Creative Work From Home: an analysis of digital nomads' creativity and motivation in relation to workspace environment

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Abstract

Considering the increase of work-from-home across all sectors due to the COVID-19 pandemic, this study aims to understand the impact of blurring together work and leisure domains as work-from-home becomes more common. Digital nomads serve as the units of analysis based on their ability to work 'anytime, anywhere,' encompassing the group of creatives who work primarily with a laptop and are not unfamiliar to remote working. Most studies investigating creativity in the context of workspace tend to focus on the physical attributes. At the same time, these studies agree that most creative workspaces tend to be more deterministic and contrive a specific approach to creativity than facilitate the creative process. Additional studies also aim to understand the motivational aspects that encourage creatives to pursue a precarious profession under evolving circumstances. To triangulate the relationship between workspace, motivation, and creativity, this predominantly quantitative analysis employed Amabile's (1996) KEYS measuring creativity within the workspace, Taylor & Kaufman's (2021) creative trait motivation scales (CTMs), and Chang et al.'s (2018) creativity indicator scale. The survey instrument designed for this study (n = 169) aimed to draw relations between the measurement scales. Findings indicate that workspace does not have a statistically significant influence on creativity and motivation. However, utilizing motivation as a multidimensional concept embodying intrinsic, extrinsic, and amotivational factors, yielded a single significant relationship between intrinsic motivation and creativity. These findings bolster previous studies inferring creatives to be more intrinsically motivated and provide suggestions on supporting remote workers in the foreseeable future of work. The data collected for this study alludes to a more extensive discussion that workspace is not enough to act as a catalyst for creative motivation. Rather than focus on what physical attributes the space has, this study finds that the four walls serve as a framework that enables individuals to modify their experiences. These fundamental needs lend themselves to Ryan & Deci's (2000) self-determination theory (SDT), in which the workspace enables the individual needs of autonomy, relatedness, and competence. These attributes allow digital nomads to craft the environment depending on the stage of the creative process. Statistical findings coinciding with supplementary qualitative data from open answers and focus group interviews expresses a need for reframing work entirely that falls more in line with Latouche's (2009) notion of degrowth. Degrowth calls for a more sustainable and inclusive creative workforce while embracing creativity born out of spontaneity, looking at the foreseeable economic opportunities in a post-pandemic world.

Keywords: motivation, organizational creativity, creative workspaces, work-from-home, digital nomads

Illustration on front page cover by the author

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Acknowledgements

1 – Introduction

While other industries may have found it difficult to adjust to work-from-home amidst the events of the COVID-19 pandemic, this notion was not unfamiliar to creatives. Creative work is defined by its ability to be adaptive, reactive, spontaneous, and nomadic (Amabile et al. 1996; Eikhof & Haunschild, 2006; Markusen, 2013). Creatives, especially digital nomads, are known to adjust to create a holistic lifestyle characterized by autonomy, where life is regarded as equally enjoyable to the work that they create through professional, spatial, and personal freedom (Reichenbaker, 2017). Creatives have embedded in the name itself to create and make do with what is available while still yielding substantial outputs. Creativity is also understood as a highly cognitive process that demands additional high levels of well-being to allow the space for the creative process. Looking ahead at the shifting dynamics of the workforce and lessons taken away from the pandemic's limitations provide insights on how to build a more sustainable creative workforce. Considering each of these attributes, the following research aims to draw connections between the workplace, creativity, and motivation through the lens of the pandemic and potential lasting impacts.

According to Jabagi et al. (2019), the gig economy, or new economy, in 2020 is expected to account for more than 40 percent of the workforce in the United States. However, in a contemporary context, the inundation of shifting circumstances due to global events such as the COVID-19 pandemic calls into question how these creative individuals will contribute to the new economy or act as instruments to boost other industries. Additionally, questions show how creative individuals find the space to keep themselves motivated to create when inundated by the stressors of current events with the looming potential economic rebound and downturn.

Extrapolating from the notion of creativity as a spurious and emergent process, literature within the field further questions the extent to which creativity can be fostered and organized. The precarious nature of creative work is reflected through its tendency to be project-based and contributing to the gig economy. Jabagi et al. (2019) find the gig economy to remain "characterized by definitional ambiguity and variety of discipline-specific interpretation" (p. 193). This conceptualization of the gig economy reflects previous work by Eikhof & Haunschild (2006), who indicate creative work as "spontaneous, unpredictable and following no strict rules, whereas interference with the market brings about the need to manage, plan and organize processes of creative production" (p. 234). Contemporary adages that

underline the role of the creative and cultural industries in job creation and economic growth tend to push people away from secure employment into portfolio careers consisting of passionate work (Cnossen, Loots, & van Witteloostuijn, 2019). Creativity is then understood as a deeply personal endeavor in which the person takes on jobs that instill a sense of self-fulfillment and purpose to encourage motivation.

Commonly, creative workers are self-employed due to increasing pressures on internal labor markets, forcing them to manage their artistic capabilities. A sense of identity as an artist calls upon these individuals to split their identities between artistic integrity and their identity embedded within their ability to make a living out of being an artist (Eikhof & Haunschild, 2006). While artists tend to be nomadic, studies find that creative workers flock towards urban and developed cities (Landry & Bianchini, 2006, Florida, 2012).

Amabile et al.'s (1996) seminal work of studying creativity in the context of the social work environment requires innovation to foster creative ideas. These ideas are contingent upon successfully implementing the individual's capabilities to extend the idea beyond its initial state. By studying creativity within the work context, Amabile et al. (1996) stresses how this enables a richer understanding of creativity and how to foster it towards innovative ideas. Studies of the creative individual at work focus on the intrinsic factors satisfied through the discovery of self-fulfillment by offering oneself as a contribution to the art itself (Eikhof & Haunschild, 2006). Creative individuals flock to urban areas, where creative and cultural identities thrive and feel a sense of shared community, to further chase self-discovery and identity (Markusen, 2013). Creative work is seen as an essential fixture as life as a work of art itself.

Motivation theory is predominantly based on Ryan & Deci's (2000) self-determination theory (SDT), highlighting the individual needs for autonomy, relatedness, and competence. Additional psychological studies by Callier (2012) utilize the SDT to study motivation within the workspace. The study finds work motivation to be determined by aligning goals and values for both the employee and employer. Similar to the creative industries, an employee's psychological well-being is tied "to the extent to which the job is central to the employee's identity" (p. 464). Employees are more motivated and obliged to reciprocate after being treated more favorably when allowing more accommodations from work-from-home. Orsini & Rodrigues (2020) also find education teams working remotely or not dependent on autonomous motivation based on how they perceive the work environment in response to their basic psychological needs of autonomy, relatedness, and competence.

Considering the events of the COVID-19 pandemic, workers from all corners shifted their workspaces within the confines of their homes. However, this concept of work from home is not necessarily new within the creative and cultural industries. A key attribute defining creative work includes the precarity of such work, causing numerous individuals to be self-employed or quasi-self-employed, balancing stable work with project-based work. The triangulation of work environment, creativity, and motivation are at the core of how creatives approach and instrumentalize creative ideas into tangible products. These workers tend to be project-based due to intense pressures from internal labor markets, taking on multiple jobs at once to ensure stability and working in any space available due to cost constraints (Eikhof & Haunschild, 2006). Recent work by Jabagi et al. (2019) suggests that when work is conducted by workers outside traditional offices and work hours, organizations cannot rely on conventional management practices to coordinate, control, and motivate workers. Within the gig economy and the implementation of digital communications, managers find themselves encouraging the creative workers to self-organize and maintain self-motivation to increase productivity to implement efficiencies in line with organizational objectives (Jabagi et al., 2019).

Several studies have taken place within the field of spatial design, reflecting upon creative workers' ability to adjust to various work settings out of necessity due to financial constraints and accessibility limitations (Eikhof & Haunschild, 2006). From a psychological standpoint, studies focus on human behavior and performance in different work environments based upon needs, personality, motivation, perception, expectations, and experiences (Oseland, 2009). These psychological explorations focus on individual personalities leading to their choice of profession, where then the work environment is a deeper reflection of their character in practice. Additionally, psychological studies find that the office environment needs to foster basic psychological needs such as comfort, safety, security, and belonging. The aspects are based upon the "if basic needs are not met then people cannot perform to their maximum potential" (Oseland, 2009, p. 253). The workspace is then encouraged to reflect the needs of the inhabitants and the organization's functional needs rather than creating aesthetically pleasing spaces.

In response to the boom of creative workers within the gig economy, recent studies focus upon the impact of co-working spaces within organizational creativity (Lapsomboonkamol et al., 2020). While many researchers agree that creativity involves a more profound cognitive process influenced by the environment, there appears to be a gap between

spatial design, creative motivation, and psychological studies. De Paoli & Ropo (2017) indicate that contriving physical space to facilitate the concept of creativity is perhaps too focused on workspaces as a management fad. This approach to the creative workspace is perhaps too based upon standardized and deterministic assumptions, concentrating on aesthetic rather than intangible attributes that support the creative cognitive process (De Paoli & Ropo, 2017). Therefore, this study aims to study the connection between workspace, motivation, and creativity and how to utilize these relationships due to a shift in economic circumstances.

1.1 – Research Question & Relevance

Considering the cognitive, social, and individual needs informed by the environment that facilitate creativity, this study aims to stitch together the opposing disciplines of spatial and architecture design, psychology, and creative work economics. De Paoli & Ropo (2017) highlight the lack of studies that examine employees' perception of creativity in differently configured workspaces. Their arguments suggest that creative spaces can be manipulated to encourage creativity, independently of the individual's subjective experience. Examining the current state of creatives who tend to be more digitally nomadic finds the predominant workspaces to embody the office, a co-working space, or at home. Therefore, this study targets creative individuals by asking the following research question,

To what extent does the workspace, especially considering work-from-home, impact creative workers' motivation and creativity?

This question alludes to the underlying interest of understanding the potential future function of the office. Shifting circumstances and hybrid methods enables employers the option to reduce the amount of office space. However, through the perspective of creative workers in relation to fulfilling their creative needs, this study further questions:

What is the new function of the office in this hybrid working method?

Thus, this research is split two-fold using a mixed-methods approach to achieve a rich understanding of spatial influences on creative motivation. As De Paoli, Sauer & Ropo (2019) expressed, previous studies regarding office space design predominantly investigate employee

satisfaction, communication, or the fluidity of knowledge sharing. Despite Amabile et al.'s (1996) seminal work of studying creativity with workspace, the disconnect is perhaps due to the difficulty of assessing contemporary designs of workspaces and their influence on creativity.

