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**Remote Work: How It Came to Be, Its Current Status and What It May  
Look Like**

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Look Like**

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## **Abstract**

### **Remote Work: How It Came to Be, Its Current Status and What It May Look Like**

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Since the rise of COVID-19 in 2020, workers in numerous fields and industry had to make a major transition to remote work to minimize commuting and thus spread of the infection. As the new normalcy set in, new phenomenon and workplace conflicts emerged. But remote work is no novel way of working, as it emerged as a legitimate mode of labor during the early days of Industrial Revolution, with the modern concept of remote work being proposed decades before the Internet was widely available to the public. This Master's Report is a literature review that outlines the context of remote work, its current position in office work cultures with emphasis on the transition to remote work in 2020, and its potential future direction in what kind of position remote work would have in terms of work organization and work practice. Outside of academic journals, a variety of sources such as historical accounts, law review and investigative news reports have been considered to paint a better picture of the significance of remote work.

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## INTRODUCTION

Since the rise of COVID-19, the world had to make a sudden transition to performing tasks remotely. During the early days of the pandemic in March 2020, over half of the workforce in the United States made a transition to remote working (Brynjolfsson et. al., 2020), with the number of people working primarily from home tripling from 5.7% to 17.9% between 2019 and 2021 (U.S. Census, 2022). With essential workers like healthcare professionals being one of the few exceptions, homes became offices. Meetings were held using video conferencing software and technology exclusively. Large portions of in-person interactions and processes were replaced by virtual means. Instead of going to work, work came to them.

The current mass transition to remote work is novel in that transition to such a scale and impact has never been seen before. However, remote work is no new phenomenon, albeit how it was carried out was different from later implementations. Along with early concepts of remote work that have been realized since the beginning of Industrial Revolution, technological developments, namely the personal computer (PC) and the Internet, have paved the way for the current form of remote work in an office setting. Despite the fact that sudden transition to remote work imposed a drastic change on workers, it allowed them to experience increased workplace autonomy and its benefits. However, the lack of face-to-face interaction in remote work also creates a sense of social isolation, rendering them feeling overwhelmed from prolonged use of video conferencing technology – A phenomenon known as “Zoom fatigue”. To add onto this, as vaccines rolled out and treatments for COVID-19 started to develop, the world slowly

shifted back to pre-pandemic normalcy. With this, employers attempted to bring back their employees to commute to offices once again, creating room for tension between employers and employees due to conflicting views on the position of remote work in their organizational culture.

This report will reveal that although remote work has its own disadvantages that stems from its decentralized nature, current and historical examples show that remote work provides more work autonomy, improving not only working conditions, but also overall quality of life of the workers. Sources including academic journals, government records, historical accounts, law reviews, news reports and surveys were considered to showcase the historical development of remote work, as well as the current attitude towards it, which also alludes to demands for remote work to stay. The comprehensive historical account of remote work provided in this report will bring about a deeper understanding of the rapidly rising mode of working, while theoretical explanations call for empirically testing the factors that affect the effectiveness of remote work.

## **Chapter 1: Remote Work Before COVID-19**

### **EARLY EXAMPLE OF REMOTE WORK: COTTAGE INDUSTRY**

The familiar sense of remote work can be traced all the way back to the times of Industrial Revolution. During the early days of industrialization in the 18<sup>th</sup> Century, British manufacturing industries functioned according to a bottom-up work organization that was referred to using various terms such as “the ‘domestic system,’ the ‘outwork system,’ or simply ‘cottage industry.’” (Bythell, 1983) For the sake of consistency, this



report will refer to this form of work organization as cottage industry. Workers in cottage industries would manufacture goods from their own home, using pieces of equipment that they owned. This domestic nature meant that traveling to workplace is not necessary unlike the later factory system, allowing to work in an environment that workers are the most familiar with. This would have given them more freedom in creating work conditions optimal for each worker in their labors. The workers were also regularly visited by figures referred to as “‘putters-out,’ ‘bagmen’ and ‘foggers,’” (Bythell, 1983) who collected goods produced by workers, provided raw material and distributed wages to the workers. Above these middlemen were merchant-manufacturers who oversaw the entire operation, buying the *putter-outs* the material to distribute across the workers, as well as hiring employees and providing compensation for their labor by giving wages.

The fact that cottage industry used wage labor in manufacturing implies its distinct nature from the pre-Industrial Revolution form of producing commodities, where the direct producer of goods also independently acquired raw material and distributed finished products, but is rather closer to modern wage-labor (Bythell, 1983). Firstly, workers in cottage industry had distinct roles. The roles and responsibilities of the workers, *putters-out* and merchant-manufacturers were mutually exclusive. Each position can be characterized by the tasks involved, and in which part of the manufacturing pipeline it took up. This is analogous to different positions in modern corporate organization, which are characterized by the types of tasks involved, as well as roles having specific position within the corporation’s line of operation. Secondly, the difference in work organization also highlights the fact that those who work under the

pre-Industrial organization of labor are not bound by wages given by the higher-up. Meanwhile, pre-Industrial Revolution forms of labor would have the option for the workers to keep all of the profit, since all steps in manufacturing can be taken cared by a single party. Thirdly, the distinct division of labor in cottage industry allude to the difference in scale of operation, where that of cottage industry is comparable to scales of operations in modern manufacturing industries. Its distribution network spanned so vast that cottage industry could “[supply] the wants of West Indian slaves and North American frontiersmen” (Bythell, 1983, p. 18-19) without the knowledge of workers who produced those products. This is analogous to modern situations where consumers can easily purchase goods made in parts of the world far away from them, and workers who directly produces those goods do not know the exact places in which their products are sold.

