosopher each published ideas that would radically redefine universes, inner and outer, and profoundly alter the way nature was studied and described by each discipline. Martin Heidegger wrote *Being and Time* in an attempt to redefine the essential task of philosophy as ontology, or the study of the nature of being. To do so, he felt he needed to create a novel language with which to describe “Being” that he felt current philosophical concepts and language could not do – a task he failed to complete. In a sense, because of this failure, he left philosophy wordless and aphasic. His work represents a traumatic rupture at the heart of the

Western philosophic enterprise, a silence in the “house of Being,” whereby philosophy can no longer claim to carry out its essential task: the description of nature, human and worldly.¹

Equal in its dimensions of disruption, the young physicist Werner Heisenberg published in 1927 “On the Perceptual Content of Quantum Theoretical Kinematics and Mechanics,” which articulated an uncertainty principle in regards to the behavior of atomic particles. Working at the Nils Bohr Institute in Copenhagen, he realized that one could not know both the position of a particle and its speed at the same time. If one could not know both the speed and position at the same time, then it no longer made sense that causal laws organized the universe. Matter and motion had been essential categories of the description of nature in classical mechanics: to describe what the universe is “doing” one needs to know how it is “moving.” The best one could hope for was a probabilistic description of nature, but not of nature itself. Symbols of mathematics and language were at best an approximation of nature, and, from Heidegger, language was of little use at all at describing the nature of what is perhaps most sacred to those in

¹ See Robert C. Solomon, *From Rationalism to Existentialism: The Existentialists and Their Nineteenth-Century Backgrounds*, (New York: Rowman & Littlefield Publishers, Inc., 2001), Chapter 6, 184–193. See 190 for the quote from *Being and Time*, which reads, “Language is the house of Being.” Ludwig Wittgenstein was another German-speaking philosopher who found language problematic in describing philosophical problems, going so far as to say that philosophy should not engage in grand problems like the analysis and description of Being. He, in fact, advocated a basic voicelessness on such problems: “we had better be silent about that of which we cannot speak.” Wittgenstein would also be associated with the school of Logical Positivism in his early career, though he later distanced himself from it. Logical Positivism was an effort to remake philosophy in the image of mechanistic science, one that Goldstein and Maslow would vehemently attack. See Roland N. Stromberg, *European Intellectual History Since 1789*, 6th ed., (Englewood Cliffs: Prentice Hall, Inc., 1994), 237–41. The quote comes from the *Tractatus* (1921), though I do not know the edition or translation.

the human sciences: the human being itself. Silence and probability left little meaning in the world, and what meaning remained, remained disturbingly unstable.²

Like Goldstein, Heidegger's and Heisenberg's work emerged out of a Western culture that had experienced the catastrophe, misery and mass death of World War I.³ *Being and Time* and the uncertainty principle were epochal events and affected many scholars in the post-War period. Amidst the anxieties of Weimar Germany, Goldstein responds in his work to both these events—which I think of as a kind of shared suffering amongst some western intellectuals and scientists of which Maslow is also a part. If the nature of Being is indefinable and unknowable with the current language, according to Heidegger, and uncertainty pervades nature, according to Heisenberg, Goldstein offers, in elegant counterpoint, a human being awash in tripartite potentiality:

Thus, our scientific procedure is apparently commensurate with the character of the human being in general, manifesting itself mainly in three phenomena: in the potentiality of complete devotion to Being, in the potentiality to keep modestly at a distance from it, and in the potentiality to act with free decision in placing the personality at risk.⁴

Goldstein's human being does have "the character of an entity" in contrast to Heidegger; yet he pays clear homage to the concept of Being. This passage comes at the end of *The Organism* in his concluding remarks. In the previous chapters, he describes "our" scientific procedure, inviting the reader to join with him and leave the cold isolation of the scientific paradigm he methodically and forcefully attacked. Maslow was captured by this alluring invitation to a new

² Peter J. Bowler and Iwan Rhys Morus, *Making Modern Science: A Historical Survey*, (Chicago and London: The University of Chicago Press, 2005), 267–70 for the placement of Heisenberg's work in the conflicts and revolution of cosmology and physics in the interwar period.

³ See Eric Weitz, *Weimar Germany: Promises and Tragedy*, (Princeton and Oxford: Princeton University Press, 2007), 275–84 for an excellent contextualization of Heidegger's work in Weimar Germany. See Stromberg, *European Intellectual History Since 1789*, 210–11 for the contextualization of Heisenberg in the interwar period.

⁴ Goldstein, *The Organism*, 384.

science. To grasp the full meaning of what can seem like metaphysics in Goldstein's writing as science, it requires an understanding of his criticism of the dominant paradigm of science. In his criticism, he responds to Heisenberg as an opportunity to see the human being as not determined by causal laws of physics. Where he differs from Heidegger is that he does affirm science's use of language and the capacity it endows to symbolize the nature of Being with it.

In this chapter I explicate the large trends in science to which Goldstein specifically responds in *The Organism* and out of which he develops a science of holism that is based on a creative engagement with the world and with nature. The specific concepts and events I will address in a highly summary fashion, as a full discussion is beyond the scope of this chapter, are: epistemologies such as materialism, vitalism, mechanical philosophy, determinism and atomism. I will also address the larger scientific paradigms of physics and physiology. Once we understand the larger context of the scientific paradigms to which Goldstein is speaking, we are in a position to understand what Goldstein was doing in creating a new scientific procedure "commensurate with the character of the human being;" and how it relates to both the problems in science and philosophy that the examples of Heidegger and Heisenberg make clear. I build on my discussion of localization in chapter two to do so. In writing this chapter, I aim to lend credence to the idea that the Goldstein's work, and others like him, was and remains science. I do so for dual purposes: I believe it sheds crucial understanding on Maslow's work and in some measure, sets the course Maslow's work took as it was absorbed in the cultures, popular and scientific, of the United States; and I feel that there is something valuable that was lost in Goldstein's work as it was forgotten by neurology and science in general, and to the degree that this is true, we are impoverished for it.