Moreover, studies of physical aspects of a workspace's effect on creativity and motivation are primarily within social psychology, environmental psychology, architecture, organizational research, and facility management. Despite the overlap, there has yet to be a study that stitches these disciplines together, considering the nomadic nature of creative work due to different cognitive demands at various stages of the process. Enriching a deeper understanding of the workplace with creativity and motivation can help creatives, despite geographical locations, and provide creativity for creatives. As work-from-home becomes more common for creatives, building upon previous research can perhaps shed light on approaching a modern conceptualization of the office.

1.2 – Context of COVID-19 and Foreseeable Repercussions in A New Working Economy

Furthermore, these findings connecting workspace in response to creative motivation provide insights into new working models in the foreseeable shifting dynamics of the workforce. Considering Latouche's (2009) approach to de-growth as a more sustainable approach to the economy, taking away lessons from the restrictions imposed by the pandemic provides insights as to how to make do, if not better, with less. The data collected and interpreted from this study aims to connect creative motivation in the workplace context to de-growth to reframe how creative work is approached and instrumentalized.

Due to the pandemic, economists and analysts have been keen to compare the upcoming recession with past recessions in the United States, from the economic rebound of the 1920s leading to the Great Depression (Wheelock, 2020). Latouche's approach to a new economy embraces leisure as a critical factor when reconsidering a more sustainable workforce and to possibly evade a devastating downturn. Shortening a workweek is an essential element to enable space for leisure, supporting the possibility of changing economic situations and different times in one's personal life. Latouche (2009) express that

…we must be weaned off our addiction to 'the job', as it is a major element in the tragedy of productivism. We will not be able to build a serene de-growth society unless we rediscover the repressed dimensions of life: the leisure to do one's duty as a citizen, the pleasure of freedom to engage in freely chosen arts and crafts activities, the sensation of having time to play, contemplate, meditate, enjoy conversations or quiet simply to enjoy being alive (p. 40).

This approach of reconnecting with oneself and allowing space for leisure is interpreted as a method where individuals can find opportunities through what is available and feasible without depredating resources to the point of detriment.

Data collected from a study by The Economist conducted during three months in December 2020, months before the pandemic hit the western sphere, indicated a large percentage of employees worked at home at some point during the week (The Economist, 2021). This global shift towards a hybrid method of partial work from home in tandem with office visits has foreseeable consequences. These consequences add stress on managers to reconsider work itself and reframe practices that consider overall well-being to drive creativity and motivation. Looking ahead into the foreseeable changing dynamics of the workforce indicates a change in how we approach work itself. The findings from this analysis of the impact of workspace concerning creative motivation aim to draw conclusions based on Latouche's (2009) notion of de-growth and how to create more efficient and intentional creative work.

In order to achieve this, this research is designed to utilize a quantitative survey analysis to measure and compare which workspaces creatives feel more motivated to produce. The supplementary aspect of this research design aims to go deeper and allow creatives to address needs and desires of the workspace through open answers. Additional data collected from initial focus group interviews were also employed to gather deeper insights to the new approach to work. The following theoretical framework triangulates the relationships between workspace, motivation, and creativity to then frame the units of analysis and measurement tools used in the survey instrument. This research thus concludes with recommendations for managerial procedures when supporting creativity remotely and in person in relation to de-growth. Further conclusions aim to highlight the potential function of the office and creatives within a new workforce in relation to Latouche's (2009) notion of degrowth.

2 - Theoretical framework

The usage of terminology involving creativity, innovation, and motivation is often overused for attention-grabbing sake to garner support and funding (De Paoli, Sauer & Ropo, 2019). The following theoretical framework aims to summarize previous research and apply such when exploring current work-from-home models, motivation, and the potential future of the creative office space in light of the COVID-19 pandemic. This framework thus informs the design of the theoretical model underlying a quantitative survey and thematic codes for the supplementary qualitative content analysis aspect of this research. The triangulation of the predominant themes of motivation, workspace, and creativity creates a model on the basis of which the hypotheses were formulated to answer the aforementioned research question (see Figure 1). This visualization was created to connect the relationships between the three themes. These connection points thus illustrate how each relate to each other in answering how creatives respond in relation to their workspace and how workspace can influence creativity and motivation.

2.1 – Digital Nomads and Creative Work

This study focuses on digital nomads within the creative industries. These individuals are identified as young professionals who depend on information and communication technology, allowing them to work independently from their location (Reichenberger, 2017). These individuals are further characterized by their desire to escape the structures of traditional working environments that are location dependent. Through this working method, these individuals strive for a more holistic and flexible approach to work and life in which "work and leisure and leisure are not considered dichotomous through spatial and temporal separation, but where both aspects of life contribute equally to self-actualization, -development, and -fulfilment" (Biesalski, 2016, n.d.; Blanda, 2016, David, 2014, Reichenberger, 2017, p. 365).

Liegel's (2014) contributions to the notion of digital nomads identifies digital work to be 'anytime, anywhere '(p. 163). These workers are footloose and can place their laptop anywhere allowing the mobility that is an effect of the affordances of mobile technologies in the globalized economy (Liegl, 2014). Through his work, he identifies how observing work-from-home and working within an office is increasingly complemented with working everywhere. This mobility acts as an essential part of creative work, where the physical space enables the flexibility for nomads to craft the space according to the phase of the process. These

phases are dependent upon how much the nomad needs to collaborate with colleagues or self-organize solitary action to evade distractions. The theoretical understanding of digital nomads encapsulates workers who work within blended environments at their choosing. This particular focus of creative individuals serves as an archetype when considering the broader expanse of remote workers in the foreseeable future.

2.2 – Motivation in response to work environment conditions

Based on the theoretical model designed for this study, the first section aims to describe the relationship between workspace and motivation. Environment perceptions are found to be among the strongest predictors of both idea generation and creative performance within the workplace (Mumford & Simonton, 1997; Mumford & Fichtel, 2020). Therefore, the workplace environment is stressed as an essential component of people's motivation for work by shaping their engagement and capability for creative problem-solving (Amabile et al., 1996; Mumford & Fitchtel, 2020). As previously explored within research, motivation for creative work finds itself between the crossfires of intrinsic and extrinsic factors as creative work balances creative purposes versus economic purpose (Eikhof & Haunschild, 2006; Jabagi et al., 2018). However, literature within the creative and cultural industries indicates that individuals are more intrinsically motivated.

Yet, there appears to be a downplay of the importance of extrinsic factors' impact on intrinsic ones. Jabagi & Croteau's (2018) find that independent workers within the gig economy are reliant upon their ability to self-organize and self-motivate. Self-motivation is thus positively tied with organizational commitment, retention, effort, persistence, involvement and performance (Jabagi & Croteau, 2018). Their research finds that organizations that are able to address these issues with remote working promote longer-term sustainability of their organization, as gig workers are known to participate based upon extrinsic motivators for financial reasons and intrinsic ones due to particular features of the job. These intrinsic motivators involve the fulfillment of individualistic needs facilitated through social interactions that are embodied by Ryan & Deci's (2000) self-determination theory, encompassing the elements of autonomy, relatedness, and competence.

2.2.1 – Self-determination theory

At its fundamental levels, motivation within scientific research is deeply rooted in Ryan and Deci's (2000) framework of self-determination theory (SDT). Self-determination theory is

applied within the biological and psychological sciences and functions as an approach that is practical and critical. The practical aspects point to features of specific contexts that more or less facilitate and possibly "undermine the motivations and satisfactions underlying effective self-regulation and wellness" (p. 4). SDT is critical in the sense that it can be applied to proximal social contexts based on more pervasive cultural, political, and economic conditions "as they affect basic human need satisfactions and the developmental and social assets they foster" (p. 4). SDT separates motivation into three critical components that the individual strives for: autonomy, competence, and relatedness. These components reflect the individual achieving satisfactions necessary for self-development and how they see themselves as they engage with the world (Ryan & Deci, 2017).

SDT recognizes the role "of an inherent human capacity for developing awareness and self-reflecting, including being aware of one's needs, values, and goals and experiencing the difference between being autonomous and being controlled" (p. 9). Autonomy reflects a particular role within the individual's system of needs. Individuals are more motivated based on their ability to self-organize environmental factors and actions to best suit their needs. However, the SDT framework throws caution to the wind, distinguishing needs from values as they are not necessarily congruent. Needs, while having subjective aspects, effect wellness outcomes regardless of people's values and expectations (Ryan & Deci, 2017). Deterministic interventions may deter individuals from engaging with the activity at hand (Ryan & Deci, 2017). Autonomy is essential due to its function as "the initiative and regulation of behavior through which other needs are better realized" (p. 769). Forced actions neglecting the freedom of choice are found not to have the same reinforcing effect on the individual and perhaps deter them from engaging at all (Ryan & Deci, 2017).

Current literature utilizing self-determination theory (SDT) challenges the traditional notion that creative workers are predominantly intrinsically motivated. Intrinsic motivation, as previously indicated, is tying work to their life where self-fulfillment is achieved by doing the work and what this work brings to the individual (Mumford & Simonton, 1997). Mumford & Simonton's (1997) research defines extrinsic motivation as reinforcing motivators focusing primarily on monetary gains such as bonuses and salaries. Reid et al. (2016) suggest that individuals who view their career as more of a calling are likely to be more satisfied and committed to their work, fostering a stronger sense of productivity and motivation to produce such work. Creatives who view their work as more of a calling to self-fulfillment view "work

not for financial gain or career advancement, but instead for the fulfillment that doing the work brings to the individual" (p. 39).

Previous research on the concept of work motivation within psychological studies, by Caillier (2012), "refers to the external and intrinsic factors that drive employees to work harder by affecting the 'direction', 'intensity', and 'duration' of their job-related activities" (p. 463). This exploration of teleworkers within the United States Federal Government explores how job involvement with the employee ties the job features to their identity. His findings based on teleworking, or remote working, indicate that these individuals do not necessarily have consistently higher levels of work motivation than non-teleworkers.

2.2.2 – Motivating remote work

However, findings indicate that infrequent teleworkers had higher work motivation factors based on job satisfaction, organizational commitment, and work motivation. Job satisfaction declined as teleworkers commuted more than two days a week. Caillier (2012) suggests that organizations should offer benefits "in a deliberate manner, finding a level that works for the organization and the worker…[with] periodic face-to-face activities…with frequent teleworkers to reduce isolation caused from working at home" (p. 474). Additional efforts to bolster benefits to increase shared organizational values did not produce significant effects on motivation. Managers through this study are encouraged to "offer benefits in a deliberate manner, finding a level that works for the organization as well as the worker" (p. 474). Motivation through this aspect highlighted the needs of workers to feel that they share values with their employer and that benefits were designed to sustain these values. Caillier's study concluded that workers felt more motivated when given a choice to telework or not, which harkens back to the SDT's emphasis on autonomy.

ten Brummelhuis et al. (2013) further analyze teleworking or remote working when blurring the domains of work with home. Contrary to Caillier (2012), their study found that employees with more demands from home life reported more physical stress and health complaints, decreasing work motivation. Their research highlights limited resources that assume individuals attempt to "obtain, retain and protect resources—such as self-esteem, socio-economic status, time and energy" (Hobfoll, 2002, ten Brummelhuis et al., 2013, p. 274). Thus, this assumption implies that the overlap of work and home domains drain the individual's resources, resulting in physical and psychological stressors. Additionally, their study also reflects on the psychological benefits of working from home, as employees' performance

enhances due to an increased sense of self-esteem, emotional support, and advice. Employees with a partner to help with household chores experienced more fulfillment and less energy drained from tasks (ten Brummelhuis et al., 2013). Thus, this study also adds that employees who have access to psychological wellness have a positive relationship with motivation for work.