The similarity between cottage industry and modern forms of labor is further seen in both being decentralized forms of work organization. The first similarity is that cottage industry shared the value of modern remote work in that workers did not have to commute to a centralized place to do their tasks. The tools necessary for those under both system of labor to perform their jobs are within their vicinity. Workers in cottage industry stored and used their production equipment in their residences, while modern remote workers would have in their work laptop in hand in their locations of choice, such as home office in a domestic setting. The decentralized nature also meant that the work came to the workers. Modern remote workers may receive tasks through electronical means, while workers in cottage industry would receive raw materials to be processed

into manufactured goods. The responsibilities of a *putters-out* is analogous to those in managerial positions in modern work organizations, as both positions are directly involved in the workers performing the main production task in respective work organizations.

However, cottage industry represents a big contrast from the factory system, yet another work organization that emerged during the Industrial Revolution. Throughout the Revolution, newer technological inventions continuously surpassed previous ones in terms of production efficiency and quality of products. Samuel Crompton's spinning mule invented in 1779 allowed producing high-quality threads in a large-scale setting (Mantoux, 2015). This also signaled the beginning of the end of cottage industry, as products could be produced faster and with better quality. On the other hand, Elias Howe's sewing machine, which was patented later in 1846, managed to bring down the cost of clothing production (Encyclopædia Britannica, 2023). With the power of mechanically-powered sewing machines, more products could be produced in shorter time than by traditional means of hand-sewing, meaning that incorporating the use of sewing machines into manufacturing pipeline would be more cost-efficient in the long run.



Illustration 1: Spinning Mule. Retrieved from Encyclopædia Britannica.

The decline of cottage industry in was also reflected on the changes in wages for textile workers. For instance, the average weekly wage of a handloom weaver in Yorkshire was 10 shillings in 1787, rapidly increasing to 34 shillings and 6 pence in 1814, then dropping to 12 shilling and 6 pence in 1838, 59 years after the introduction of the spinning mule (Bowley, 1900). In the current decimal system, this equates to 50 pence, £1.73 and 60 pence respectively. On the other hand, Great Britain's GDP per capita have been gradually growing over the years throughout early 18<sup>th</sup> Century to the end of 19<sup>th</sup> Century. From \$1,787 in 1780 to \$3,263 in 1820, nearly doubling itself (Crafts, 1998). If demands for handloom weavers steadily grew even after reaching its peak and the weavers were provided compensations with the economic growth throughout the Industrial Revolution in mind, their wage in Yorkshire may have seen a steady growth as well. Instead, it dwindled back to earnings similar to the early days of factory system, indicating the decay of cottage industry.

Despite the efficiency of such newly introduced machines, cottage industry did not phase out right away, surviving up to the 1890s in some parts of the Great Britain. (Bythell, 1983) Rather, these inventions provided rapid and economical means to produce more material to be processed in the next step by hired workers. In the case of the textile industry, the then-unprecedented rate of the spinning mule's production meant that as many extra handloom weavers could be hired to meet spinning mule's rate of production, as long as the employers could meet the financial condition. As entrepreneurs equipped their production line with more machines, large spaces would be naturally required to house them, leading to the creation of factory in the modern sense.

As factory system rose and cottage system fell, new changes came about as well. Instead of *putters-out* traveling across town taking care of managerial work, workers would have had to leave their houses and commute to a centralized workplace, where their new tools to make goods were located. The factory system is even more hierarchized than cottage industry, as factory owners impose control over hired workers through wages and stripping them unrestricted access off of the tools to perform the necessary tasks. The image of workers in cottage industry shifted as well. From being idyllic and independent, working hard to provide for the family, employees were now working in squalor, barely making ends meet under the factory system. (Bythell, 1983) This imbalance in power creates a class division between those who control the production pipeline, and those who are subservient to it. The hierarchical work organization of the factory system is further expanded in modern corporate world, where

managerial positions are layered up one another with executives and board members at the top.

By the end of the 19<sup>th</sup> Century, factory system dominated the manufacturing industry, with cottage labor surviving on demands from those who were unable to join the mainstream workforce or wanted to make extra income, or exported out to parts of the world where cost of labor is cheaper when it was more economical to do so than adopting the factory system for capitalists that owns the production operation.

The historical example of cottage industry shows that remote work is not a novel phenomenon, but has developed throughout the Industrial Revolution since its nascence. Its parallelism with the modern remote work provides evidence to the feasibility of remote work, in that limitations on technology is not a justification for doubting the effectiveness of it. The aforementioned image of cottage industry workers as being hardworking and self-sufficient represent the core benefits of remote work – increase in work productivity (Baudot and Kelly, 2020), and higher work autonomy.

### **1970s TO 1980s: PC, THE INTERNET AND TELECOMMUTING**

Although cottage industry faded as a prominent system of production, further inventions and technological developments has paved the way towards modern sense of remote work. Most notably, the development of PC and the Internet play direct roles in the foundation of modern remote work, as the former is widely used and inseparable to modern office work, and the latter is the system of network in which PCs are

interconnected to a global network, allowing access to work from wherever there is Internet connection available.

Historical examples of computers do reach far into the antiquities, such as the Antikythera mechanism dating back to around the end of 2<sup>nd</sup> Century, (Freeth et. al., 2006) which shows that technology has been the human solution in completing a complex task, with calculation being the case for computers. However, the direct precursor of the digital computer can be traced back to ENIAC, which was completed in 1945 with fundings from the United States Army. (McCartney, 2001) By 1949, computers became commercially available with the release of Ferranti Mark 1 (Rojas and Hashagen, 2002), but it was delivered to the Victoria University of Manchester for research purposes rather than it being truly used for commercial and personal uses. It was not until the 1977 when PC as a concept was first widely introduced through commercial successes of three PC models: Apple II, PET and TRS-80 (Chandler, 2005).