The Dominant Science

The Scientific Revolution and the Enlightenment are the two large-scale historical concepts that describe the process of how ideas appeared and combined that would come to be described as modern science. Nicolaus Copernicus (1473–1543), René Descartes (1596–1650), and Isaac Newton (1642–1727) exemplify the years and events of the Scientific Revolution as its protagonists. Copernicus noticed observational anomalies in planetary movements that did not conform predictions of the Ptolemaic system. These anomalies led Copernicus to reject Ptolemy’s geocentric model in favor of a heliocentric model, there by redefining the cosmos, and with it, human’s place in nature.⁵ Exemplary of an imagination that conceived of the cosmos as mechanical, Descartes’ mathematical genius supplied Newton with analytical geometry necessary to conceive of classical mechanics. Newton described a cosmos and nature that operate by mathematical laws, strictly tied to the notion of causality, where one event causes another in some direct proportion. Newton’s laws of motion, among others, provided a basis for later physiologists and psychologists to conceptualize the atoms of the body and mind moving in a law-like fashion, as I discussed in chapter two. The works of these men provide the intellectual basis for understanding the epistemologies like materialism and atomism that Goldstein would dispute. In addition to these scientists’ concepts and others like them that compose the Scientific Revolution, the animus of Enlightenment thinkers toward religion, mysticism and supernaturalism is another necessary component to understand of why epistemologies like materialism and atomism took hold in the minds of nineteenth-century physiologists and

⁵ Kuhn, *The Structure of Scientific Revolutions*, 68–67

neurologists.⁶ The Enlightenment saw the emergence of controversial, heretical ideas that challenged Christianity's description of cosmos and nature. Reason and rationalism replaced superstition and magic as a basis for understanding nature and the cosmos for these thinkers. Once the physical structure of the universe was broken anew, new possibilities entered for the physical sciences and a generation of scientists became committed to versions of ideas that descended from the Enlightenment.

In Germany, as well as across Europe, post-revolutionary Romanticism in the late eighteenth-century, often described as a reaction against the sterility of Enlightenment rationalism, changed the landscape of intellectual attitudes possible in science. Goethe emerged as a central figure that held the status of both poet and scientist. He made advancements in biology and evolution that found a place in nature according to what Goethe believed, existed as a unified, living whole—far apart from the theories of biology and science that would be dominated by metaphors and epistemologies of physics throughout most of the nineteenth-century in German science.⁷ Goethe would become for Goldstein, a sort of spiritual forefather in science that presented him with a theoretical basis for his scientific procedure to conceive Being and the human being as a whole and unified, against what he felt were radical epistemological and methodological inadequacies of mechanical philosophy, materialism and atomism.⁸

⁶ See Bowler and Morus, *Making Modern Science: A Historical Survey*, 23–53 for a chapter on the scientific revolution and the contextualization of these figures within the idea of a scientific revolution.

⁷ *Ibid.*, 83. See also, Edgar E. Knoebel, ed., *The Modern World (Classics of Western Thought Series, Volume III)*, 4th ed. (San Diego: Harcourt Brace Jovanovich, 1988), 221.

⁸ See Harrington, *Reenchanted Science*, 29 for a discussion of the shaping influence of Goethe's principles of wholeness in studying natural phenomena in fin de siècle German science.

The Memory of Metaphysics

Whereas Goldstein took homage and inspiration from Goethe, the generation of scientists before him in Germany sought for an all out repudiation of *Naturphilosophie*, roughly translated in English as ‘philosophy of nature’, associated with scientists like Goethe of the German Romantic period.⁹ Practitioners like Hermann von Helmholtz, Emile Du Bois-Reymond, Carl Ludwig and Rudolf Virchow adopted a mechanistic and materialist approach to describing nature in the nineteenth-century. Helmholtz, arguably the most famous among them, is credited with articulating the first law of thermodynamics, also known as the law of the conservation of energy. Helmholtz, however, was not originally a physicist, but rather a physiologist and a physician. He viewed the body as well as the universe as a machine made of the same material, both of which conform to the law of the conversation of energy. The law of conversation holds that, “the quantity of force which can be brought into the action in the whole of Nature is unchangeable, and can neither be increased or decreased.”¹⁰ Bodies and cosmos as Nature then conform to the same law of the interchangeability of energy and matter, each transforming from one into the other, inorganic to organic and back again, all the while the amount of energy in the universe remains constant. The concept of a universe and organic bodies operating like a machine finds origins in Descartes. Descartes conceptualized the universe as entirely composed of particles of matter, referred to as corpuscles, which science would later transform into atoms.

⁹ Other thinkers commonly associated with *Naturphilosophie* are: Johann Gottlieb Fichte, Friedrich Schelling, and Georg Hegel.

¹⁰ Quote found in Harrington, *Reenchanted Science*, 8. She also narrates the first law of thermodynamics in the history of German science. This theory would have a profound impact on the emergence of theories of mind, most specifically seen in the Freud’s development of the topographical theory of mind. See Jonathan Lear, *Love and its Place in Nature*, (New York: Farrar, Straus, & Giroux, 1990), *passim*. These energy dynamics also structured the way in which Maslow’s hierarchy of needs developed in that he distances himself from energy metaphors and repudiates Freud’s theory of the mind.

Corpuscles behaved in a mechanical fashion where, when one part of the universe moved, so did another, just like a machine. For Helmholtz, these mechanics, empirically confirmed by the law of the conservation of energy and in accord with Newton's laws of motion, justified the use of materialistic principles to study and explain life—explanations that would also apply to the brain. In so conceptualizing the various phenomena of nature, these phenomena could be studied and experimented upon with much greater utility as no metaphysical or magical principles required postulation to explain the function and the behavior of the phenomena.¹¹

Conceptualizing the body as a machine and composed of different types of cells executing processes via atomic exchanges of energy and matter allowed for the idea that to understand the different types of body parts and cellular tissues, a physiologist should reduce his inquiry to specific organ; he should explain its particular operation via universal atomic particles and principles to add to the scientific project a producing a universal description of nature. The idea that a biological organism could be reduced to parts and studied according to discrete chemical and physiological process had profound implications for the evolution of scientific knowledge of the body. Reducing the problem of the body and brain to parts made them more manageable to study and allowed for professional specialization. This process of reducing complex biological processes to parts allowed for the emergence of a new biology and for careers like Helmholtz to flourish. The epistemology and methodology of reducing complex biological phenomena to atomic parts to acquire knowledge of those phenomena became linked

¹¹ See Bowler and Morus, *Making Modern Science: A Historical Survey*, 35–39 for a discussion of mechanical philosophy and 95–98, 177–178 for the history on Helmholtz and the law on the conservation of energy. The example of William Harvey's use in 1628 of mechanical principles to explain the circulation of blood is given and clearly demonstrates the power and utility of using these principles to advance science and medicine. Interestingly, with Harvey's work it became clear that soul, intelligence, or any form of mentality did not reside in the heart as thought in the ancient Greek world, but rather resided in the brain.

with the concept of *atomism*. Atomism is the idea that studying individual parts, like the brain and the heart, and then “adding” them together to produce a model of the human being. As an epistemology and methodology, atomism gained widespread use in German neurology in the nineteenth-century and became the dominant mode of inquiry into the human being.¹² As argued in chapter one, Maslow reacted with particular force against the idea of atomism and faulted the epistemology for wide-scale failures to understand human psychological phenomena. This history in German science is the proper context with which to understand his protest. It displays a transcultural and transatlantic migration of German debates on the nature of the world to the United States in the 1930s.