Other studies focusing on remote working debate whether remote working and telecommunications, have a detrimental spillover effect between work and home. Wajcman et al. (2010) find that while much focus has been on the negative spillovers between work and home, there are potential positive benefits that outweigh the negatives. For example, self-esteem developed through work can impact how the individual acts within their home life. Individuals utilizing telecommunications "weaken the spatial and temporal boundary between work and home by allowing their personal lives in their work day…maintaining this social boundary" (Wajcman et al., 2010, p. 269). Workers by establishing social boundaries and limiting digital interactions are found to perceive this form of communication as more beneficial as a more strict way to balance their lives.

In response to the COVID-19 pandemic, Orsini & Rodrigues (2020) reflect upon the disruptive and abrupt transition to remote activities within educational institutions. They explore best practices to support educators and maintain motivation and engagement through well-being initiatives. Implementing the SDT to study why individuals engage in work activities depends on how the educators perceive the work environment to support their basic psychological needs, including autonomy. To help autonomy for remote workers, Orsini & Rodrigues (2020) suggest that team leaders should enable freedom of choice and encourage individuals to voice needs to their colleagues to promote a sense of volition.

Team leaders who micromanage and are overtly intrusive may have an adverse reaction and decrease employee engagement and creativity. However, at the same time, creatives need a sense of encouragement and guidance from managers to steer the uncertainties of the creative process. Remote working in this sense "requires space, trust, open communication and flexibility," especially for those who require flexible working schedules that call for more self-organization (p. 829). The second proposition Orsini & Rodriguez (2020) suggests that individuals need their sense of competence supported while working at home through clear guidance and structure from team leaders. The third suggestion concerning relatedness presents the most challenges for remote works and physical isolation. Their study encourages team leaders to stimulate meaningful connections and facilitate conversations amongst team

members. Yet, at the same time, while nurturing individual and group connections, team leaders should also "[allow] and [respect] the team's time for disconnection, considering individual needs" (p. 829). Presumably, people will feel self-determined if "they feel like the 'origins' of the behavior rather than 'pawns' of other people" (Amabile, 1993).

2.2.3 – Motivation in the creative workspace

Amabile's pivotal contributions dovetail into the psychological mechanisms of motivation towards creativity, as individuals will be the most creative when they are primarily intrinsically motivated. Intrinsic motivation is fostered mainly through the interest, enjoyment, satisfaction, and challenge of the work itself. Amabile (1993) states that "intrinsic motivation can be undermined by extrinsic motivators that lead people to feel externally controlled in their work" (p. 1158). Additional previous work by Amabile (1993) highlights the relationship between intrinsic and extrinsic motivation for creativity, extrapolating from Ryan & Deci's (2017) SDT framework. Her work adds that work motivation is not stable, and organizational changes can cause it to fluctuate. Any changes to the organizational structure can significantly impact the individual's motivation; and incentives, whether intrinsic or extrinsic, can have different effects depending on subjective feelings. These feelings include opinions towards the work itself, eagerness to do the job, and self-perceived quality of the performance (Amabile, 1993).

Two of the pillars of SDT, autonomy and competence, are discussed as intrinsic motivators by social psychologists, as individuals feel self-determined and capable of accomplishing the work at hand. However, individuals may also be less consistently oriented towards starkly intrinsic and extrinsic motivators. The motivational states for creative individuals "can be temporarily affected by the presence of salient extrinsic motivators and by the nature of the work" (Amabile, 1993, p. 193). Intrinsic and extrinsic motivational factors do not operate in isolation or as additive factors to one another. Specifically, instead of putting a tunnel vision focus on the work environment or individuals as the locus of motivation, factors respond to another. High levels of intrinsic motivation "can coexist with an orientation towards high levels of extrinsic motivation" (Amabile, 1993, p. 193).

Based on this theoretical understanding of the relationship between workspace and motivation informing creativity by encompassing autonomy, competence, and relatedness, this study therefore hypothesizes:

H1: Workspace environment effects motivation.

Based on this hypothesis, the following sub-hypotheses are proposed when considering the different types of offices being examined for how they lend themselves to the core attributes of autonomy, relatedness, and competence:

> *H1a: The office has a negative effect on motivation.*
> *H1b: Work from home has a positive effect on motivation.*
> *H1c: Co-working spaces have a positive effect on motivation.*

In response to these hypotheses, the alternative hypotheses states that workspace does not have an effect on motivation. Each sub-hypotheses will then draw conclusions as to how these domains lend themselves to motivation in response to their theoretical understandings in relation to motivation. From this theoretical exploration of the relationship between the different workspace environments and motivation, we anticipate that different environments positively correlate with higher motivation levels. Workspace environments for this study are divided between the main domains of the office, co-working spaces, and the home. As specific workspaces enable the individuals' needs for autonomy, competence, and relatedness, we will see motivation increase.

Additionally, we predict that working in the office affects motivation negatively based on impediments and obstructions that prevent the individuals' inability to craft the environment according to their needs. Consequently, we anticipate a positive effect on motivation from work from home as the space allows individuals the flexibility to adjust the space according to personal needs. Furthermore, we anticipate a positive effect from co-working spaces on motivation due to the ability for individuals to choose particular spaces according to their needs during the creative process whether that entails solitude or opportunities for collaboration and inspiration. We anticipate positive relationships with co-working spaces and work from home, as these spaces enable more freedom of choice to appease individual needs at different stages of the process. These findings aim to highlight necessary interventions for team leaders for considering the environmental factors to best support their teams whether they work in an office, co-working space, or at home. The following section provides an overview of the origins of these different work domains for creative work and their influence on creativity.

2.3 – Relationship between workplace characteristics and creativity

Despite creative workers' needs to satisfy their intrinsic motivation by extrinsic environment factors, Markusen (2013) expands beyond Florida's (2006) analysis and finds that creative workers work everywhere and are not necessarily tied to a particular place. More self-employed artists are footloose and can choose locations based on affordability, amenities, accessibility. Artists thrive outside of cultural industry-rich centers where their presence may improve economic and livability in communities of all sizes and configurations. In this sense, extrinsic factors play a significant aspect in informing intrinsic factors that support overall wellness and well-being (Jabagi & Croeau, 2018). This argument challenges how much creatives tie their identity to the social and cultural relationships embedded in a space to feel motivated.

To further understand the relationship of motivation for creative work based on the workspace environment, we must also consider the relationship between the workspace environment and the concept of creativity. Departing from the psychological approach to creative motivation, Amabile et al. (1996) suggests that the environment can influence the level of creative behavior. Creativity, however, is a primarily contested term within the field of research concerning innovation. Successful innovation is thus kickstarted by employing creative ideas within an organization (Amabile et al., 1996). Yet, there is a call for attention when using creativity and innovation interchangeably, as both indicate a form of radicalized change to existing systems. Landry & Bianchini (2006) suggest that creativity is the initial cognitive process that proceeds innovation. However, discourse within the field arises due to the ambiguous and amorphous nature of creative work, which precedes innovation.

2.3.1 – Organizational creativity and shared spaces

From this standpoint, much research within the creative field has taken place within the domains of artist collectives consisting of visual artists and performers who are inclined to be more nomadic (Jabagi et al., 2019). Co-working spaces act as a contemporary response to the influx of digital nomads acting as "an open-plan office [environment] in which [individuals] work alongside other unaffiliated professionals for a fee" (Spinuzzi, 2012, Capdevila, 2015, p. 2). As opposed to other shared offices, co-working spaces focus on the community and its ability for knowledge sharing dynamics. These spaces are known for allowing individuals to pay a subscription which enables them access to the space, whether that be an open desk or a private office space. Allowing open-access to subscribers gives the opportunity to other like-minded creatives to meet and potentially collaborate. Co-working thus lends itself to the values

of "Collaboration, Openness, Community, Accessibility, and Sustainability in their workplaces" (Coworking.com, n.d., Capdevila, 2015, p. 2). Other forms of research focus on the impact of co-working spaces and their ability to encourage moments of solidarity and mobilization (Merkel, 2019). From this notion of creative collectives, other studies shift the focus towards start-ups and more commercially focused applications of organizational creativity (De Paoli & Ropo, 2017; De Paoli et al., 2017). This sector of the creative industries tends to cluster within urban cities in which the identity is inextricably tied to the individual's sense of identity to foster creative cognition (Bianchini & Landry, 2006, Florida, 2012).

While creativity is understood as a spurious process with creatives constantly on the move, research within the field questions how to facilitate the process without dampening its effects. Organizational creativity embodies the production and facilitation of creativity and innovation in practice (Amabile et al., 1996; De Paoli et al., 2017). At its nascency, organizational creativity considers the psychological studies of creative individuals and personality traits and assumes creativity can be reduced to this individual level (De Paoli et al., 2017). Studies by De Paoli et al. (2017) express the expansion of organizational creativity to go beyond personality traits and consider contextual and environmental perspectives. Creativity is identified to occur "in the interaction between individuals and a combination of a number of social, cultural, and organizational factors" (p. 333). Organizational creativity is understood as a multifaceted and complex phenomenon than just focusing on inherently talented individuals, leading to contextual and environmental perspectives. Previous research of organizational creativity in the context of workspaces first examines space as an indirect influence on communication, social relations, and organizational culture. Other studies focus on tools, visuals, furniture, and other physical objects within a space that stimulate organizational creativity. Further studies specifically focus on designed spaces for creativity, including co-working spaces and incubators (Martens, 2011; De Paoli et al., 2017).

These predominant workspaces within contemporary forms of creative work are described as "an open system, susceptible to broader socio-cultural force" as new work practices include remote work, co-working, and project-based (Amabile & Pratt, 2016, Fisher et al., 2020). Additionally, new facets of automated technology, including artificial intelligence, robotics, and rapid prototyping, alter the ways creative activity emerges from the collaborations of participants within the environment (Amabile, 2020, Fisher et al., 2020). Amabile & Pratt (2016) find a new approach to studying creativity within specific environments through the multiplicity of creative processes. Previous work focuses solely on

creativity processes focused on individual idea journeys. A modern approach to examining the creative process focuses on an iterative "(a) process of developing multiple creative ideas (b) starts, stops and overlaps between different ideas, and (c) [practices] associated with managing several simultaneous creative processes" (Fisher et al., 2020). These interactions enable a new perspective when considering the interactions and collaborations fosters or hindered in different workspaces and contexts.