While these models seem compact enough to fit in one corner of a kitchen table, as illustrated in Figure 2 (Apple Inc., 1978), computers were large and heavy piece of machinery. For one, the Ferranti Mark 1 weighed 10,000 pounds and took up 600 square feet of space (Rojas and Hashagen, 20002), making it only operable for institutions large enough to handle the cost and proper maintenance of the machine. The relatively smaller size of PCs lowered the bar for commercial and personal use of computers, starting the widespread usage of the PC. In addition to this, the costs of PCs dropped during the 1970s, allowing the introduction of computers in office settings as a work tool (Haigh, 2006). But the machines used were specialized computers installed with packages written

precisely for office works, rather than a general-purpose personal machine like the aforementioned PC models. By the end of the 1980s, PCs dominated the office environment with word processing environment, pushing typewriters away from regular use.

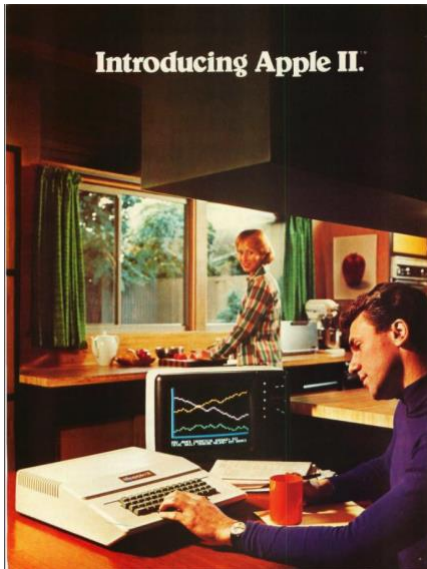


Illustration 2: Introducing Apple II. The advertisement depicts the PC model fitting right on a kitchen table. Retrieved from the March 1978 edition of Byte magazine.

Similar to the PC, the Internet also was developed from a military background. In 1969, United States Department of Defense started the development of ARPANET in building a network of communication (Lee, 2012). With the first node-to-node message sent in 1973, the ARPANET was the first step towards the Internet as we know, where a network of computers as nodes are able to send information to one another. In 1991, World Wide Web (WWW), which was originally developed as an information management system used for academic purposes at the European Organization for



Nuclear Research (CERN), was released for public domain use (CERN, 1993). With this release, the WWW was available for all to access at no cost, transforming the paradigm as the primary tool for people to connect with one another. Instead of transferring information using physical data storage, the advent of the Internet allowed work to be sent through means of telecommunication, paving the grounds for modern forms of remote work.

The historical development of the PC and the Internet provides the technological foundation of the modern remote work. It defined the basics of office work, in which workers complete tasks on a PC or laptop using specialized software, and deliverables and tasks are exchanged between coworkers and stakeholders through the Internet. This, in turn, shaped the modern remote work, where workers perform tasks on a laptop while connected remotely to the rest of the organization via the Internet. The portability of laptops, combined with the ubiquitous nature of the Internet, significantly widens the choices in workspaces. This provides additional work autonomy as workers are not bound to their homes, unlike the workers in cottage industries.

Conceptual foundations of the current sense of remote work started to be talked about in the 1970s, as developments in computer technology and telecommunications such as the previously mentioned cases of PCs and the Internet. In their pioneering research at the University of Southern California, Jack Nilles (1975) coined the term “telecommuting”, where telecommuting network and equipment would “enable employees of large organizations to work in office close to (but generally not *in*) their homes.” This definition of telecommuting still does not exactly correspond to the modern

form of remote work, as it still puts an emphasis on a centralized workplace. But upon consideration, this can be explained by the technological limitation of the time period when the research was published – PCs did not become widely available until two years later in 1977, and ARPANET was still in its nascence with the first success communication taking place only two years ago in 1973.

Around the same time period, private companies started to experiment with rudimentary forms of remote work. In part of this trend, IBM conducted a pilot project on telecommuting in 1979 as a response to waning morals amongst employees that was revealed in an employee survey, where computer terminals were utilized in the homes of five researchers. (Caldow, 2009) In 1983, this number increased to over 2,000, with computer terminals being replaced by PCs. Department store chain JC Penney began to maintain teams of call centers based in domestic setting to take catalog orders. (Mandell, 1985) Telephone company Pacific Bell even utilized a screener to select appropriate telecommuters. Large corporations' attempt to realize remote work, combined with the continuously occurring innovations in relevant technologies, made working remotely a more viable option for office workers.

### **1990s AND ONWARDS: LEGISLATIONS AND SLOW ADOPTION OF REMOTE WORK**

With the rise of telecommuting as more of a viable employment arrangement, legal frameworks were also being established around the emerging work organization. In 1996, the International Labor Organization created the Home Work Convention, promoting the “equality of treatment between [remote workers] and other wage earners”

(International Labor Organization Home Work Convention, 1996) in terms of workplace rights, including but not limited to discrimination and safety, social security and maternity protection. However, even after 26 years, only thirteen countries have ratified the convention as of 2022. (International Labor Organization, 2022) This may be a reflection of a trend across member states giving lower priority to remote work, despite its emergence half a century ago. But there are cases of countries that have created their own legislations to protect remote workers' rights. One example of such is the United States' Telework Enhancement Act of 2010, which ensures that working remotely is a viable option for those eligible, and that remote workers are treated the same as non-remote workers. (Telework Enhancement Act, 2010)

The Americans with Disabilities Act (ADA) is another legal framework that plays a role in ensuring remote work is a viable option for those who could benefit from it. In 1999, the U.S. Equal Employment Opportunity Commission (EEOC) issued a response to the question “[Whether] an employer has to allow an employee with a disability to work at home as a reasonable accommodation,” to which it responded that employers would have to accommodate its disabled employees by permitting working at home, assuming that the accommodation is deemed effective and not causing undue hardship. (Goluboff, 2001) Although ADA does not explicitly state remote work as a reasonable accommodation to disabled workers, EEOC's answer to the issue is significant in that it provides legal protection of remote work being a reasonable accommodation for disabled workers, albeit it also highlights ways in which employers can deny remote work for employees who requested it.