Yet, despite the enormous success of materialism in producing innovations in technology and medicine, the idea that the body, and eventually the brain, operated solely by physical forces that correspond to the so-called laws of physics remained in conflict with the idea that something else moved behind the veil of life, animating its splendor. Materialism as derived in Newtonian classical mechanics did not present enough compelling evidence nor describe the totality of nature in a way that allowed science to predict the various movements of nature with an accuracy that confirmed the model of the phenomena under study. Metaphysics, then, asserted within the voids and cracks of materialism, that body and brain, organism and world remained free and undetermined, however difficult and indefensible positive metaphysical assertions about nature’s ultimate structure would be. If anything, the memory of metaphysics, allowed for a commitment to remain to an ethic of a world with meaning and order – commitments worth price of the courage to live in a new disenchanted world. Perhaps the memory of Goethe gave Goldstein the

¹² See Harrington, *Reenchanted Science*, 15–18 for how atomism allowed the conceptualization of the brain as localized by parts, as I described in chapter 1. See Bowler and Morus, *Making Modern Science: A Historical Survey*, 176–178 for a discussion of reductionism in nineteenth-century German biology.

spiritual and intellectual courage not only to resist the totalizing force of materialistic science, but also to respond, with passion and force, that new possibilities for a science, based on evidence derived through meticulous observation *and* a creative ordering of the life processes and performances of creatures, existed.

Everywhere in nature Goldstein saw a suffering – with origins in the attempt to respond to the gauntlets of the environment – in the eventual demise of all living things—a characteristic act of theodicy, that revealed the essence of organisms and the world itself; a suffering that science must be willing to bear in order to achieve scientific knowledge of organisms. Of humans he would say, “the privation of essential performances and limitation of the world can be mitigated, *because he has the capacity to bear insufficiency, that is, suffering*. This capability is *the* characteristic of human nature and reveals the very highest form of life in the phenomenon of freedom.”¹³ Science, then, must be willing to see, empathize and bear the suffering of living; and this engaged empathy—a form of science beyond the strict confines of objectivity—is what I characterize as Goldstein’s emotional engagement with a good enough world, that, however much suffering is involved in the act of living, is worthy of scientific inquiry.¹⁴

Maslow would identify strongly with these spiritual and existential elements of Goldstein’s thought and scientific procedure. The notions that personality, motivation and life had an order, and that science had a role in making that order visible, would appeal to him. The younger, collegiate Maslow had engaged passionately with philosophy, science and religion and

¹³ Goldstein, *The Organism*, 392 (my emphasis).

¹⁴ It is Jonathan Lear’s analysis of psychoanalysis as a “science of subjectivity” that I take inspiration from to characterize Goldstein’s attempts to broaden and redefine the methods and boundaries of science. Lear’s analysis departs from classical psychoanalytic arguments that psychoanalysis was materialist science, and is suggestive of opportunities to view acts of study into the mind and emotional experiences of humans as other than purely objective research. The idea is that there is an important, constitutive emotional investiture in both the act *and* product of scientific inquiry. See Lear, *Love and its Place in Nature*, 3–28 and *passim*.

denied the need for metaphysical principles to explain the purpose of life; he would, in fact, call using such appeals intellectual cowardice.¹⁵ The older, professor Maslow would experience acute frustration with his field's and colleague's timidity at taking on the big questions; he resented the narrowness of inquiry and the obsession with experimental approaches to solve meaningless small-scale problems in an incremental approach to building psychology.¹⁶ He, too, would search for a third way between metaphysics and materialist science.

However, the metaphysics side of the dialectic in *Naturalphilosophie* would take on a different form in an American scientific and religious context. While Goldstein would console with, what I characterize as a scientific theodicy, one that naturalizes suffering, Maslow would offer salvation in self-actualization. Suffering would lose its essential place as *the characteristic* of what it is to be human. The tragic cast of the organism would become the transcendent possibility of the new faith of the psychological adept. Courage and suffering gone, Maslow's self-actualization substituted as the consolation and salvation promised to American psychological seekers. Goldstein's theory of the organism was absorbed into a mid-century American context more explicitly preoccupied with the problems liberal religion and the possibilities of faith absent belief; self-actualization would be that faith, that promise of salvation found in understanding the organism and the world through the new science, of which Maslow was, while not prophet, its preacher. The third way Goldstein and Maslow sought between science and metaphysics would leave the explicitly scientific contexts and be absorbed into the larger conflicts of culture of the 1950s and 60s America in which Maslow's work enjoyed enormous popularity. However, Maslow's intellectual debt to Goldstein is greater than has been previously recognized by scholars in spite of Maslow's own insistence on the importance of

¹⁵ Hoffman, *The Right to Be Human*, 41.

¹⁶ *Ibid.*, 161–62.

Goldstein to his work on the hierarchy of needs and self-actualization. As I demonstrated in chapter one, Goldstein provided the theoretical basis for Maslow's apostasy from the dominant forms of experimental and behaviorist psychology in the 1940s.

The New Biology

The idea that nature had been divided, disunited—even dismembered, by materialist and mechanistic epistemologies runs through Goldstein's description of an alternative approach to studying biology.¹⁷ He charged that methods derived from these epistemologies failed to adequately describe biological phenomena. Of mechanistic science he would say, "One of the main objections against the mechanistic view of life processes is supported by the fact of self-regulation of the organism, in spite of its defect, is supposed to become restored."¹⁸ Organisms are not machines because they heal. He would claim that:

This "essence of nature" cannot be dissected mechanistically into parts, but it is a structurally articulated organization. True, we can dismember it, so that we construe "parts"; but this is only the case when we actually take it apart, that is, split it into its physico-chemical elements. In every physiological dissection – and this is true also for many experiments carried out with the knife – we create a mixture of these "part elements" and real "whole members." It is our task to discriminate, in this mass of phenomena, the true "members" from the artificial "parts," and further, to investigate the former as to their functional membership character in the organism and what significance they have for it.¹⁹

The mechanistic and materialist scientific paradigm produces artificial knowledge about nature and how it operates. As we saw in the case of the brain, the presumption of distinct parts of the brain that correspond mechanically to distinct mental capabilities such as language, led to faulty

¹⁷ One is reminded that in the preface to *De Revolutionibus* Copernicus evoked a similar sentiment of a dismembered description of the cosmos by the apologists of geocentric theory: "On the contrary, their experience was just like someone taking from various places hands, feet, a head, and other pieces, very well depicted, it may be, but not for the representation of a single person; since these fragments would not belong to one another at all, *a monster rather than a man would be put together from them.*"

¹⁸ Goldstein, *The Organism*, 303.