Co-working presents itself as a response to creative individuals' perceived needs, acting as a hub for start-up companies, entrepreneurs, freelancers, and digital nomads, enabling like-minded creatives to work adjacent to others in the same room (Lapsomboonkamol et al., 2020). In response to the downsides to traditional offices, homes, and cafes, co-working spaces are designed to foster communities, exchange knowledge, and co-innovate under the same roof. Co-working spaces have been found to improve work-life balance, provide flexible economic efficiency and offer shared facilities and services (Lapsomboonkamol et al., 2020). However, other studies contradict the intentions of co-working spaces, finding the space demotivates creatives due to increased opportunities for external interference (De Paoli et al., 2017). Additionally, co-working spaces have also been found to reflect spatial manipulation similar to traditional offices and open-office plans that stifle opportunities for privacy and autonomy. Lapsomboonkamol et al. (2020) find factors, including self-interest, critical when encouraging individuals to be motivated to participate within a co-working space. Intrinsic factors, including self-efficacy and altruism, were more effective than extrinsic rewards. However, these factors again present themselves as a one-size-fits-all and perhaps too deterministic to support the vast expanse that encapsulates the creative sector.

2.3.2 – Workspace manipulation enabling *flow*

Martens (2011) builds upon Amabile et al.'s (1996) definition of creativity within the workplace as "the ability to produce work that is…unusual, unique, point of view, varies, original, breaking from existing patterns and contributing to something in the field which was not there before" (p. 65). Previous research in creativity also focuses on psychology regarding individual motivations based on personal experiences and upbringing (Landry & Bianchini, 2006). Considering the individualistic accumulation of creative cognition, Martens (2011) further characterizes creativity by "allowing a free flow of ideas and linking these new ideas to restrains, grammars, and rules, and of course to reality" (p. 19). The creative process is distinguished by Csikszentmihalyi's (1996) notion of 'flow' or the absence of awareness to the

individual's surroundings as if timeless while engaging with the creative activity (Martens, 2011).

While there are no discernible relationships between flow and physical surroundings, Martens (2011) stresses the importance of limiting interruptions to not disturb this sense of flow. Previous work on workspace literature describes the importance of supporting concentration and attention to avoid mental fatigue. Strategies aim to eliminate and mitigate sources of interference and interruptions by reducing noise while also improving communication lines between team leaders and employees. Additional efforts include interventions that reduce mental fatigue and restore the mental wellness of individuals by instilling a sense of nature and calm (Martens, 2011). Despite these challenges, Martens (2011) indicates that facilitating creativity requires different spatial settings beyond cognitive intensities and personal preferences. The function of a creative workspace depends on the creatives' ability to modify their physical environments to appease their intrinsic desires.

Existing literature predominantly focuses on creative clusters within cities and the impact of productivity within co-working spaces as a solution to foster these social interactions within a creative environment (DePaoli et al., 2019, Lapsomboonkamol et al., 2020). Moreover, workspace studies mainly focus on the aestheticization of space and designing it to produce pleasurable and sensuous effects (DePaoli & Ropo, 2017, DePaoli et al., 2019). These effects are drawn out by notions of fun at work, employee as the consumer, and the workplace as a home and a community (DePaoli & Ropo, 2017). Additional arguments from their study pinpoint how space is being utilized to stimulate creativity indirectly by creating a creative organizational culture. Current managerial practices impose designed workspaces to force creativity rather than support the spontaneous nature of creativity. Planned creativity is thus discerned as someone else's idea of what creativity ought to be. This instrumentalization of creativity neglects the social and emotional needs at an individual creative level.

DePaoli & Ropo (2017) argue that constrained and planned creativity is not necessarily supportive when acknowledging that creativity is not definitely dependent upon the workspace and can happen anywhere. Reflecting on bohemian workers through Eikhof & Haunschild (2006), part of the creative process integrates lifestyle as a key driver. Yet, the association of space is more dependent upon intrinsic factors of feeling connected to others while maintaining a sense of autonomy. De Paoli, Sauer & Ropo (2019) suggest that interactions with physical attributes indirectly influence intrinsic factors. When considering designed spaces to organize

creativity, there needs to be a balance between planned and spontaneous spaces for creativity to emerge.

Working with designers and architects to plan a space indicates companies seeking to reshape workspaces to achieve organizational goals rather than support creativity. De Paoli & Ropo (2017) argue that this approach can be referred to as "spatial manipulation," which, apart from economics, also touches upon core organizational issues within creative management. Rather than fostering a collective identity through the employees, managerial practices attempt to influence and shape behavior through the symbolic and cultural value of the objects curated within the space. The employee is then left to shape their individual experience to fit within these parameters. While the physical workplace can reflect the identity and culture of its users, this layout can express a flat structure. To increase creativity, Martens (2011) suggests that space needs to create "a generative building that allows and encourages plurality, contradictions, and dissensus, through the spatial organization" (p. 71). Workspaces are not limited to physical characteristics that push agendas focused on diversity, enclosure, and flexibility. What is more important within a physical space is recognizing social-psychological dimensions and the intangible benefits that space allows, encouraging ownership, identity, and behaviorally linear space.

As spatial manipulation tips more towards trends and what creativity ought to be, other literature expresses the tensions of creative work being socially dependent while also enabling space for individuality and autonomy. Samani et al. (2017) add that workspaces based on community-building through office design create a false sense of illusion of a harmonious and committed work environment. They argue that this aspect of approaching organizational creativity overlooks individual differences and needs during the fluctuations of the creative process. Different office layouts, ranging from partially visible cubicles to open offices, affect employee relations and communications. While open-office fosters social interactions and collaboration that may contribute to creativity, this same layout can also decrease their sense of control and hinder the creative process with too many distractions.

2.3.3 – Spatial relationships that inform creativity

Despite the intention of designed layouts to foster a sense of community, De Paoli, Sauer & Ropo (2019) challenged this by stating that for "professionals working on complex intellectual issues, socializing is rather a burden than a relaxing activity" (p. 340). This critical reflection weighs the pros-and-cons of the office, replicating homey attributes and perhaps blurring the

lines between work, home, and leisure. Spatial relationships and differentiating each domain may impact the individual's well-being and separate work from life. Workspace can act as a driver for creativity but has the potential to hinder creativity. This argument is reflected through Martens's (2011) previous work where no direct evidence could be found on workflow and physical surroundings. However, the role of physical surroundings plays an integral part in productivity based on interruptions to workflow. Strategies encourage the mitigation of sources of disruption by reducing noise and improving communication to reduce uncertainty. This study also indicates that while having other creatives around is vital for creative performance, it does not mean that these communications are continuous or present at all times. What is more important is the possibility of interacting and reflecting on individual work and coordinating as needed to foster social cohesion.

Amabile (1998), through her seminal work, highlights how studying creativity at work may lead to a more sophisticated understanding and instrumentalization of creativity in general. Entrepreneurial activity, a key component to creative work, is viewed as an inherently motivated phenomenon in which intrinsic needs, such as self-expression, and extrinsic ones, such as monetary gains, are necessary for creativity in the workplace (Mumford & Simonton, 1997; Amabile, 1998). Amabile et al.'s (1996) research highlights the intraorganizational foundations of innovation, examining the context in which creativity thrives regarding the environmental perceptions that influence the creative work carried out within an organization.

Within the componential model of creativity and innovation within organizations, three broad factors are identified as work environment dimensions that influence creativity. These factors include *organization motivation to innovate*, which alludes to the organization's orientation towards innovation and ability to support the process. Secondly, *resources* are highlights as they refer to the raw materials available within the organization to aid work within a domain targeted for innovation, including "sufficient time for producing novel work in the domain, and the availability of training" (Amabile et al., 1996, p. 1156). The last factor includes *management practices* that enable freedom and autonomy in the conduct of work, remaining challenging and interesting to the individual while in line with the organization's overall strategic goals. These management practices also allude to the ability of the organization to draw together a large group of individuals with diverse skills and perspectives (Amabile, et al. 1996). These factors play a large part in Amabile et al.'s (1996) formation of the KEYS instrument, which focuses on the individual's perceptions of their work environment and

perceptions of creativity through work. This measurement tool expands beyond SDT regarding motivation and provides a supplementary tool for determining creativity levels.

The conceptualization for the KEYS instrument under Amabile et al.'s (1996) framework defines the five main factors that influence creativity as (i) encouragement of creativity, (ii) autonomy and freedom, (iii) access to resources, (iv) workload pressure, and (v) organizational impediments to creativity. Utilizing Amabile et al.'s (1996) framework concerning more recent research building upon the concept of the influence of the workplace on creativity, this research hypothesizes the following:

H2: Workspace environment influences creativity.

In response to the different workspace domains, this study also proposes the following sub-hypotheses:

H2a: The office has a negative effect on creativity.
H2b: Work from home has a positive effect on creativity.
H2c: Co-working spaces have a positive effect on creativity.

Therefore, the alternative hypothesis for this aspect of the triangulation of workspace, motivation, and creativity suggests that workspace does not influence creativity. Based on the indicated predominant workspaces, including the office, the home, and co-working spaces, we predict that creative individuals will exhibit the environment as a significant factor when shaping their perspective and affiliation towards creative work. Observing creative work and a sense of 'flow' as indicated by Csikszentmihalyi (1996) and Martens (2011), we predict that as each environment presents itself with more impediments, a tendency towards creativity will decrease. Workspaces that allow the flexibility to adapt to the creative individual's personal preferences that often fluctuate during the creative process (work from home and co-working), will be viewed as the preferable workplace.

With Amabile et al.'s (1996) KEYS framework, we predict that as the environment enables the individuals to craft and modify the space according to their needs, we will see autonomy and freedom relate with creativity. Within the space, we also anticipate that creativity will correlate positively as the environment lends itself to supporting competence, bolstered by other factors that enable creative support and access to resources. We predict that

based on the literature indicated offices that contrive a sense of community inversely cause more impediments that disrupt the creative process rather than foster it. We further anticipate that work-from-home, with more personal distractions at hand will also decrease creativity. As such, we predict that co-working spaces that allow more freedom to choose different configurations will coincide with higher levels of creativity. Each aspect of the setting lends itself as indicators that depend solely on physical attributes and interactions facilitated through these environments. Thus, these attributes and their influence on creativity will enable a perspective that considers the physical environment's influence.