Despite practical implementation of remote work and rapid development of relevant technology, remote working was not the norm within in the office work culture. A survey conducted by technology company IBM across full-time workers in U.S., Canada, U.K. and Australia over the years between 2008 and 2012 revealed that the percentage of those who works remotely at least once a week never exceeded 10% over the 5 years. (IBM, 2014) A 2011 survey on federal workers showed similar response, with 10% of employees working remotely at least one entire day a week. (Mahler, 2012) Although survey response showed low percentage of regular remote workers, IBM's report postulated that the trend will rise "as work locations continue to disburse, and [teams] are no longer co-located in a central office." (IBM, 2014) However, remote work continued to be taken up by only small portion of the workforce, with fewer than 6% of American workers working primarily from home, and around 75% have never worked from home before. (Coate, 2021) In 2017, Even the same company that put out a positive prediction on the spread of remote work pulled back on its remote work policy, giving a 30-day ultimatum to its remote workers to relocate to an IBM office or to leave the company. (Simons, 2017)

## **Chapter 2: Remote Work Since COVID-19**

### **THE CURRENT STATUS OF REMOTE WORK DURING THE PANDEMIC**

On January 31, 2020, the U.S. Department of Health and Human Services (HHS) declared a national public health emergency. (HHS, 2020) By March 11, the World Health Organizations (WHO) declared the outbreak as a pandemic, emphasizing that

pandemic “is not a word to use lightly or carelessly, [as it] can cause unreasonable fear.” (WHO, 2020) Soon after this declaration, drastic measures to prevent the movement of people have taken effect in an effort to prevent the exponential spread of COVID-19. Travel restrictions like mandatory quarantine or even banning entry from certain countries or regions took effect. Businesses and schools were closed to minimize situations in which a crowd can gather in a restricted indoor space. But with the case of remote work post, it most salient example in regards to. Soon after the declaration by WHO, administrations started to issued lockdown measures, significantly restricting individuals from leaving their place of residence. For instance, U.S. state governments released stay at home orders on the same month as the declaration, starting from California on March 19. (Exec. Order N-33-20, 2020) By the end of March, 13 states have issued lockdowns, with the number peaking at 40 by the next month. (Adams-Prassl et. al., 2020)

With measures limiting people’s movement and travelling, employers had no choice but to comply and make a sudden transition to remote work for their employees. A nationwide survey conducted in 2020 has revealed that most of the transitions to remote work has taken place by early April, as their survey done in two waves on April 2020 and May, in which no significant changes in responses were found. (Brynjolfsson et. al., 2020) Considering that the declaration of public health emergency in late January, companies only had roughly two months to make a complete transition to remote work. In May of the same year, about 35% of the employed workforce has worked from home due to COVID-19. (Coate, 2021) The rapid increase of remote workers is another

testament to the extreme circumstances of the early days of the COVID-19 outbreak, especially when the percentage full-time workers only increased by 2% over a decade from 2009 to 2019. (Coate, 2021) By September 2021, 45% of full-time employees in the U.S. worked from home, of which 67% of those in white-collar jobs worked from home either fully or partly. (Saad and Wigert, 2021) This trend of transition can be seen in other regions of the world but to a lesser extent, as a 2020 report by European Commission's Joint Research Centre (2020) showed that the portion of workers working remotely rose to 25% a 10% increase from the pre-pandemic 15, amongst which Poland saw a near two-fold increase from the pre-pandemic 4.6% to 8.9%. (Pokojski et. al., 2022)

Workers quickly realized the autonomy remote work can give, as the work would be with them wherever workers had their work laptop and a stable internet connection. By the end of May 2020, 24 of the states have eased their lockdown orders, (Adams-Prassl et. al., 2020) making travel slightly more viable and less cumbersome. This, coinciding with the fact that transition to remote work was complete for the most parts, suggested opportunities for remote workers to venture outside of their domestic settings in search of the most optimal workspace. As a matter of fact, 22% of U.S. adults reported that “they either changed their residence due to the pandemic, or know someone who did,” with one of the most prominent reported reasons for relocating being “money-related reason.” (Cohn, 2020)

With the remote workforce taking this opportunity, so-called “Zoom towns” started to emerge across the United States. A reference to the video conferencing

software, Zoom town is a community where its population is rapidly rising due to a large influx of remote workers. Gateway communities with easy access to natural attractions such as the Hamptons in New York, Cape Cod in Massachusetts and Aspen, Colorado are some of the prominent examples of “Zoom towns”, as the number of remote workers moving to these destinations brought about a sharp rise in populations of such communities in a short amount of time. (Rosalsky, 2020) With relatively lower cost of living in a smaller community and easy access to outdoor activities, the phenomenon of “Zoom town” is a manifestation of post-pandemic remote workers utilizing their newly endowed work autonomy.

The pandemic imposed a significant limit on mobility, prompting for a widespread and sudden switch to remote work regardless of opinions towards the mode of work. This meant an opportunity for workers to once again experience what it is like to work in a decentralized setting, where one does not have to show up to office every day. The shifted paradigm from on-site work to remote work also meant more benefits and harms of remote work becoming more apparent, affecting the entire work organization.

### **BENEFITS OF REMOTE WORK**

Analogous to the contrast between cottage industry and factory system shows during the Industrial Revolution, modern form of remote work also provides more freedom for workers compared to on-site work, which mandates workers to commute to a centralized workplace. Whereas in remote work, work comes to wherever workers are through means of telecommunication. With remote work as a viable working option,

employees will be able to set up the most optimal environment that will cater to their needs not only in terms of working, but also in terms of general wellbeing. Empirical study shows that remote work is associated with increased job satisfaction and leisure time satisfaction, (Clark et. al., 2019) and survey further reveals that whether respondents preferred working fully on-site, hybrid or fully remote, personal wellbeing and productivity are included in their top five reasons of their preference. (Saad and Wigert, 2021) This suggests that a hybrid of both remote and on-site work, given that the liberty of choice is on the employees, would allow for responses that address wider scopes of worker needs, leading to higher levels of satisfaction at work.