¹⁹ *Ibid.*, 321.

description of symptoms of brain injured patients. It lent itself to a problematic theory of anatomical and mental functioning that ignored evidence to preserve the theory. The brain, the human organism, and nature are “structurally articulated organizations” – a designation Goldstein asserted as an epistemology that allowed for the revelation of “true” biological knowledge. The holistic biologists task was to refine each such structure of organization, whether a brain or heart, human or animal—even to draw bright the gray delimitation between organic and inorganic nature.²⁰

The physico-chemical approach to describing life processes held particular appeal and utility to practitioners of materialist science. It is easy to imagine why. Explaining the functioning of the brain as the sum of its electrical activity or blood flow are still useful methods to monitor and study brain activity today. Goldstein in his articulation of holism did not deny their importance but rather asserted that, “they play no greater part than the other phenomena [in the study of the nervous system] but are only coordinated with them.”²¹ He took issue with the the approach “attempted by present-day physiology, and that is regarded as the ideal, is to examine the organism by physical and chemical methods and to form a concept of the functioning of the organism on the basis of results thereby obtained.”²² The quantification and exactness allowed by these methods Goldstein points to as reasons for their popularity. Additionally, the idea that working with elemental substances to describe life connected with the idea that universe was all one substance and by working with them conveyed “a particularly direct insight into the events in living substance.”²³ While necessary, these findings remained incomplete for Goldstein. He would not agree that, “it is a foregone conclusion that life

²⁰ *Ibid.*, 320.

²¹ *Ibid.*, 108.

²² *Ibid.*, 108.

²³ *Ibid.*, 109.

processes can ultimately be resolved into physico-chemical processes”²⁴; but rather he would question, “Is it not altogether a mistake to talk about the physiological facts where it would be more correct to say that we are dealing with physics and chemistry applied to a living object, but not with a physical and chemical research of life processes?”²⁵ His point is that explanations for life cannot be reduced simply to the atoms of physics and the reactions of chemistry. Atomism fails. The epistemologies and more importantly methodologies do not grasp, and instead, disappear the “essences of nature.” In fact, he would use a type of thinking that bears the imprint of Heisenberg when he remarks, “could not the onset of the experiment alter the activity of the organism in such a way that we always obtain a modification of its normal functions that deviate irreparably from the normal process?”²⁶. In other words, the act of observation under the materialist-classical mechanism epistemology and methodology, distorts the phenomena under study. Like Heisenberg, Goldstein would claim that classical physics couldn’t adequately describe nature. He would later even extend this point to general and specific relativity. He believed physics was a fundamentally inadequate paradigm for approaching the scientific and spiritual problems of organic life. He would say, “we must reject the assumption that in this way processes in the organism can be grasped directly.”²⁷

The Symbolic Real

In the chapter, “The Nature of Biological Knowledge” Goldstein deepens the reflection on the relationship between biological and natural science and, in doing so, carves out a mature philosophical space for the distinction between biological knowledge and physical theory. As he stakes out an epistemological position that biological knowledge is unique and of a wholly

²⁴ *Ibid.*, 109.

²⁵ *Ibid.*, 109.

²⁶ *Ibid.*, 109.

²⁷ *Ibid.*, 109.

different kind than physics, the bases for the science of holism emerge. Concomitant with this emergence it becomes possible to understand the “nature” of what he postulates as the *prototypes of organisms*. Additionally, his idea that there is an essence to nature and Being, in contradistinction to Heidegger, becomes clearer and comprehensible as an element of a robust philosophy of science. In Maslow, this essence transformed from the nature of biological beings, of which humans are a part, to a specific kind of human nature that is psychological and described by basic needs. Maslow takes this abstract concept of the *prototype of the organism* and attempts to operationalize it. He wants to describe the personality and human nature as a structurally articulated organization.

Goldstein begins with an analysis of the so-called “self-evident facts” arrived at via the analytic methods of materialist science; he denies, “the possibility of gaining biological knowledge on the sole basis of the phenomena that can be determined by the analytic methods...we do not accept them simply as undistorted manifestations of the nature of the organism”²⁸ In other words, facts, like the localization of functions of language in specific gyri of the brain, in and of themselves do not offer much in the way of understanding the nature of mindedness. He forcefully asserts, “the value the separate phenomenon has for our understanding of the behavior of the organism depends on *our conception of the organism*.”²⁹ Recalling the idea of the brain and body as a machine, Goldstein’s coming description of the conception of the organism implicitly argues against this mechanistic epistemology; he has already demonstrated how localization produced false facts about the operation of the brain and the organization of mental life.

²⁸ *Ibid.*, 306.

²⁹ *Ibid.*, 306.

Making a historical comment on the problematic nature of such so-called facts, he contextualizes and elevates his work as a historical phenomenon: “in the history of science, many facts have proved meaningless of the progress of our knowledge.”³⁰ He retains here the old faith of progress in life, unbroken by wages of war—unlike his beloved soldier-patients and adored Germany—made by the knowledge found through science. He subtly affirms that meaning is possible in life. He believes history has not ended. If the sum of facts, in and of themselves, is not enough to say anything meaningful about nature, then what is necessary to clearly describe nature and reality? What will bring order to entropic facts and to a nature unimaginable?

Goldstein turns to a contemplation of the symbols of science, suggestive of a parallel, to me at least, in a similarity of function to symbols of faith as a source of order.³¹ He is looking to find a way to articulate what type of abstract ideas, what working conceptualizations of the organism would give biological science the adequacy to describe the natural world and the richness of life. Maslow searched for much the same thing. Goldstein draws closer to his concepts by engaging in a discussion of symbols of nature used by physicists and expressing his points of agreement and departure. To deliver biology unto its own place in nature, to make a

³⁰ *Ibid.*, 306.

³¹ Risking a distraction from my current analysis, I draw this analogy based on a work by Goldstein’s longtime friend, intellectual compatriot, and fellow émigré, Paul Tillich. In *Dynamics of Faith* (1957) Tillich discusses the functions of religious symbols in creating a living church, one that imbues modern life with meaning and order. Written after his most famous work *The Courage to Be* (1952), which is often but mistakenly read as form of Christian atheism, *Dynamics of Faith* lays the theoretical groundwork for the use of religious symbols as dynamic conceptions that respond to history, science, psychology and modern philosophy while retaining their revelatory and redemptive properties. The idea and plea that each church must find its own meaning in religion by the reconciliation of faith with modernity is similar in impulse to what Goldstein is trying to accomplish in *The Organism*. With Maslow, this linkage of a search for a new language and symbolic of religion and science is explicit. Maslow cites Tillich’s *Courage to Be* in *Motivation and Personality* as well as various other essays and articles.

final separation with materialist science, he turns to the neo-Kantian philosopher Ernst Cassirer (who interestingly is his cousin) and quotes at length a passage from his *The Philosophy of*

Symbolic Forms:

Instead of concrete data, we use symbolic images, which are supposed to correspond to data on the basis of theoretical postulates which the observer considers as true and valid.... The significance of these concepts *is not manifest in the immediate perception*, but can be determined and secured only by an *extremely complex process of intellectual elaboration*.³²

Physics, then, is of an order of abstraction, complex and highly mathematical, that is not appropriate to describe living substance: “the symbols that biology requires for the coherent representation of the empirical facts are of a kind other than those in physics.”³³ Data and observations in biology are of an object of such immediacy and activity, physicality and action that such abstractions fail to achieve adequacy in describing their behavior and essential qualities. Rather, twentieth-century biological sciences “must come closer to the “real” than is requisite for a science of inorganic nature. We need symbols that are not as *essentially alien* to the observed phenomena, as is permissible for the symbols of physical science; that latter in the extreme case can confine and content itself with a system of fictitious “signs” (*mere models*).”³⁴ Goldstein’s subtle contempt for materialist science as a fiction and mere model when applied to biology is clear here. It is to biology that life belongs; physics, classical or relativistic, belong to a cosmos beyond the living. He seems to say—we devotees of knowledge today—need:

a more complete image of an individual concrete character that as much as possible must match the particulars from which we build it up. After all, we do not regard the particular data as mere appearance but as something that pertains to the reality of the whole organism, *although it is insufficient for the direct cognition of that*.³⁵

³² Goldstein, *The Organism*, 314 (my emphasis).