2.4 – Tying motivation and creativity within the creative industries

To connect the ties between workspace and creative motivation, we must also draw the connection between creativity and motivation. As previously explored, creativity is highly contested, and motivation is not necessarily split between intrinsic and extrinsic factors. Within research, there is much debate about whether creativity is an innate ability or an incrementally accrued process through experience. Despite these challenges, additional facets pinpoint the difficulty of the origins of creativity and what keeps these individuals motivated despite the challenges of creative work (Amabile et al., 1996; Eikhof & Haunschild, 2006; Martens, 2011; Taylor & Kaufman, 2021). Additional examinations of motivation for creative work focus primarily on individual differences and traits, including personality and cognition. In contrast, more modern investigations account for how personal and environmental factors interact to influence creativity (Taylor & Kaufman, 2021). Amabile and Pratt (2016) suggest feedback loops that describe how psychological factors, incorporating motivation and emotions, bolster the ability to iterate within the creative process and connect creativity and organizational innovation. (Fischer et al., 2020).

2.4.1 – Motivational factors informing creative work

Creativity is primarily illustrated through the process of performance aspects embodying novelty and appropriateness. A creative product is considered creative if it is different from its predecessor and provides practical, valuable, and appropriate solutions to a particular and significant problem. The creative process is a dynamic process that includes the stages of "problem presentation, preparation, idea generation, idea validation, and idea communication" (Amabile, 1983; Amabile, 1993, p. 192). The creative process through Amabile's (1993) work highlights that the demands of creativity being based upon cognitive flexibility and complexity

are at their highest when influenced by intrinsic motivational factors for the job. In response, extrinsic factors foster intrinsic ones and do not necessarily undermine them through monetary rewards but signify a constraint that may present detrimental effects (Amabile, 1993). This work further adds to how research can perhaps organize and foster creativity and give managerial suggestions. However, understanding that creativity is an emergent process further questions why individuals engage with such precarious and unpredictable work in the first place.

Eikhof & Haunschild's reflect on motivation for creative work through the lens of bohemian theater performers who regard creative work beyond as a means to earn one's living but as a vehicle for self-fulfillment. The overall work motivation was to integrate life like work of art itself" (p. 236). Despite the creative and cultural industries being understood as a part of the economy that depends on artistic and creative motivation, Eikhof & Haunnschild (2006) question the extent that the embedded principles within the lifestyle drive these individuals. As previously indicated, the CCI's are exemplified through long and irregular working hours in conjunction with high levels of energy and devotion towards self-management. The spread of quasi-bohemian principles into other disciplines that call for more flexible work structures co-evolves with a "desire for a higher degree of self-actualization at work" (Eikhof & Haunschild, 2006). The motivation for creative work is noted as "art for art's sake," where the integration of work and life contributes to the art (Caves, 2000; Eikhof & Haunschild, 2006; Cnossen et al., 2017).

From this, the literature indicates that motivation is more dependent upon individual identity desires and skillsets to improve to provide continuous contributions—creativity and motivation rather than one proceeding the other's actions in response to one another. Creativity is not necessarily an innate ability but more of a desire to overcome uncertainty (Martens, 2011). Creativity is primarily debated as either being a state of mind or a natural ability. Martens (2011) indicates that creativity "is not so much inborn, but more an attitude towards life…Creative and innovative behaviors at work seem to be promoted by a cognitive flexibility created by a combination of both personal qualities and work environment factor" (p. 69). The motivation to improve upon creative skills is tied to intrinsic motivation and a sense of accomplishment for oneself.

Gilson (2020), using Amabile et al.'s (1996) work as a foundation, finds that creativity-relevant skills refer to "an individual's ability to link disparate information, understand complexities, keep options open, suspend judgment and break out of performance scripts"

(Amabile et al., 1996; Gilson 2020, p. 49). Radical creative ideas are related to intrinsic motivation, whereas extrinsic motivation was a driver of incremental creativity. Contributions by Hennessey (2020) indicate that intrinsic motivation and creativity are bound to "suffer in the face of an expected reward and other extrinsic constraints" (p. 66). Certain rewards motivating creatives may 'crowd in' individuals and enhance intrinsic motivation through synergy. This process comes to light due to the increased sense of competence, the value of an individual's work quality, and the ability to enable the individual to become more engaged with the work that they find interesting (Hennessey, 2020). Therefore, creative performance is dependent on the individual's motivational orientation.

To comprehend a potential creative solution, the individual must approach the problem with the necessary and appropriate *domain skills, creativity skills, and task motivation* (Amabile, 1983; Hennessey, 2020). Domain-relevant skills pertain to particular technical skills and knowledge necessary to contribute to a specific domain. This sense of knowledge includes inherent cognitive abilities that are reinforced by formal and informal education. Creativity-relevant skills are then more related to individual differences and the ability to be adapt thinking styles and problem-solving skills to perform creatively. Task motivation, therefore, refers to how well the task matches the individual's interests and perceived reason for completing said task. Considering these factors, Amabile (1982) distinguishes two types of motivation split between intrinsic and extrinsic. Intrinsic motivation encompasses the individual's engagement with the activity based on satisfaction and enjoyment to complete it. On the other side of the coin, extrinsic involves engagement based on external outcomes or rewards. Amabile (1982) states that extrinsic motivation presents itself as a slippery slope as the lines between intrinsic and extrinsic concerning another are blurred, complicating the relationship with creative outcomes.

2.4.2 – The relationship between intrinsic and extrinsic motivation

Intrinsic motivation within research has been consistently indicated to bolster creativity, whereas other assumptions presume extrinsic factors are detrimental to creativity (Taylor & Kaufman, 2021). This notion is in response to other assertions that extrinsically motivating factors that are task-contingent upon completion lead to diminished creativity. On the other hand, performance-contingent rewards, such as rewards based on a particular quality achievement, enhanced creativity. Additional influences to the detriment of creativity based on achievement include individual differences, such as personality characteristics, and physical

ones, such as gender (Taylor & Kaufman, 2021). This notion alludes to the individual's sense of self-efficacy and belief in oneself to accomplish the task, as reflected through the fundamentals of SDT's framework for motivation.

The majority of existing studies investigate the effects of motivation on creativity through a social-psychological approach. These studies focus on the manipulation of intrinsic and extrinsic factors to elicit a creative response. In response to these studies, trait motivation is found to act as a critical indicator to predict creative behavior (Amabile et al., 1994; Sutton & Sauser, 2008; Taylor & Kaufman, 2021). Amabile et al.'s (1994) study of intrinsic and extrinsic trait motivation of university students and working adults indicated that intrinsic trait motivation positively correlated with creative products, including poetry and collages. Intrinsic trait motivation was found to mediate the relationship between personality traits and creativity by including openness to new experiences and self-efficacy. Creativity regarding other personality traits, such as perseverance, was found to be moderated by extrinsic motivation. Extrinsic motivation negatively correlated with creative products (Amabile et al., 1994; Prabhu et al., 2008; Taylor & Kaufman, 2021). However, these studies take on a dichotomous view of motivation, whereas newer studies suggest that motivation is a multidimensional construct within a spectrum (Taylor & Kaufman, 2021).

2.4.3 – The reciprocity of intrinsic and extrinsic factors

Expanding beyond Ryan & Deci's (2017) SDT, motivational orientations differ as a function in response to the amount of autonomy experienced. Extrinsic motivation is proposed as four components consisting of integration, identification, introjection, and external regulation. Integration refers to the aspects of motivation that are more self-determined and why individuals may or may not participate in the task based on how it adds to their sense of self. Introjection embodies aspects in which behaviors occur due to self-imposed expectations of reward or punishment, leading to pressures to act or not. External regulation refers to the motivation to engage with the task to gain or avoid an external consequence away from the activity. Lapsomboonkamol et al. (2020) expand upon intrinsic and extrinsic motivation based on the SDT by indicating intrinsic motivation to be stimulated by "engaging in tasks to improve [the individual's] own capabilities and increase an organization's effectiveness" (p. 1838). Extrinsic motivation is tied to reciprocal actions that lead to outcomes focused on monetary gains and career advancement. Through this perspective, intrinsic and extrinsic motivational

factors affect the individual's intention to share, distribute, and instrumentalize knowledge sharing (Lapsomboonkamol et al., 2020).

Previous research by Jabagi & Croeau (2018) also builds upon the SDT framework through the perspectives of gig-workers within the CCIs based on the fundamental needs for autonomy, competence, and relatedness. The satisfaction of these needs promotes intrinsic motivation and psychological well-being (Deci & Ryan, 2000; Deci & Ryan (2017); Jabagi Croteau, 2018). Extrinsic factors are found to not depend on money alone but also rely upon drivers such as accepting the individual's work by others within their social groups, professional field, and community (Reid et al., 2016).

Based on this approach of the integration of intrinsic and extrinsic factors within the SDT framework and its influence on creativity, this study therefore hypothesizes:

H3: Motivation and creativity are associate with each other.

Based on the theoretical understanding of the interplay between intrinsic and extrinsic motivation, the following sub-hypotheses are proposed:

H3a: Intrinsic motivation is positively associated with creativity.
H3b: Extrinsic motivation is positively associated with creativity.
H3c: Amotivation is negatively associated with creativity.

Therefore, we propose the alternative hypothesis in which creativity is not correlated with motivation once analyzed through the three distinctions of intrinsic, extrinsic, and amotivated factors. We anticipate more inherently creative individuals will have higher levels of motivation for creative work. From this perspective of intrinsic motivation based on self-fulfillment and well-being in conjunction with extrinsic motivation based on a reciprocal feedback loop built on prestige and reward, we predict both factors will have a positive relationship with creativity. Factors that are more indifferent and identified as amotivated will have a negative relationship since this aspect refers to a complete lack of motivation (Taylor & Kaufman, 2021). These assumptions are based on the theoretical interplay of intrinsic and extrinsic factors that add to the discovery of self-identity through the process of creative work.

H1: Workspace environment effects motivation.

H1a: The office has a negative effect on motivation.
H1b: Work from home has a positive effect on motivation.
H1c: Co-working spaces have a positive effect on motivation.

psychological well-being

workplace

- autonomy / job crafting
- possible disruptions per space (pressures)
- sense of belonging / group encouragemnt
- resources

organizational creativity

H2: Workspace environment influences creativity.

H2a: The office has a negative effect on creativity.
H2b: Work from home has a positive effect on creativity.
H2c: Co-working spaces have a positive effect on creativity.

motivation

- SDT
- self-fulfillment
- alignment of needs and values

motivation for creative work

H3: Motivation and creativity are associate with each other.