A theoretical framework that can further support the benefit in work autonomy is the Job Characteristics Theory (JCT), proposed by Hackman and Oldham. (1974) The JCT describes how different job characteristics can affect individual work outcomes by triggering a certain psychological state within the workers. Of the five job characteristics identified, autonomy is a determinant that directly translates to experiencing responsibility for outcomes of work, which in turn leads to positive work outcomes. Based on their proposal, Hackman and Oldham (1974) devised the Motivating Personal Score (APS), which calculates the potential for a job to motivate the workers involved in it. According to its formula, higher level of autonomy leads to higher potential in job motivation, which is supported by results from their survey of workers. The JCT is further confirmed by more recent studies, such as Van der Meer and Wielers's (2011) analysis of a 2004 survey about work satisfaction, which revealed that there is a positive correlation between job autonomy and satisfaction in working life.



## **Relatively Higher Level of Work Autonomy**

Higher level of worker autonomy in remote work also implies its flexibility in catering to individual circumstances. For example, employees with dependents can benefit from remote work as it allows tending to familial matters while being at work – A difficult feat to achieve if the employees were to commute daily. An analysis of survey data showed a positive correlation between flexible work practices and work-life balance, where respondents saw benefits in work-family balance when they worked from home. (Ferdous et. al., 2021)

In addition, more work autonomy from remote work also means higher productivity. As remote workers have the freedom to work according to non-traditional working schedules, they also have the freedom to allocate hours accordingly to maximize work efficiency. Data from survey shows that workers noticed improvements in their work productivity, with the perceived levels of productivity positively correlating with the amount of time spent working remotely prior to the transition to remote work. (Baudot and Kelly, 2020)

The accommodative nature of remote work also allows for more equitable working environment, empowering those with accessibility needs. For instance, the benefit of remote working for the disabled has already been identified in earlier developments, where corporations conducting pilot remote working program for disabled people saw the participants' potential as highly motivated and competent workers. (International Labor Review, 1990) Corporations adopting remote work means more job opportunities opening up for disabled job seekers, which in turn increases the chance of

achieving financial independence and self-sufficiency. This is beneficial on the employers' end at the same time, as embracing remote work would lead them to a new pool of candidates and talents previously difficult to manage.

Yet, a potential obstacle in adopting remote work for workforce with accessibility needs lies in difficulty to promptly adapt new technology to cater to the needs of disabled people. (International Labor Review, 1990) A 2021 study comparing the use of assistive technology before and since the pandemic showed that users of assistive technology lost access to the technology that they used to perform tasks since the pandemic. (Layton et. al., 2021) As such, implementing remote work without full considerations of the tool employees may require would not only be an ineffective solution to already-existing issues with accommodation, but renders those who need assistive technology incapable of doing their work. However, it is important to note that this is not an inherent problem of remote work, but rather a managerial issue to be resolved on the employers' side. Just like managing employees working on-site, employers need to make an effort for a successful implementation of remote work.

### **Commuting to Work Is Not a Necessity Anymore**

The lack of need to commute is another factor that contributes to better work-life balance in remote work. This benefit of not having to commute has already been recognized decades before the post-pandemic trend in remote work, as exemplified by Alvin Toffler's book *Future Shock*. In his book, Toffler calls out the contradictory nature of adhering to commuting, that "[when] moaning about low productivity and searching

new ways to increase it, the single most anti-productive thing [one] can do is ship millions of workers back and forth across the landscape every morning and evening.”

Prior to the transition to working remotely due to COVID-19, a 2019 U.S. Census report revealed that the average one-way commute time in the US was 27.6 minutes in 2019, with 9.8% of commuters spending at least one hour for their daily commute one-way. (U.S. Census, 2021) Both of these statistics were new high records, of which average commute time in the US has increased by about ten percent since 2006. The report also revealed that while those who drove alone or carpoled had the average travel time of 26.4 and 28.5 minutes respectively, while public transportations had higher mean commute time, with urban public transportation means such as bus and subway taking 46.6 and 48.8 minutes on average respectively. Average commute time for those who take the car versus those who take public transportation is the most starkly contrasted by average travel time of 71.2 minutes for long-distance train, commuter rail or ferry, which is more than double the average travel time across all modes.

Granted, the mode of transportation with the longest average travel time to work may have the longest commuting distance. But what is identified through the disparity of pre-pandemic average commute time in the United States is that commuters are not equal in the privileges they have while travelling, and those who have to resort to public transportation would have to sacrifice more time outside of their work to be on the road. A simple calculation based on the statistics above can further illustrate this. As the average time for one-way commute via bus takes 22.4 more minutes than that of commuting alone by car. With 250 workdays in 2021, commuting by bus means that

workers have spent on average 5,600 more minutes, or 93.33 more hour than those who travel alone by car on the same year. Although the time lost from being in commute for longer may seem trivial on a daily basis, it is not as negligible when it can add up to days when accumulated over a year. By removing the obligation to travel to work, remote work can return that time to workers, in which can be spent outside of work at their leisure. This also means that the disparity that comes from varying duration and modes of commute is eliminated, bringing remote workers a step closer to equitable working environment as workers are endowed with the power to choose a workspace the most suitable to their needs at a given time. This can mean simply working at home, or to an open workspace like cafés or coworking spaces, and switching workspace whenever necessary.

In addition to taking up leisure time of commuters, traveling to and from work itself is a source of other potent harms that can negatively affect the general well-being of workers. In their analysis on data of workers in the United States from the early 2010s, Gimenez-Nadal and Molina (2019) showed that longer travel time to work correlates to higher levels of fatigue and stress while commuting. Their analysis also showed that this also leads to higher levels of fatigue and stress in child care as well, which is a piece of empirical evidence on how negative feelings caused by commuting influences aspects of life separate from work. The adverse effect of commuting can be observed in other parts of the world as well. Clark and other's (2019) study examining data from past longitudinal interviews on U.K. workers revealed that the time spent traveling to work had a negative relationship with leisure time satisfaction, which was in fact the strongest

correlation amongst the measured variables involved in the data. The logic behind this correlation relays back to the idea that more time spent in commuting means less time spent in other activities.