³³ *Ibid.*, 314.

³⁴ *Ibid.*, 315.

³⁵ *Ibid.*, 315.

A central concept to materialist paradigm is the idea of causality, where one event determines the next, as so imagined by lawful interactions of the atoms that compose the cosmos, the body and the mind.³⁶ For Goldstein's critique of materialist science to be complete, the centrality of the concept requires him to critically address it and problematize its use. He begins by stating, "at present, we are concerned more with the factor of "acausality" that, for our view, is part of *biological cognition*."³⁷ And he moves quickly to assert that this method is not so far from the methods of natural sciences given the quantum revolution in physics associated with Heisenberg: "according to these views [of recent natural science], processes on the "microscopic level" are governed by probability laws, not by strictly causal principles."³⁸ This is an important point for understanding Maslow's work, as he made the same analysis on causality and the need for a new symbolic when he first used the holistic method of science he drew from Goldstein.³⁹

³⁶ I should mention at this point the intellectual framework provided to me by Robert Abzug's *Cosmos Crumbling: American Reform and The Religious*. *Cosmos Crumbling* allowed me to conceptualize alternative versions of the cosmos and understand the social, philosophical and spiritual implications of destabilization of the cosmos. Among others, Abzug makes the argument that more materialist and reductionist historical analyses of individuals active in reform movements in antebellum America miss a crucial spiritual dimension necessary to adequately understand the reform movements as well as the reformers themselves. As I discussed phrenological influences on materialist versions of the brain, Abzug's analysis of the reformers who were proponents of phrenology as a source of moral revitalization was useful to my analysis in many ways. He also discusses in a chapter various physiological reforms of the body pursued by American reformers. Despite potential problems of using a historical analysis far from Germany in subject and time, his work is important for my analysis and understanding of what Goldstein was doing in one crucial way: the sacralization, or perhaps re-sacralization, of the "disenchanted world" described by Max Weber I argue was Goldstein's purpose and the *raison d'être* of *The Organism*. It is the essence of Goldstein's project. This essence is one of the key elements that I argued attracted and captured a disillusioned Maslow, where the applicability of Abzug's framework requires no justification and is within itself crucial for understanding Maslow as a reformer of the American self.

³⁷ Goldstein, *The Organism*, 317.

³⁸ *Ibid.*, 317.

³⁹ See Abraham Maslow, *Motivation and Personality*. 1st ed. (New York: Harper & Row, 1954), 27–31.

Making a move to ally biological science's epistemology with the new physics, Goldstein cites that:

recently some scientists have formed conceptual models of the atomic structure that are quite akin to those prototypes that we have postulated for biology. They are similar, especially in the respect that they are not equivalent to strictly causal relations and exhibit a somewhat individualized character.⁴⁰

These biological prototypes then are flexible yet circumscribed by the behavior of the physical universe; or in other words biological knowledge touches the patterned yet undetermined realm of the inorganic, from the position of living substance. He expands his descriptions by using Nils Bohr's observation of quantum atomic behavior that "makes one recognize 'fundamental discontinuities of processes'. Light emission and absorption is connected with *discontinuous transitions between stationary states*."⁴¹ He completes his analogy to biological knowledge, in a remarkable turn by its interwoven elegance, to unify the patterns of life process with the patterns of the atomic: "this represents a further analogy: we differentiate also in biology between processes having continuity and order, *those that are comprehensible*, and those having discontinuity and disorder, *those that are incomprehensible ("catastrophic situations")*."⁴² One possible reading of Goldstein's epistemology is: knowledge is that which distinguishes between order and chaos while allowing for a space between each which is neither overly determined nor without structure. His form of biological knowledge establishes a fundamental category of form that separates and emerges from the ever-present possibilities of entropic nonexistence or uncoalescing nonbeing.

⁴⁰ *Ibid.*, 317.

⁴¹ *Ibid.*, 318 (my emphasis). He also cites another Bohr theoretical edifice which offers useful context: "All changes in the state of an atom must be described in accordance with indivisibility of the energy quanta as individual processes; whereby the atom passes from one so-called stationary state into another."

⁴² *Ibid.*, 318 (my emphasis).

A Reason In Knowledge

Aristotle spoke of form and matter along with efficient and final causes in *Physics*, his influential philosophy on the study of nature, as the categories with which to understand natural substances. To illuminate the separateness and relationship between form and matter, he uses the metaphor of a house, which is of a definite form and requires certain material elements, like bricks, to build, while other matter, like water, are not a suitable for the realization of the form of a house. Goldstein invokes the same image at the beginning of his description of a prototype of the organism, which, in a dialectic process that moves towards increasing adequacy and precision and will give form to biological knowledge. In Goldstein's case, I tentatively and somewhat tenuously draw the analogy that knowledge here is the matter to the form of the prototype. He asks, after a prolonged discussion of the organism, "after all, what is the character of the picture of the organism we are seeking? It is not a mere edition of brick to brick that we try to construct this building..."⁴³ It is possible, even likely, he was aware of the connection with Aristotle, as he later cites Plato as well as through the classical education he received.⁴⁴ Regardless, the idea that the organism takes a form, unique to its matter and reasons for existence (final causation), permeates Goldstein's natural philosophy, a philosophy that claims there is a stable form of each organism. There are, however, serious differences between Goldstein's concept of the form of a prototype and Aristotle's epistemology. Form according to Aristotle appears because of a teleological reason, final causation; for Goldstein, no such a priori justification is at work.⁴⁵ Indeed, an explicit argument against teleology emerges as Goldstein, acutely aware of the possibilities, perhaps some of it even unavoidable, of misunderstanding and characterization of

⁴³ *Ibid.*, 307.

⁴⁴ *Ibid.*, See page 363 for the reference to Plato's idea of the hierarchy of the body into three sections of head, chest and abdomen.

⁴⁵ *Ibid.*, 306, 324.

his work as not science.⁴⁶ He realizes he needs to avoid the condemnatory charge that *The Organism* is nothing but speculative metaphysics.