H3a: Intrinsic motivation is positively associated with creativity.
H3b: Extrinsic motivation is positively associated with creativity.
H3c: Amotivation is negatively associated with creativity.

creativity

- flow
- state of mind
- ability to navigate ambiguity and produce creative work

Figure 1: Theoretical Framework & Hypothesis Triangulation

3 – Methodology

The following mixed-methods research utilizes predominantly a deductive quantitative approach. The design of this research is based upon the theoretical framework encompassing creativity, motivation, and workspace. Additional qualitative explorations including focus groups and open answers aim to enrich and add dimensions to the quantitative data. The design of this research aims to answer to what extent creative workers' motivation is impacted due to their preferred and actual workspace (see Appendix B). Additionally, the research design aims to answer the underlying interest of how to reframe the conception of the office when thinking ahead as hybrid working models become more common. This research employs deductive reasoning by moving from a general theory towards a specific inquiry (Babbie, 2016, p 24). The testing of a theory compared to expected and actual outcomes frames this research quantitatively as an appropriate approach to distinguishing and confirming the hypothesized relationships through the defined variables. Moreover, a quantitative approach seeks to establish a connection between the variables expressed in robust and comparable numbers (Babbie, 2016).

The survey instrument (see Appendix A) implemented yielded 213 participants, which was reduced to 169 (n = 169) isolating recorded responses that completed all closed questions. Descriptive statistics including are provided in the Appendix E. In a few of the analyses, the number of observations are left out due to discrepancies or incomplete responses. Analyses control for relevant demographic factors in relation to the connection between workplace, motivation and creativity. Reports based on the following methods further aim to illustrate the aforementioned hypotheses in regard to triangulating the relationships between the three key areas of interest.

3.1 – Exploratory Data Collection and Analysis: Focus Groups and Interviews

A series of interviews and focus groups were conducted at the nascent stages of the research development and served as initial data to frame the research question (see Table I). These semi-structured discussions served as an appropriate approach due to the focus of the research to turn the focus back towards creative individuals and hear their needs at the beginning phases. Interviews were then transcribed and coded with Atlas.ti in conjunction with the open answers collected from the survey (see Appendix C).

Table I – Initial Data Collection: Interviews & Focus Groups

Focus Group 1 Date: 03.02.2021	Profession/Company	Location
Respondent A	Senior Designer – Penguin Random House	New York, NY, USA
Respondent B	Senior Designer – Tor/Forge Books	New York, NY, USA
Respondent C	Communication Manager/Photographer	Amsterdam, NL

Focus Group 2 Date: 26.02.2021		
Respondent D	Urbanist	Rotterdam, NL
Respondent E	Communication Strategist	Rotterdam, NL

Individual Interview Date: 24.03.2021	Profession/Company	Location
Respondent F	Well-being Program Manager / Founding Member	Amsterdam, NL

As this study focuses on the connection between workplace, creativity, and motivation, three interviews were conducted to tackle each theme to refine the research question and methodology approach. The first focus group aimed to frame creativity through creative professionals in the field who were identified as the targeted respondents in this study. The focus group consisted of two illustrators working for a large publishing house and a freelance copywriter. The individuals were encouraged to discuss with the researcher and amongst each other how the work environment and creative process relate to each other and have changed since the COVID-19 pandemic. Two employees from an architectural and urban planning company were interviewed to gather insights regarding the future of workspaces and development. Rounding out the third aspect of this study, a well-being counselor was interviewed to share insights into new programs and initiatives regarding support for work-from-home. These interviews proved to be fruitful and structure the methodological approach to connecting each theme for answering the research question and subsequent and subsequent inquiry regarding the future function of the office ahead:

To what extent does the workspace impact creative workers' motivation and creativity?

3.2 – Main Data Collection and Analysis: Quantitative Survey & Supplementary Qualitative Content Analysis

The survey administered for this study to answer the above hypotheses entails a quantitative (deductive) and a qualitative component. Surveys act as an appropriate measurement tool for this research design as surveys can measure "attitudes and orientation" to gather opinions of creatives regarding how motivated they feel depending on the space they work in (Babbie, 2016, p. 247). Although a survey may seem impersonal when considering the individualistic needs of creative work, this method allows respondents the freedom to answer according to their preferences. Additionally, under shifting work environments, scheduling conflicts, and understanding the individual limits of digital screen interactions, self-completed questionnaires allow respondents to answer at their leisure (Bryman, 2012, p. 234). Utilizing a mix of closed questions, validated (Likert) scales to determine variables such as creative motivation traits (CTMs) and creativity levels, and open answers enable the respondent a combination of ways to express themselves. The open-answer questions at the end of the survey act as the qualitative component for this mixed-methods approach.

To supplement and increase the validity of the data collected, open-answer questions were designed to provide an opportunity for the respondent to explain their reasoning behind closed questions. Additionally, "open answers allow the level of knowledge and understanding of issues to be tapped" as well as the salience of issues to be explored (Bryman, 2012, p. 247). Open answers were coded and thematized to supplement the data collected from the survey. Applying a mixed-method approach to this study allows the quantitative information to be amplified and contextualized through the qualitative findings. The combination of different types of data enables the researcher to "understand the statistical data because [they] have an appreciation of the nature of the areas in which the surveys were conducted and the motives and preferences of their member" (Bryman, 2012, p. 646).

The survey was designed and administered via Qualtrics software and analyzed with SPSS statistics software. The survey was distributed via a direct link online that was web-browser and mobile friendly, allowing accessibility for respondents across various platforms. To assess the open-ended questions, thematic analysis was applied to encourage more personal insights that enrich the data collected. All open answers were analyzed through Atlas.ti and coded according to the themes embedded within the relationships between workspace, creativity, and motivation (see Appendix C).

3.3 – Sampling

The units of analysis for this study include digital nomads within Throsby's (2008) concentric model of the creative industries (see Figure 2). Respondents targeted for this study fall within the broader cultural industries and related industries. These workers encompass video editors, animators, communications designers, industrial designers, architects, interior designers, and creative writers. The research was limited to this target audience due to their tendency to have innately more nomadic work that relies upon digital communications and programs that facilitate their work. These respondents are an appropriate target group for this study when analyzing the influence of workspace split between the office, home, and co-working spaces, as digital nomads are portrayed as young professionals who predominantly work in online environments. This sense of mobility enables the individuals to select work locations independently from their work (Reichenberger, 2017). Moreover, as this study aims to highlight the influence of space on creative motivation based on the SDT, these digital nomads aim to "eliminate dissatisfaction with structures perceived as inhibiting freedom, a lacking work-life-balance, and a perceived disconnect/alienation through a lifestyle" (Reichenberger, 2017, p. 367).
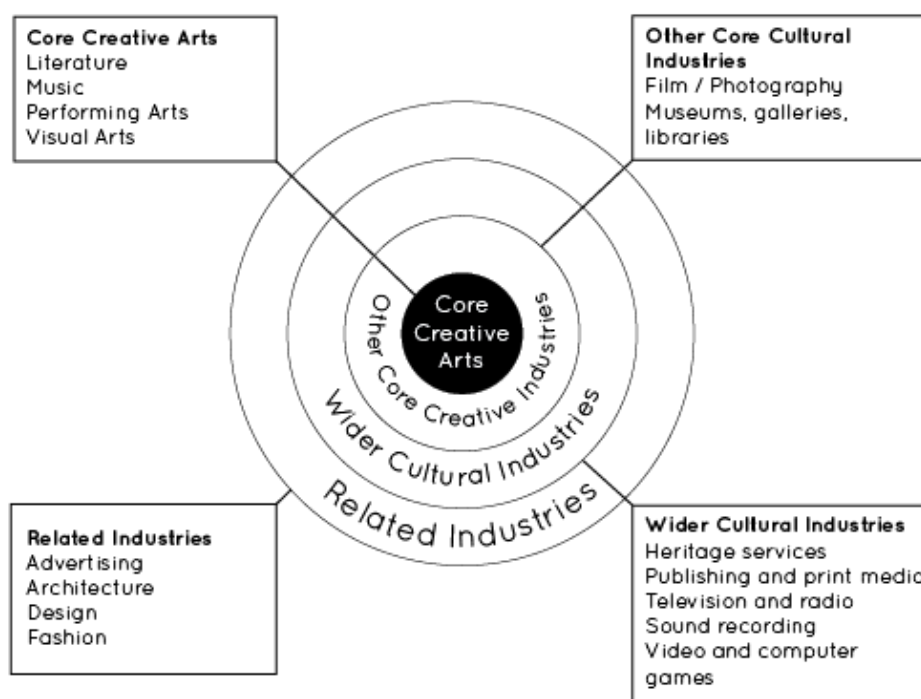
Figure 2: The concentric circles model of the cultural industries (based on Throsby, 2008, p. 150)

To ensure that data from a sufficiently diverse sample was collected, initial respondents were contacted through the researcher's contacts and were encouraged to pass along to others in their network via convenience and snowball sampling. As indicated by Schaurer & Weiß (2020), indicate an increase of surveys administered during the COVID-19 pandemic, mainly based on online convenience samples where participants recruit themselves. This form of research provides benefits when considering the health and safety risks that coincide with the pandemics, limiting in-person interactions. This approach is also acceptable for this study being sensitive to the digital nomad's time, especially spent with online engagements. Due to part of digital nomads' work on several projects with various other creative workers enables the opportunity to reach others within the field that may have been untapped due to the researcher's limitations. Furthermore, the aim of this study is to not necessarily generate results wholly representative of the entire population of digital nomads. This study rather aims to explore existing concepts and how they relate to each other under the context of COVID-19, forcing workers to predominantly work from home.

Efforts to increase the diversity of the respondents occurred via cold-contacts via portfolio websites including LinkedIn, Coroflot, Behanced, and Dribble. To broaden the scope of contacting respondents globally, local arts organizations and collectives were contacted as well. Respondents were cold contacted to open the breadth of perspectives and garner a sample as representative as possible of the population being examined (Bryman, 2008, p. 187). These methods ensure that a larger respondent pool was collected on a global scale to ensure validity. Additionally, collecting data on a worldwide scale aims to align with Markusen's (2013) claim that digital nomads within this category of the creative industries work everywhere, from rural areas to larger metropolitan areas.

3.4 – Operationalization & Variables

The questionnaire (see Appendix A) includes demographic questions with additional items designed to measure and draw connections between the triangulation of the critical concepts of workspace, motivation, and creativity. To begin, the survey asks socio-demographic variables, including *location, age range,* and *gender.* Regarding gender, sensitivity towards recent societal events has expanded beyond solely female and male and includes a non-binary/non-confirming option. The last option also enables respondents to abstain from a response to gender, allowing the respondent to represent themselves as they wish to. More in-depth

description questions developed for the purpose of this include *employment status, household, professional field,* and *education.* These demographic questions harken back to the notions of creative work's precarity and allow external indicators such as employment status and household to be measured. The potential impact they may have on creative motivation. Professional fields were grouped based on portfolio and job search engines. A new variable *continent* was created to consolidate countries into five groups labeled as *Americas, Europe, Asia, Africa,* and *Australia.*

Motivation, creativity, and *workspace* serve as the main variables for this study. An instrumentalization table regarding the theoretical backings of each variable and the connecting hypothesis was created to isolate items to measure each item (Appendix B).