## **Downsides of Remote Work**

### **More Room for Miscommunication**

As everything is, remote work is not a perfect mode of working, as it has its own issues surrounding the difficulty in replicating the in-person interactions on-site work provided. Since tasks in office are primarily carried out digitally regardless of working on-site or remotely, on-site work also heavily involves engaging in digital communication. However, face-to-face interaction can happen easily as coworkers would exist in the same physical space while they are working. With the transition to remote work since the pandemic, virtual meetings have replaced the in-person interactions that took place while performing on-site work. Although video conferencing technology is more real-time and visually engaging than other means of digital communication such as e-mail or instant messaging, it remains unsuccessful in fully conveying the contextual indicators that are used in interpreting interactions, such as body language. (Golden, Veiga and Dino, 2008)

Daft and Lengel's (1986) Media Richness Theory provides further insight on differing levels of capabilities to convey information accurately and unequivocally across means of communication. Developed to describe and evaluate means of communication within organization, the theory ranks face-to-face interaction as the mode of

communication with the highest capacity to convey the full and unambiguous information, as in-person interaction allows for immediate feedback, multiple contextual cues and information represented in natural languages. The lower capability of digital communication in conveying information compared to that of in-person communication can also render interactions in remote work as less synchronized than its on-site work counterpart, creating a potential for more fragmented communication to take place. As a result, the lack of contextual cues and technical limitations in online communication creates room for miscommunication in task-related conversations. An example of circumstances of when this can happen frequently is when a team of remote workers is still recently formed. (Maruping and Argawal, 2004) Since Disputes over task-related issues may be perceived as personal criticisms, (Kelley, 1979) a valid criticism from one remote worker to another can be misconstrued as a personal attack, leading to awkward situations that can harm interpersonal relationships within work setting.

### **Adverse Effects of Social Isolation**

Factors that negatively affect workers' wellbeing exists in remote work as well. Extensive use of video conferencing technology may also have negative impacts on the wellbeing of remote workers, with the recent and poorly understood phenomenon so-called "Zoom fatigue" exemplifying the exhaustion workers face from participating in virtual meetings for too many times than they can handle. (Shoshan and Wehrt, 2021) Remote work failing to provide the same quality of interaction with coworkers as on-site work also creates isolation between workers within the same organization. Similar to that

of traveling to work, social isolation from the lack of face-to-face interaction between colleagues working remotely has the potential to negatively impact job satisfaction, as well the general well-being of remote workers. The feeling of distance between coworkers can lead to lower job satisfaction, but also create stressful situations for remote workers. (Toscano and Zappalà, 2020) As shown by the negative impact of stress from commuting, higher levels of stress in one domain of life can influence stress levels in others (Gimenez-Nadal and Molina, 2019).

### **Weaker Self-Identification with the Work Organization**

The lack of face-to-face interaction in remote work and the further separation between workers that stems from it poses an issue with worker's relationship with the organization they belong to as well. With a large separation from the rest of the organization in remote work, it is difficult for workers to familiarize themselves with the culture and practices of the. In fact, proponents of fully on-site work pick perceived closeness with the rest of the organization as one of the main reasons of preferring on-site work, as shown by the 2021 survey previously mentioned also showed that 31% of the respondents who prefer working on-site fully cited "fee[ling] more connected to organization or team on-site" as their top reason for preferring working fully on-site. (Saad and Wigert, 2021)

As humans are social in nature, (Aristotle, ca. 350 B.C.E./1981) the sentiment for a deeper connection with the rest of work organization is not unfounded. Data from interview suggests that employees turn to coworkers as "social barometers," (Mann,

Varey and Button, 2000) in order to self-assess themselves on whether their behavior is appropriate in organizational context. Isolation between remote workers leads to weaker presence of the indicator, causing uncertainty within workers about themselves and less confident about their competency at work. (Mann, Varey and Button, 2000) To add onto this, informal social interaction at work also leads to opportunities for colleagues to continue mingling in non-work contexts. (Haddon and Lewis, 1994) With less opportunities to interact at work, working remotely reduces the chance to strengthen professional relationships, and widen one's social network outside of professional domain. Weaker levels of remote workers' self-identification with their organizational would be detrimental to integrity of the working remotely, as strong organizational identification can mitigate the impact losing traditional means of interaction from on-site work. (Wiesenfeld, Raghuram and Garud, 2001)

The importance of perceived close connection within work organization can also be theoretically reinforced through the JCT as well. Out of the five job characteristics, skill variety (how much of a variety there is in the activities involved to carry out work), task identity (how much does a job requires to complete a piece of task from the beginning to a deliverable outcome) and task significance (how much of an impact the job has on other people) determine how meaningful a worker thinks about their job, and in return contribute to individual motivation in workplace. (Hackman and Oldham, 1976) With office work and its subordinate tasks being available electronically, the content of task would remain mostly unchanged even with the transition to remote work. As such, levels of task identity amongst workers would remain unchanged in general. On the other



hand, the lack of physical interaction between coworkers in remote work leads to fewer outlets to build a bond within the work organization, decreasing the varieties of activities that are performed in comparison to on-site work. Consequently, relatively lower level of skill variety for remote work would then negatively impact the level of perceived meaningfulness of the work, which in turn leads to less desirable individual work outcomes. But with on-site work obligating coworkers to work in an office, more opportunities would rise to engage in a wider variety of work activities while coworkers to engage with each other.