He also searched for a unified world in which another one of his primary philosophical influences ideas could find integration with modern science. Like many German intellectuals of the period, the so-called return to Kant took a significant place in the projects and agenda of the burgeoning German university and academic system, the system in which Goldstein was educated.⁴⁷ Along with the Aristotle's notion of form, we can see traces of Kant's analysis of the *noumenon*, the unknowable thing-in-itself, in the idea of prototypic 'Being'—a term increasingly intermingled in usage with the term 'organism' later in the book, except that Being imparts a certain expansive aliveness within the realm of time. An organism has an intrinsic Being, by turns brimming and bright, that is yet unknowable through the simple collection of facts of scientific inquiry and is in itself inadequate to provide knowledge in both a practical, medical sense as well as a philosophic, existential one. He states, "we do not regard the particular data as mere appearance but as something that pertains to the reality of *the whole organism*, although it is insufficient for the direct cognition of [*the whole organism*]."⁴⁸ One may expand the tools and methods of the scientific enterprise in an attempt to gather data from and understand an object of inquiry; however, these attempts are ultimately in vain because, according to Kant, the noumenal world cannot be known by direct observation. Kant's transcendental mind is an active, rational

⁴⁶ *Ibid.*, 323.

⁴⁷ Harrington, *Reenchanted Science*, 141.

⁴⁸ Goldstein, *The Organism*, 315.

agent that orders the direct data of sense experience, but by itself mind can only perceive representations of objects (phenomenon) and never the objects themselves (noumenon).⁴⁹

The prototype, then, in itself, for Goldstein, shall remain incomplete, and unknowable something, that yet demands inquiry and investigation despite the perhaps mournful distance between the observer and the object that fascinates them. What demands attention in Goldstein's case is a patient suffering a crisis—of parts psychological, physical and spiritual; and its their strange, alien cry for help that pierces the space of the unknowable something and asks for consideration and consolation. The prototype of the organism is then Goldstein's response the noumenal world, reaching out across the void, asking for understanding; it is a response that aims to provide the biological knowledge and concepts necessary to ease suffering, heal wounds and promote health of those stricken by the pains of the body and soul.

As the philosophical foundations of his scientific epistemology become clear, Goldstein realizes the need to directly address the protest of his work as metaphysics; he knows that the lineage of Aristotle, Kant, and especially Goethe, are sources of controversy and strong feeling in an scientific environment dominated by materialist viewpoints. He specifically addresses the subjects of mysticism, vitalism, entelechy and teleology in an attempt to head off too much objection, to avoid the scoffing and denegation of his fellow scientists. There is real risk to his career in what he is doing in *The Organism*; indubitably his expulsion from Germany is an important event that impassioned Goldstein to write and publish this romantic work of science: having lost a country most dear to him, he shared what secret thoughts had moved within his innermost professional and personal being. "To advance such a type of cognitive procedure may

⁴⁹ I should note that based on my description of the associating mind, it is possible to see themes in the organization of mind, sense experience and knowledge when comparing to Kant's transcendental mind.

at first give the impression that we are headed for, and leading into, metaphysical or even mystical fields,”⁵⁰ he counsels his fellow scientists when he begins to describe how to think formatively about a biological prototypes. But he continues, “just as we had to reject vitalism and the idea of entelechy, so too do we reject the teleological approach.”⁵¹ It is clear that he rejects the teleology and entelechy that guide Aristotle’s philosophy.⁵²

In the absence of a strict materialist explanation for how organic worlds are organized, the farthest Goldstein will go, and cautiously at that, is to Kant: “at most, the concept of the so-called *inner purposiveness* in the sense of Kant could be taken into consideration.”⁵³ Inner purposiveness is complicated concept (and still a subject of debate today) that Kant ascribes in the *Critique of Judgment* to organisms that, while they have purpose, “they are, or must be considered, as products of nature rather than products of conscious design.”⁵⁴ Goldstein comes to the point that the prototypal nature of beings, while having a certain form, that form is *of nature*, and not of mystical or metaphysical origin. Only it takes a new type of thought, beyond casual and mechanistic categories, to organize organic life as knowable and comprehensible, to see the structured patterned of life that is the character of the organism.

⁵⁰ Goldstein, *The Organism*, 307.

⁵¹ *Ibid.*, 323.

⁵² It is also clear that he distances himself from Hans Driesch, a German neovitalist biologist, though his comments are more subdued in tone and he does not seem so offended by Driesch’s vitalism to stiffly and contemptuously reject his approach.

⁵³ *Ibid.*, 323. Importantly, Maslow cites “purposivism (not teleology)” as part of his theory of the personality syndrome. He means it in the sense that motivations are the inner purposiveness of human beings. This linkage from Kant to Maslow is important as it provides a clearer understanding of what Maslow is trying to do: ground personality and motivation as structured patterns of human life as well as root psychology in the study of the biology and organic nature.

⁵⁴ Hannah Ginsborg, *Kant's Aesthetics and Teleology*, ed. by Edward N. Zalta, September 21, 2014, <http://plato.stanford.edu/entries/kant-aesthetics/#3.3> (accessed March 13, 2016).

If the character of the organism and the prototypal forms of living substance are not knowable through direct cognition, then, again, how does Goldstein describe it? What is the nature of biological knowledge and how does he stay within the bounds of science in its description? Goldstein offers clear answers to these questions. He proposes an alternative type of cognition to the direct cognition of the noumenal world he believes is not possible without form. It is a different kind of thinking as opposed to believing a “sum” of empiric facts reveals anything fundamental to organic phenomena. It is this thinking that Maslow attempted to access and import into American psychology. It is, “rather *the actual Gestalt of the intrinsic architecture of this building that we try to discover*, a Gestalt from which the phenomena, which were formerly equivocal, would now become intelligible as belonging to a unitary, ordered, relatively constant formation of a specific structure.”⁵⁵

Goldstein is offering a new type of thinking, that of seeing how the world and its living creatures assemble out of chaos into something constant, something that endures through time, that other fundamental category in Heidegger’s analysis of existence and arguably Aristotle’s notion of forms, too.⁵⁶ This new organization of scientific thinking adds new life the fundamental purpose of science and scientist—the description of nature—and, I argue, Goldstein hopes leads to a new type of mindedness among nature’s inquirers. He seeks to reform mind and morals as much as methodology and epistemology—something Maslow explicitly responded to as well. He tells his fellow scientists, “We do not look for a ground in reality that constitutes Being but for an idea, *a reason in knowledge*, by virtue of all particulars can be tested for their agreement with the

⁵⁵ Goldstein, *The Organism*, 307.