3.4.1 – Variable: *Motivation*

First, the variable *motivation* was measured on two different scales from previous studies. *Motivation* regarding *workspace* implemented Amabile et al.'s (1996) KEYS scale, which was based on Deci & Ryan's (2000) SDT framework to measure the psychological context of creativity. KEYS was designed to "[reveal] the psychological meaning that respondents attach to events in their organizations, their organizational units, and their work groups" (Amabile et al., 1996, p. 1157) thus making it an appropriate tool for measuring creative motivation concerning spatial contexts. These items indicate the source of influences that are of importance to individual's perceptions and relation to the space. Five items were designed from this framework based on the conceptual model themes (see Table I). These items embody the themes of the SDT framework, including aspects of autonomy, competence, and relatedness within the context of creative work. Slight wording changes were applied to make statements more relatable for the targeted respondents to yield more accurate results based on personal reflections. These items act as motivational drivers within a workspace, allowing respondents to indicate a sense of presence or lack thereof. As respondents indicate a higher importance level for the items, indicate needs to facilitate motivation within a workspace.

To enrich the descriptive statistics regarding motivation levels, respondents were asked to rate motivation factors on a scale of 1-10, from least to most important (see Table II). These statements included main themes of autonomy, relatedness and competence within the SDT framework and Amabile's KEYS. More specifically these themes included *encouragement for expression of creativity from colleagues, autonomy/freedom, access to resources, reduced pressure from workload,* and *reduction of distractions/interruptions.* The scale was presented

first as a reflection of how important these factors were before the COVID-19 pandemic. The scale was then presented a second time but asked respondents to rate the items based on their importance during the pandemic. This comparison was designed to bring to light any shifting values that the pandemic may have caused.

Table II – Pre/Post-COVID Motivation Scale

Item (*Please indicate how important (1-10) the following statements are for creating design work (pre/post) COVID:*	**Code**
Encouragement for expression of creativity from colleagues	PRE_KEYS_COLLEUGE
Autonomy/freedom	PRE_KEYS_ATNMY
Access to resources	PRE_KEYS_RSRCS
Reduced pressure from workload	PRE_KEYS_WRKLD
Reduction of distractions/interruptions	PRE_KEYS_DSTRCT

To assess motivation in relation to *creativity* and *workspace*, the survey instrument included seven items (see Table III) based on Taylor & Kaufman's (2021) Creative Trait Motivation Scales (CTMS). CTMS act as a valuable tool for assessing creative trait motivation in domain-specific contexts. This scale adapted Academic Motivation Scales (AMS) designed items to assess three types of motivation: intrinsic motivation (knowledge, accomplishment, and stimulation), extrinsic (external, introjected, and identified regulations, and amotivated (absence of desire to engage). This scale provides The CTMS was based upon Guay, Mageau & Vallerand's (2003) Global Motivation Scale, which assesses "people's global motivation toward behaving in general in their life as a whole" in tandem with Vallerand & Bissonnette's (1992) AMS, which measure individual's motivation for attending college (Taylor & Kaufman, 2021, p. 3).

The CTMS act as an appropriate measurement scale for this study due to the scales' ability to tackle each component of motivation based on intrinsic, extrinsic, and amotivated statements about why the individual may or may not engage with the activity. Seven items were selected from their instrument, including three intrinsic items, three extrinsic items, and one amotivated item chosen for the survey design based on their relation to the key concepts of motivation within the work environment described in the theoretical framework. The intrinsic and extrinsic motivation items were selected equally to be able to measure against

each other. Specific items were selected based on how much they related to autonomy, relatedness, and competence within the workspace. A single amotivated item was chosen as a control. Items were rated on a scale of 1 – *Does not correspond* to 5 – *Corresponds mostly.*

Table III – Creative Trait Motivation Scales

I engage in creative work because… (1 – Does not correspond to 5 – Corresponds mostly)	Relation	Code
…because I experience enjoyable feelings	intrinsic	CTM_ENJYMNT
…because of the sense of well-being I feel	intrinsic	CTM_WELLBNG
…because of the pleasure I feel as I become more and more skilled	intrinsic	CTM_SKLL
…because I want to be viewed more positively by certain people	extrinsic	CTM_PEER
…in order to attain prestige	extrinsic	CTM_PRSTG
…because I would feel bad if I did not	extrinsic	CTM_GUILT
…although it does not make a difference to me and I do not see the benefit from it	amotivated	CTM_BNFT

3.4.2 – Variable: *Creativity*

Creativity was measured based on two scales. The first scale, analyzes the creative process in relation to workplace. Connecting to the workplace, creativity was measured using scales derived from Amabile's KEYS (see Table IV). KEYS are designed to "assess perceptions of all of the work environment dimensions that have been suggested as important in empirical research and theory on creativity in organizations" (Amabile et al., 1996, p. 1155). These scales examine the psychological context of creativity. Firstly, respondents were asked to indicate where they prefer to work and where they actually work. The options included the variables for workplace encompassing *the office, at home, in a co-working space,* or *other.* Reflecting on their indicated actual workspace, respondents were asked to rate statements on a 5-point scale from 1 – *Does not correspond at all,* to 5 – *Corresponds exactly* that related to how often they experience the statements. Using this scale allows respondents to indicate how salient the statements are and how they pose potential threats to the creative process from iteration to implementation based on the componential model of creativity and innovation in organizations. Amabile et al. (1996) indicates KEYS are a more detail and specific articulation componential model of creativity by assessing the organizations' design, structures and functions.

Table IV – Creativity in relation to workplace

How often do you experience the following feelings while creating work in the space indicated above? (1 – Does not correspond at all, to 5 – Corresponds exactly)	Code
I feel distracted by the environment	SDT_DSTR_ENVRNMNT
I feel connected and supported by my colleagues	SDT_CNNCTD
I feel stressed from the workload	SDT_WRKLD
I feel supported by my supervisor	SDT_SPRVSR
I feel in control of my day-to-day activities	SDT_ACTVTY
I feel personally connected to this environment	SDT_CNNCT_ENVRNMNT

In regards to *creativity* in relation to *motivation,* measurement scales based upon Chang et al.'s (2018) creative trait components, derived from Amabile's (2012) work on creativity based upon personality traits, thinking skills, and professional knowledge based on effective incentives (see Table V). These indicators generate explicit behaviors related to creative performance, therefore, informing the essential creative components. To measure creativity in the context of this study, six items (see Table V) were derived from Chang et al.'s (2018) instrument, each relating to fundamental creative components that encompass domain-relevant skills, creativity-relevant processes, task motivation, behavioral intention, perceived behavioral control/social environment and attitude. Each of these elements were rated by respondents on a scale of 1 – *Does not correspond* to 5 – *Corresponds exactly.* Items selected on this study were adapted to better reflect the process of digital nomads' work.

Table V – Creativity scales

Indicate how far the following statements correspond to how you feel while creating work? (1 – Does not correspond to 5 – Corresponds exactly)	**Relation**	**Code**
I can handle the materials and assemble deliverables using basic tools	domain-relevant skills	CRTVTY_BSCTOOLS
I can think of ideas that are different from those of others	creativity-relevant processes	CRTVTY_IDEAS
I feel happy crafting unique projects	task motivation	CRTVTY_UNIQUE
I am willing to design and craft creative products/ideas	behavioral intention	CRTVTY_WLLNG
I create creative deliverables because the outcomes will be evaluated	perceived behavioral	CRTVTY_EVAL

	control/social environment	
I find enjoyment in designing/producing creative products	attitude	CRTVTY_ENJMNT

3.4.3 – Combined Variables

To synthesize the dependent variable *motivation* based on the items derived from Taylor & Kaufman's (2021) CTMS (see Table III), a factor analysis of the seven-items selected was run. Items were then grouped into a single component based on their reliability and congruence. A reliability test was conducted to ensure that the combination of items to create the three new variables of *intrinsic, extrinsic,* and *amotivated* was appropriate for the analysis. To synthesize the dependent variables encompassing *motivation*, a factor analysis of the seven-item version of Taylor & Kaufman's (2021) CTMS was conducted to describe the variability among the observed and correlated variables to condense into three variables of *intrinsic, extrinsic, and amotivated* (see Appendix D)

After these observations, one extrinsic item (CTM_GUILT) was moved due to its positive relationship with the other intrinsic items. *Extrinsic motivation* was then measured based on two items (CTM_PRSTG and CTM_PEER). Based on this analysis, correlated items were joined and tested for reliability using Cronbach's alpha. *Motivation* is further conceptualized into three components consisting of *intrinsic, extrinsic, and amotivated* based on how highly rated each item was recorded from respondents. After examining the data via factory analyses, all items created for *motivation* items were identified to be loading as expected (all being above 0.70) (Appendix D). Reliability for *intrinsic motivation* proved to be good ($\alpha = 0.713$), as well as *extrinsic motivation* ($\alpha = 0.788$).

This same process was applied to the dependent variable *level of creativity* from Chang et al.'s (2018) creativity scales. The version adapted for this study rephrased items to relate itself more to the process of digital nomadic work from ideation to implementation. Therefore, *creativity* (see Table V) is conceptualized as a multi-dimensional measure of an individual's level of creativity based on how salient the statements were to the respondents while conducting work. Based on the factor analysis (see Appendix E), we arrived at four of the six items used in the instrument to extract a single component measuring *creativity*. These four items included CRTVTY_IDEAS, CRTVTY_UNIQUE, CRTVTY_WLLNG, and CRTVTY_ENJMNT. The merged score of these items yielded a good reliability analysis ($\alpha = 0.766$).

3.4.4 – Variable: Workplace

The workplace was measured as a nominal variable based on four domains identified as the predominant working spaces for creative workers. These items identified for the purposes of this research include *the office, home, co-working spaces,* and *others*. Since this study focuses on the influence of workspace shifting from the office to more commonly at home, the order is presented respectably. To gain a deeper insight into individual's preferences, the survey was designed to have respondents indicate where they prefer to work and where they actually perform the majority of their work. Additional questions to help gain a holistic view of the workplace and time distributed to each domain included a scale that enabled respondents to indicate in two-fold the percentage of their work that they complete and prefer to complete in each environment. Allowing this measurement tool for the survey aims to add discussion points regarding hybrid working models in the future.

Other items designed for the purpose of this research aim to understand the household dynamics of digital nomads. These dynamics range from individuals living on their own, young families or living with other family members without children. Household dynamics are a critical aspect to look into by understanding the other people within their surroundings and whether they foster relatedness or present other impediments to the creative process.