### **Exacerbated Issues in “Zoom Towns”**

Outside of the context of work, the adverse effect of remote work can also be seen in social phenomenon closely associated with the mode of work. For example, the previously mentioned “Zoom towns” struggled with sudden spikes in population, facing difficulties coping with a larger population that they are used to. Stoker and others’ (2020) research on gateway communities in the American West revealed that such towns were already facing problems not very often associated with communities of such sizes and settings, which include low availabilities of affordable housing, rising cost of living and congestion due to increases in population and visits. This is a stark contrast to strong self-identity and appreciation of the small-town spirit the gateway communities have. (Stoker et. al., 2020) The same issues apply to “Zoom towns” as well as they form a subset of gateway communities. In addition to this, considering that the data from the study was collected prior to the rise of COVID-19, “Zoom towns” that faced large

influxes of newcomers have higher potential for the current problems to exacerbate. As one example, the median home sale price in Truckee, California, saw a 63.2% increase from \$625,000 in February 2020 to \$1,020,150 April 2021. (Redfin, 2023) This is 3.7 times more than 16.9% increase of the median home sales price in the United States. (U.S. Census and U.S. Department of Housing and Urban Development, 2023) With the effect of relocations by remote workers still visible, finding ways to ameliorate the current problem to return to the quality of life “Zoom towns” once had.

After all, not every industry or type of work can embrace remote work due to being physically present at work being a crucial part of them. For example, trade jobs such as electricians or plumbers would require the worker to be present at the site of work, as their tasks involves maintaining physical infrastructures. Implementing remote work is difficult for types of work that heavily involves manual labor, such as construction or manufacturing, as is for those that require quick response, such as healthcare and military. In fact, when California released an executive order to stay at home in March 2020, 16 critical infrastructure sectors identified by the U.S. federal government were exempt from this order, considering the “importance of these sectors to Californians’ health and wellbeing.” (Exec. Order N-33-20, 2020) No matter how beneficial remote work may be, if the nature of work does not allow remote work as a feasible option.

## **TENSION BETWEEN WORKER AND MANAGEMENT**

Tensions also exist between employers do not share the same sentiment with the employees towards remote work. As a matter of fact, corporations' reluctance to adopt remote work has existed before the COVID-19 pandemic. The aforementioned 1990 law review points out "organizational and cultural factors" as potential major obstacles for companies to adopt remote work, as management would be more reluctant to novel forms of work organization. (International Labor Review, 1990) Some corporations which previously allowed remote working also repealed their decisions, threatening to terminate remote workers if they do not return to offices allocated to them. (Simons, 2017)

Despite having experienced a large-scale transition to working remotely, the negative views of employers towards remote work persisted throughout the pandemic as well. The initial shock of the pandemic gave no choice to the employers but to switch to remote work, as this was not a mere managerial decision, but an imminent public health crisis. With the introduction of COVID-19 vaccines (U.S. Food and Drug Administration, 2021) and travel restrictions easing up, companies have started to make an attempt to switch back to the pre-pandemic norm. As of April 2022, while 84% of employers in Manhattan requested their workers to come to office daily, only 38% of Manhattan office workers have returned to offices, and a mere 8% commuted to their workplace every day. (Partnership for New York City, 2022) Out of those who complied to their employers' request, less than a quarter reverted themselves back to working like COVID-19 did not happen. Similar attitude can be seen outside of the United States, as illustrated by 89% of corporations in Poland not providing their employees additional support for remote work.

(Pokojski, 2022) While it is true that the sudden transition to remote work could have rendered many employers' unprepared for the new mode of work, it has been two years since the switch took place. The delay in providing support for remote working rather alludes to the fact that companies are instead more attracted by the idea of reducing cost by their employees working outside of the office, while overlooking the additional trainings and company-side support employees need in order to make remote work a viable option.

Employers have also been implementing different measures to get employees to return to the office. For example, food delivery platform GrubHub offered workers in its Manhattan office free lunch up to \$15 during a three-hour period around lunchtime on a Tuesday in May 2022. (Restrepo, 2022) However, the small window of time for free lunch offer has caused a rush of orders, reaching 6,000 orders a minute at one point. This resulted in causing delays and cancellation of orders due to the sheer volume of orders that surpasses the number of orders system could handle. Meanwhile, Google hosted a private concert for their employees featuring artist Lizzo. (Elias, 2022) On the other hand, corporations such as automobile company Tesla took on a more aggressive approach, where the company threatened to dismiss workers who resist returning to office. (Nicholas and Hull, 2022) Social media platform Twitter also ordered its employees to return to the office for at least 40 hours a week, which is essentially mandating workers to work full-time at the office as Twitter employees would have to 8 hours per workday at the office. (Vinopal, 2022) These cases of attempts to incentivize or to put pressure on employees to return to office indicates the employers' lack of consideration for their

employees, despite the capability of remote work in accommodating to needs and circumstances of employees.

It is also evident that remote work has been integrated into work context for many of those who have transitioned to remote work since the pandemic. With remote work being imposed on a large number of workers since the beginning of pandemic (Brynjolfsson et. al., 2020), there was no choice but to adapt to the new norm, which may have led to the realization of benefit of remote working. The once-commuters do not need to get up early to get ready for work, nor are they bound in a set place of work, unlike many offices where each employee would have a designated workplace. But as society slowly transitioned to normalcy, corporations started to mandate their employees to return to the office, as exemplified in the previous paragraph. Resistance towards going back to the pre-pandemic norm in work organization is bound to happen since it means that the merits of remote work can be taken away, as it happened with cottage industry. The sentiment is more to be the case for younger workforce who are more technologically literate. A 2021 survey done on over 32,000 workers across 17 countries revealed that 71% of respondents between the age of 18 to 24 said that “if my employer insisted on me returning to [the] workplace full-time, I would consider looking for another job.” (Richardson and Antonello, 2022) In fact, 64% of all respondents expressed the same opinion, which is a further reflection of workers’ resistance towards their employees attempt to steer away from remote work.