⁵⁶ I suspect that time is central yet sparsely recognized concept, perhaps even by Goldstein himself, in *The Organism*. There are many references throughout the text to time, though no extended analysis. In a sense, the suffering Goldstein speaks of is the element of time along with the courage to bear it. It would be valuable for a future work to examine these connections and implications, as it would add an important dimension to the prototype of the organism.

principle – an idea on the basis of which all particulars become intelligible, if we consider conditions of their origin.”⁵⁷ There is no ground, no fundamental force in life from which Being parturiates; but rather, it takes an idea, a reason in knowledge, a virtuous idea, the notion of an ethical Gestalt with which to order the world and, I argue, make it spiritually and existentially safe for the modern individual whose self is increasingly constituted by the claims of science.

There are revelatory aspects to this form of mind and thinking. Indeed, prototypic Being and biological knowledge itself only appear, “by a form of creative activity.” It is an engagement with the world, grounded in Kantian reason, and touched by a form of spiritual reverence earned from Goldstein’s venturing into the realms of Kierkegaard and Goethe.⁵⁸ “Biological knowledge is continued creative activity, by which the idea of the organism comes increasingly within our reach of experience,” it is a dialectic moment, the realization of knowledge that Goldstein calmly asserts as a “sort of ideation equivalent to Goethe’s “*Schau*,” a procedure that springs continuously from the empirical facts and never fails to be grounded in and substantiated by them.”⁵⁹ This is the “essence of nature”: not a thing or characteristic but a form of dialectical

⁵⁷ *Ibid.*, 307 (my emphasis).

⁵⁸ *Ibid.*, 307.

⁵⁹ *Ibid.*, 307. *Schauen* is the German verb that means to “look at something” or “to look around.” Goldstein here is using it in the context of the growing philosophy of phenomenology. Edmund Husserl is considered the founder of the phenomenological method who famously taught Heidegger and provides him with philosophical methodology that was instrumental in the creation of *Being and Time*. Goldstein also encountered these ideas from Max Scheler, often unrecognized for his importance in earlier twentieth-century philosophy. Scheler was also Husserl’s student and Heidegger commented that Scheler was “the strongest philosophical force in modern Germany, nay, in contemporary Europe and in contemporary philosophy as such.” See Heidegger, *The Metaphysical Foundations of Logic*, “In memoriam Max Scheler,” for the comment. Goldstein devotes several pages to discussing Scheler in the chapter title “On Life and Mind” following the one on the nature of biological knowledge. These passages show a deep engagement with Scheler and the notion of mindedness I have been speaking about. For the purpose of length I cannot discuss Goldstein’s engagement with Scheler, but merely point to its existence and relevance. The fascination they inspire requires ample and lengthy consideration to do justice to Scheler’s notions like the mind as originally powerless: “The goal and end of all

cognition aimed at finding reason in knowledge, an eternal procedure of hope by which to live in peace and ordered behavior with a nature that is murderous and blind—an ultimate terror.

Coming to Terms

If *The Organism* is a romantic work of science, its romantic nature is most clearly seen in Goldstein's description of a 'coming to terms' with the world and with Nature during a living being's lifetime. The feeling Goldstein imparts is that through a creative coping with the environment the organism survives and grows, and in doing so, achieves a certain level of meaning and purpose to its existence. What is romantic about this conception is the same thing that makes Camus' story of Sisyphus a romantic parable of defiance of the gods, in which Sisyphus shakes his fist at the gods and Camus declares, "One must imagine Sisyphus happy."⁶⁰ With Goldstein's organism it is not the gods, but rather nature that is the origin of suffering. And there is meaning in affirming life in spite of the unavoidable "nature" of suffering. The romance in this story is Goldstein's presentation of the possibility of coming to terms with nature. It is this possibility of growth and continued life that is wagered as a concept against the concept of nature as inhuman and amoral—indeed, an unrelenting, unreasoned pitiless lethal ferocity.

The idea of coming to terms with such a nature is to see the spiritual and moral possibilities of life, beyond the cold, deadly mechanism of nature as so imagined by the materialist paradigm of science. Goldstein sees the coming to terms with the environment as "*the* basic biologic law"; it is fundamental to his universe of the organism.⁶¹ So much so that the "essence" of the organism is how it responds to the tasks of the environment, creatively and

finite Being and Becoming is the mutual penetration of the originally powerless mind, and the originally demonic urge, an urge blind towards all spiritual ideas and values." See 353–360 in *The Organism* for the discussion.

⁶⁰ Albert Camus, "The Myth of Sisyphus," in *The Myth of Sisyphus and Other Essays*, trans. by Justin O'Brien (New York: Alfred A. Knopf, Inc., 1955).

⁶¹ Goldstein, *The Organism*, 102 (my emphasis). See also 387.

successfully, over time, to become a stable form of life: “the tasks [of the environment] are determined *by* the “nature” of the organism, its “essence,” which is brought *into actualization* through the environmental changes that act on it.”⁶² In other words, the form of the organism, human or animal, arrives and continues through time as it responds to the environment and changes through its responses to the environment: “the expressions of this *actualization* are the performance of the organism.”⁶³

The essence, then, of the organism is that which it must do, the “essential tasks” it must complete, not to survive, but rather to live. The organism’s essence is not a set of moral qualities nor is it defined by instinctual patterns for sex or survival. The nature of the organism is those performances that aid the individual organism in realization of its form during its “conquest of the world.”⁶⁴ While a comparison to Darwin does have an aptness, a better comparison that more faithfully evokes Goldstein’s sentiment is to Nietzsche. As mentioned, Maslow would cite the Nietzschean vulgate quotation, “Thou shalt become what thou art” in *Motivation and Personality* but then immediately list *The Organism* as an exemplar of the exhortation.⁶⁵

As Maslow’s adoption of Goldstein’s thought makes clear, the analysis of the essence of the organism as, that which it must do, brings it closer to the ideas of individuation—the question of how to live well and with a minimum of suffering—that captured the attention of a generation of German and American psychologists and psychotherapists, many of whom were Maslow’s colleagues.⁶⁶ Within his theory of the form of the organism, Goldstein describes how an

⁶² *Ibid.*, 101.

⁶³ *Ibid.*, 101.

⁶⁴ *Ibid.*, 238.

⁶⁵ Maslow, *Motivation and Personality*, 201.

⁶⁶ Individuation is usually associated with the thought of Carl Jung, though the idea of a path of psychological development through facing the challenges of the world has many philosophical and psychological sources. See *Modern Man in Search of a Soul*, particularly chapter 5, “The

organism achieves identity and a stable form through a constancy of adequate response to the threats of the environment:

The possibility of asserting itself in the world, while preserving its character, hinges on a specific kind of “coming to terms” of the organism with the environment. This has to take place in such a fashion that each change of the organism, caused by environmental stimuli, is equalized *after a definite time*, so that the organism regains that “average” state that corresponds to its nature, which is “adequate” to it. Only when this is the case is it possible that the same environmental events can produce the same changes, that is, can lead to the same effects and to the same experiences. *Only under this condition can the organism maintain its constancy and identity.*⁶⁷

Again, we see how time and history have a developmental relationship to form and identity of the organism. It is a certain kind of memory of response – the experience of past time in the present – to the environment that brings about a stable form. At this point, one might ask: What about the traumas of life, expressed as a failure to respond adequately to present events with the patterns of the past? How are they accounted for in Goldstein’s concept?