## **Chapter 3: Future Directions of Remote Work**

### **REMOTE WORK IS HERE TO STAY**

Despite the tension between employers and employees over remote work, those in charge of recruitment have a positive outlook in remote work remaining as an option for working. Survey data from early days of COVID-19 revealed that 61.9% of hiring managers plan to go more remote in the future, with 56% of hiring managers believing that the transition to remote work has gone better than expected, which is over five times higher than the 10% who thought it has gone worse than expected. (Ozimek, 2020)

Since the pandemic has transformed the landscape of working, shift in dynamics over the control of remote work are taking place as well. With COVID-19 subsiding over time, society started to return to the orders of the times before the outbreak. This meant that employers had to make a decision whether to make a change in remote work policy. Although employers that provide complete freedom of choice on the mode of work do exist, it is not the case for some. (Smite et. al., 2022) Restrictions on the flexibility of choosing the mode of work ranges from requiring prior approval from a supervisor or having binding periods over the form of working chosen. Having experienced of working fully remote, some employees may have held grudges against the possible mandate to return to office. This leads to employees protesting against their employers' decision, even considering alternate employment options.

Stories shared by industry insiders give empirical support of higher demand for remote work, in that they describe situations where high level of control over mode of

work from management act as the reason for employees to consider leaving the organization. (Smite et. al., 2022) The previously mentioned survey data of Richardson and Antonello (2022) also reflects a strong sense of defensiveness towards carte blanche on mode of work. To sum up, from exceptional benefit in which management can offer to a select few employees, remote work as an option in working has now become a fundamental right all employees believe they should have.

### **SUGGESTIONS FOR A BETTER IMPLEMENTATION OF REMOTE WORK**

In order to create a smoother operation of remote work, worker management practices need to be appropriately adjusted to maintain a consistent quality of management between on-site work. As self-management skill has a positive correlation with productivity and level of work engagement, (Galanti et. al., 2021) employers can provide training and any additional support for their remote workers to nurture self-assessment and prioritization skills in work context. This would provide further support to the higher level of autonomy in working remotely, amplifying the positive effect of remote work.

Sociotechnical Theory (STS) can also help better understand ways in which support from the employers can make remote work more effective. According to the theory, the three components of organizations (technical subsystem, which deals with type and degree of support for Information Technology, personnel subsystem, which affects the manners and attitude towards work, and organizational structure, which deals with levels of formality and standardization within organization) influence one another,

which in turn determines the result of the determined output. (Bélanger et. al., 2012) The aforementioned training on self-management skills can help bolster personnel subsystem by providing opportunities for workers to be more self-sufficient. On the other hand, supporting social interactions within the organization further bolster the component, also has a positive correlation with job satisfaction and negative correlation with levels of stress. (Bentley et. al., 2015)

A clear guideline towards remote work from employers provides transparency in the organizational structure, leading to a more successful implementation of remote work. Organizations with uncertain guidelines on remote work causes concern or anxiety, which “is known to decrease work performance [and] reduce job satisfaction.” (Alexander et. al., 2021) This implies that employers’ vague direction with their plans with remote work could negate the benefits remote work could bring. With the employers delineating the implementation of remote work in the organization, employees will understand and form an expectation on what remote work entails in the context of their work. This eliminates an uncertainty in their work practice, allowing workers to not worry about unexpected changes in the way they perform their tasks.

However, this would be no easy task as achieving this would require a thorough understanding of any issue employees working remotely are facing, with the added fact that the pandemic is the only circumstance for most companies to gain any experience with managing remote work. (Smite et. al., 2022) But with COVID-19 posing less as a threat in terms of mobility, employers would gain new lessons from managing remote work in a new environment not bounded by travel restrictions.



Reducing the negative impacts of remote work would be important in maximizing the benefits of remote working as well. Already being implemented in workplaces, a hybrid of remote work and on-site work could be able to satisfy both preference in forms of work, with companies described above are examples of such. If there are no restrictions to the freedom of choice between remote work and on-site work, issues such as lack of space and/or amenities for employees at the office are the employers' motives for applying restrictions over employees' freedom of choice. (Smite et. al., 2022) Hence, there exists logistics reason involved in imposing limits on the freedom of choice as well. But ultimately, it is true that by letting employees to freely go back and forth between working remotely and on-site, the additional autonomy would lead to higher levels of productivity and job satisfaction, which can benefit the corporate side as well by maintaining a satisfied and efficient team of employees.

## **CONCLUSION AND SUGGESTIONS FOR FURTHER RESEARCH**

This report has examined the historical and technological context in which brought about the current status of remote work. The historical example of cottage industry demonstrated an image of self-sufficient workers thriving in their work autonomy, and the spread of PCs and the Internet became the foundation for modern office work practices, including remote work. The widespread adoption of remote work at the start of the pandemic was an opportunity for employees to experience higher levels of work autonomy and the benefits that came from it, leading to increased demand for remote work to stay.

Despite the tension between employers attempting to bring back on-site work, this report posits a positive outlook where remote work will continue to be part of the office work culture. If the trend for remote work continues, employers would have no choice but to adapt it into their work practice in order to meet the demands of their employees, and to attract more talents. In part of this, this paper has also suggested, management practices that could help in better implementation of the mode of work were also suggested.

Due to the scope of the report, the influence of remote work on other aspect of society has not been further explored. Analogous to Zoom towns, the phenomenon of remote workers moving to locations abroad for better access to leisure lifestyle calls for cross-cultural investigation on the socioeconomic impact of remote work in popular destinations for such workers.

The comprehensive look on remote work also prompts further research on different manifestations of going remote in other domains of society. For instance, further investigation can be made on the effect of remote learning towards student performance and student-teacher relationships in primary and secondary education settings. Ethnographic studies on how researches are done in universities would also provide better understanding of the impact of the current transition to performing tasks remotely in academia.

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