As opposed to the term of trauma, Goldstein uses the terms ‘catastrophe’ and ‘shock’, perhaps deliberately to distance himself from psychoanalysis, to designate the experience of an organism’s encounter with an intense, threatening experience that overwhelms its ability to adequately respond to that experience. Importantly, Maslow does not adopt these ideas into his work; their absence reflects both Maslow’s personal distance from the tragedy of war as well as his protest against what he saw as the darkness and pessimism of Freud’s theories. As Goldstein describes them, catastrophes and shocks are experienced in time, inevitably and in a “phaselike” course. When they are slight, these catastrophes are part of the process of coming to terms with

Stages of Life.” An example publication that examines and describes the challenges of psychological growth and development in the generation of psychologists of which Maslow was a part is Rollo May’s, *Man’s Search for Himself*.

⁶⁷ Goldstein, *The Organism*, 101 (my emphasis).

the world as a form of an organism.⁶⁸ Eventually when it achieves adequacy of response to these catastrophes and the organism becomes a stable identity of living form and substance.⁶⁹

However, when the level of catastrophe, “goes beyond a definite or normal limit it signifies defective behavior of the organism, danger for its performance capacity and for its existence,” which Goldstein terms as *shock*.⁷⁰ Shock unsuccessfully overcome is also thought of as the moment where the new form does not realize and never comes to exist, something that is akin to a paradoxical moment of nonbeing. It is against the “opposing forces of the environment,” the shocks of life that beings emerge and this “tendency toward actualization is primal”.⁷¹ The idea is that an organism is continually and urgently attempting to actualize its form against hazards of the world, to become “what it is” so to speak, like an acorn into a tree: “Thus we are probably not overstating the facts if we maintain that these shocks are *essential to human nature, even to all organic life*, and if we believe that life must, by necessity, take its course via uncertainty and shock.”⁷²

What is necessary for humans to face such ever-present threats to existence? To

Goldstein it is unflinching courage in the face of the overwhelming anxiety of death:

The capacity of bearing anxiety is the manifestation of genuine courage, in which ultimately one is not concerned with the things in the world but with the threatening of existence. *Courage, in its final analysis, is nothing but an affirmative answer to the shocks of existence, which must be borne for the actualization of one’s own nature.*⁷³

⁶⁸ In a limited sense, this does equate to Maslow’s notion of the ‘coping aims’ of motivations and ascending the hierarchy of needs.

⁶⁹ *Ibid.*, 227.

⁷⁰ *Ibid.*, 227.

⁷¹ *Ibid.*, 239.

⁷² *Ibid.*, 239.

⁷³ *Ibid.*, 240. This is Goldstein’s most famous and often quoted passage. I seek to highlight here that the linkage between anxiety, courage and death so clearly articulated here that precedes the theologian Paul Tillich’s conceptualization of the role of courage in overcoming anxiety and the threat of spiritual, moral and physical nonbeing by 18 years.

The important historical and biographical context for this rousing, almost bellicose statement is Goldstein's witness of the horrors of World War I, but more importantly, Goldstein's own brutalization and possible execution by the Nazi German state. Who knows what anxious affirmations Goldstein made of his own life as he endured the blows of sand filled hoses, the threatening of his existence? His courage to write *The Organism* following this experience of catastrophe and shock is clear. In this context, when he calls out: "[The world] becomes intelligible only if one regards [culture] as expressions of the *creative power of man* and of the tendency to effectuate a realization of his nature. *Only* when the world is adequate to man's nature do we find what we call security," one can see that an ordered culture and society, as opposed to the disorder of the Nazi state, are linked to a creative rendering of the world, with a reason in knowledge, that Goldstein places "the creative trend in human nature" at the heart of human existence.

Of the ideas for which Maslow became famous, creativity occupies a central place. At its origins, his extolling of creativity is found here, in Goldstein's holism by its "complete devotion to Being" and ability to "keep modestly at a distance from it."⁷⁴ Maslow would take this devotion to heart and link creativity as one of the highest values that guided a human being to become whole, "a structurally articulated organization." It is an essential characteristic of how people self-actualize. For Goldstein, this type of creative cognition revealed knowledge and intrinsic Being; for Maslow, the focus on reason in knowledge would fade, at least in popular understandings of his works, and creativity would become less linked as a central feature of having a mind. Creativity would acquire the status of a descriptor of personhood and personality and as a way of life. It became part of the experience of self-actualization as a form a personal

⁷⁴ *Ibid.*, 384.

growth as opposed to an engagement with natural worlds that have a rational yet creative structure. However, it is within these forms of cognition and prototype that the idea of self-actualization makes sense; it is to this form that the efforts to realize the essential nature of the form—for Maslow which was the creative, healthy, less abstract, American individual—by its adequacy in response to the challenges, threats, and tasks of the environment in which the organism’s life is directed: it is through continuing to live, in spite of the catastrophes and shocks of the world, in a courage of suffering borne – in an overcoming of the anxieties—existential, spiritual, physical and moral—that the world becomes inhabited by organisms whose meaning is given by a kind of Sisyphean existence; an existence that is yet marked also by revelation of the organism and the world anew by the freedom to risk destruction and the infinite possibility of transformation to ordered Being and world: “Thus the organism and world realize themselves simultaneously and grow from the sphere of potentiality into actuality.”⁷⁵ Maslow was ultimately concerned with how to turn potentiality into actuality and through this concern he sought to save the American soul in disintegration.

⁷⁵ *Ibid.*, 317.

Author's Note

I want to take a moment to acknowledge that this thesis has had a deeply personal meaning to me. As is likely detectable from my writing, I have a passion for this topic. I faced an existential threat of a potentially fatal illness that led to my early departure from the honors program many years ago. The overwhelming anxiety of facing such a catastrophic situation stretched my courage to the limit and beyond. After a long, and at times brutal fight, I emerged healthy and with a greater sense of grace in the world. It seems my capacity finally met my courage. The departure from the honors program years ago was a failure, no matter the reason, that I did not want to accept. Last year, I began down a path of acceptance to let go of the work. I had decided to get an answer to whether I could complete the thesis. I applied to the honors program and fully expected to learn that the time to do this work had passed. Against the odds, it somehow all worked out that I could reenroll and finish this work. Like everybody else in the program, I faced many challenges this year. Writing is hard. But it is done. For me, what is most important is, this is the last step in a long process of recovery. I have completed a piece of work that I have dreamed of completing for many years. This dream was a kind of suffering that has yet turned into new life. I am grateful to all that were with me on this journey. What undeserved grace....

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