The survey concludes with two open-answer questions, enabling respondents the opportunity to add explanations to their answers. The first question we developed asks the respondents to explain *some personal practices to keep themselves motivated while working from home during the COVID-19 pandemic from early 2020 to the present*. The second open question developed allows respondents to reflect and verbalize *how they imagine the future function of the office to suit their needs better*. These questions add depth to the primary research questions and allow respondents to show how they craft their own space to support their creative motivation and how the office can respond to them.

3.5 – Data Analysis

All items were recorded and coded in SPSS (see Appendix B). The obtained data was first analyzed with descriptive statistics to understand the scope of respondents based on location, household arrangement, and professional field (Appendix F). Demographics including *continent* (CONTINENT)*, gender* (GNDR)*, age* (AGE)*, household* (HSHOLD)*, living environment* (LIVE)*, and employment status* (EMPLYMNT) acted as the control variables in the regression model. For both *preferred workplace* and *actual workplace*, out of the four

categories, *at home* acted as the reference category. The remaining reference categories included *continent – Americas, gender – female, household – living with partner (no children), living environment – urban/city,* and *employment – employed fulltime.* These socio-demographic items were selected and identified as key influences that may impact motivation and creativity in the context of workspace. These items also indicate facets that may cause any impediments to creative flow and the principles of autonomy, competence and relatedness.

To test the first hypothesis of the effect of *motivation* on *workplace*, three separate linear regressions were run to account for each form of motivation (*intrinsic, extrinsic, amotivated*). The same approach was conducted when testing the third hypothesis of *creativity* in relation to motivation. Each regression model included demographic variables to test whether these had an effect on the dependent variable. To further analyze *motivation* to *workplace* under the context of this study, a secondary analysis was run by isolating cases that indicated that they work from *home* but prefer to work in either *the office* or *a co-working space*. Reference categories in this regression include *continent – Americas, gender – female, household – living with partner (no children), living environment – urban/city, employment – employed fulltime,* and *preferred workspace – the office.*

In regards to the second hypothesis, a factor analysis and linear regression analysis were not necessary due to *workplace* in relation to *creativity* as based on Amabile et al.'s (1996) KEYS present themselves as a closed set therefore indicating a categorical dataset. Consequently, it is more interesting to look at the probability to which environment is more likely to influence creativity through descriptive analysis. Data collected was analyzed through the distribution of items on how often respondents experience the items relating to disruptions to creative flow within the space. Through descriptive interpretations of the data will be able to compare which items may be more frequently felt than others. To further understand creativity in relation to workplace, a linear regression to test individual levels of creativity in relation to workspace. A single linear regression was run utilizing the combined variable measuring individual levels of *creativity* based on Chang et al.'s (2018) indicator scale as the dependent variable. Independent variables included *actual* and *preferred workspace* alongside the aforementioned socio-demographic items. Again, similar to the first hypothesis, a secondary analysis was run testing individuals who had a change in preference from working at home to another domain.

Hypothesis 3 was analyzed by means of a linear regression analysis testing the impact of *creativity* based on Chang's (2018) creativity scales and its influence on the three divisions

of *motivation* based on Taylor & Kaufman's (2021) CTMs. Three separate regression were run testing *intrinsic, extrinsic,* and *amotivated*. Additional descriptive measurements in regards to motivation to add contextual depth to creative work, *motivation* was further analyzed through the items based on Amabile et al.'s (1996) KEYS. Respondents were asked to rate on a scale of 1-10 the importance of items related to motivation for creativity before COVID-19 (*pre-COVID*) and during COVID-19 (*post-COVID).*

3.6 – Validity & reliability of data collection

For the internal validity of the statistical models to hold and to check if the multicollinearity assumption of multiple regression analysis, we ran a Pearson correlation test. We do not observe high correlation between variables (see Table VI).

Table VI – Correlation table (Pearson's correlation coefficient)

	Gender	Household	Living environment	Age	Continent	Intrinsic	Extrinsic	Amotivated	Level of creativity
Gender	1	-0.008	0.21	0.086	-0.42	0.083	0.82	-0.17	0.40
Household	-0.008	1	0.157*	0.130	0.221**	0.052	0.046	0.011	-0.013
Living Environment	0.021	0.157*	1	-0.036	-0.071	-0.149	-0.117	-0.061	-0.136
Age	0.086	0.130	-0.036	1	-0.107	0.032	-0.080	-0.050	0.098
Continent	-0.042	0.221**	-0.071	-0.107	1	0.008	0.097	0.083	0.082
Intrinsic	0.083	0.052	-0.149	0.032	0.008	1	0.327**	-0.231**	0.495**
Extrinsic	0.082	0.046	-0.117	-0.080	0.097	0.327**	1	0.020	-0.076
Amotivated	-0.017	0.011	-0.061	-0.050	0.083	-0.231**	0.020	1	-0.171*
Level of creativity	0.040	-0.013	-0.136	0.098	0.082	0.495**	-0.076	-0.171*	1

* - Correlation is significant at the 0.05 level (2-tailed)
** - Correlation is significant at the 0.01 level (2-tailed)

While quantitative studies are robust forms of research, some elements are worth mentioning that may influence the validity and reliability of this study. Although acting as the leading light shed on this study, complicating matters include the circumstances due to the COVID-19. The unpredictable and rapidly evolving nature of the virus calls for individuals to be in constant response within a short period. Under these shifting circumstances, job and housing situations have changed over the time this study was conducted. Respondents by filling out the survey may be a limiting snapshot for a particular time, and point as events are currently unfolding.

Other elements that may implicate the representativeness of the sample considering the broad scope of disciplines and environmental contextual factors including country and living situation. Pressures from workload may not be necessarily as extreme from one country to another due to the different work cultures. Additionally, due to the researcher's network from educational and professional experience acting as a main source of respondents may present a narrow scope of respondents. While this may also be seen as an advantage, with the researcher having a personal connection to the respondents and yielding a higher response rate, the diversity of respondents may be limited. For example, in terms of diversity of design disciplines that participated in the study. Additionally, respondents who face more strains due to the circumstances may influence their participation and answers. Furthermore, as the data collected for this study is based upon convenience, the sample is subject to bias introduced by respondent self-selection. Respondents by recruiting themselves present a bias in which particular respondents may be more inclined to respond than others due to circumstances with the additional facets inflicted by the pandemic.

4 – Results

4.1 – Initial Data: Focus Groups and Interviews

From initial data collected to inform the approach to this research project, focus group respondents (see Table I) indicated no sense of urgency to return to the office full time. The first focus group consisted of two illustrators and a photographer, where each reflected upon their ability to focus on their overall well-being while working from home, removing all other distractions to focus on creative outputs. This focus group called for more action from management to invest more in employee well-being, focused more on humanizing the creative process. For creativity to be fostered, the panelists stressed a need to support overall wellness and support for home life, ranging from mental health resources and the reduction of five to four days within a workweek.

The second focus group included two employees from an architectural and urban planning strategic company. The company, by creating experimental spaces to facilitate new working methods, allows this experimental ground to study the interactions within these spaces. Their designs aim to segment the office based on different tasks and individuals needs at different stages of the process, whether that be within groups or needing isolation and quiet to focus. This model of segmenting the office based on tasks aims study how productive individuals are in comparison to other office layouts. Additionally, the focus group acknowledged the impact of the pandemic on their current research, as they also had to consider the free time away from work that employees need to keep themselves motivated. Work needs, as they observed due to current events, extended beyond the physical elements of a space. For example, respondents indicated practices their companies implemented such as 'no-interrupt zones' where there was a company-wide block of incoming and outgoing emails for a period of time once a week. Current events also call for actions that enable employees take a step outside of work in order to maintain their health and wellness. This focus group proved itself fruitful by framing the importance of the office space, individual space need beyond these parameters.

Considering then wellness as a priority to keep workers motivated during the pandemic, to round out the theoretical backing regarding motivation within the workplace, a well-being manager was interviewed to gain insights as to how to support teams in online environments. Through this interview, this research gathered insights as to how to build relationships between managers and employees despite the lack of physical connections and interactions within

physical spaces. The interviewee's perspective gave insights as to how to build connections within teleworking team dynamics while also urging the importance forging inner connections based on individual growth and wellness. Building on this notion, she indicated the distinction between wellness as a more physical and well-being that as a more holistic approach.

Each of these interviews acted as a foundation for the deductive approach, reaffirming existing theories within the literature review within the context of COVID-19. Through these interviews, the research was thus confirmed as a viable approach to utilizing existing theory and how to apply it within the context of extraordinary circumstances and how this impact may have longer repercussions. Additional insights indicated how creatives are also finding the room to revisit creative projects away from work. Respondents from the first focus group also raised concerns that in the future, if their companies did not enable the same sense of freedom during the pandemic, they would consider other job prospects. Their insights also proved other facets to work-from-home, as freelancers can live anywhere yet have clients anywhere dotted across the planet. These insights alluded that creatives felt more of their identity tied to the surrounding city and the facilities, rather than finding identity through their job.

4.2 – Survey results

4.2.1. Descriptive statistics.

From the demographics in Appendix F, the survey yielded respondents from 15 different countries with the majority reporting from the United States of America (68.4%), the Netherlands (12.3%) and India (8.8%). Based on these percentages of recorded responses, countries were grouped by continent (Americas, Europe, Asia, Africa, and Australia). The continents were categorized as Americas (70.2%), Europe (17.5%), Asia (9.9%), Africa (0.6%), and Australia (0.6%). From these respondents, the majority indicated that their living environment can be best described as an urban area or city yielding 126 responses (73.7%).

In order to gain insights regarding their environment dynamics and others around them, respondents were asked to select an item that best described their household. 76 respondents reported to be living with a partner without children (44%), 28 to be living with family including children, 23 to be living with roommates (13.5%), 22 to be living with other family members excluding children (12.9%) and 20 lived alone (11.7%). Of the 169 collected responses, 111 identified as female (64.9%), 50 as male (29.2%), 7 as non-binary/non-

conforming (4.1%) and 1 choosing not to say (0.6%). Participants age ranged from 29 to 69 years where the average age is 33 and modal age is 29.

Regarding employment professional fields, 68 were identified within Communication Design (39.8%), 35 in Industrial Design/Service Design (20.5%), 20 in Film/Photography/Animation (11.7%), 17 in Architecture/Interior Design (9.9%), 16 in Fashion Design/Textile Design (9.5%) and 13 in Literature/Creative Writing (7.6%). The vast majority of respondents indicated that they were employed fulltime (59.1%) compared to fulltime freelance (24.6%) and a combination of employed with part-time freelance (15.2%). Of these respondents, 101 indicated to be employed fulltime (59.1%) compared to the 42 who indicated to be fulltime freelance (24.6%). A minority percentage of 26 respondents identified as part-time employed and freelance (15.2%).

4.3 – H1: The relationship between workspace and motivation
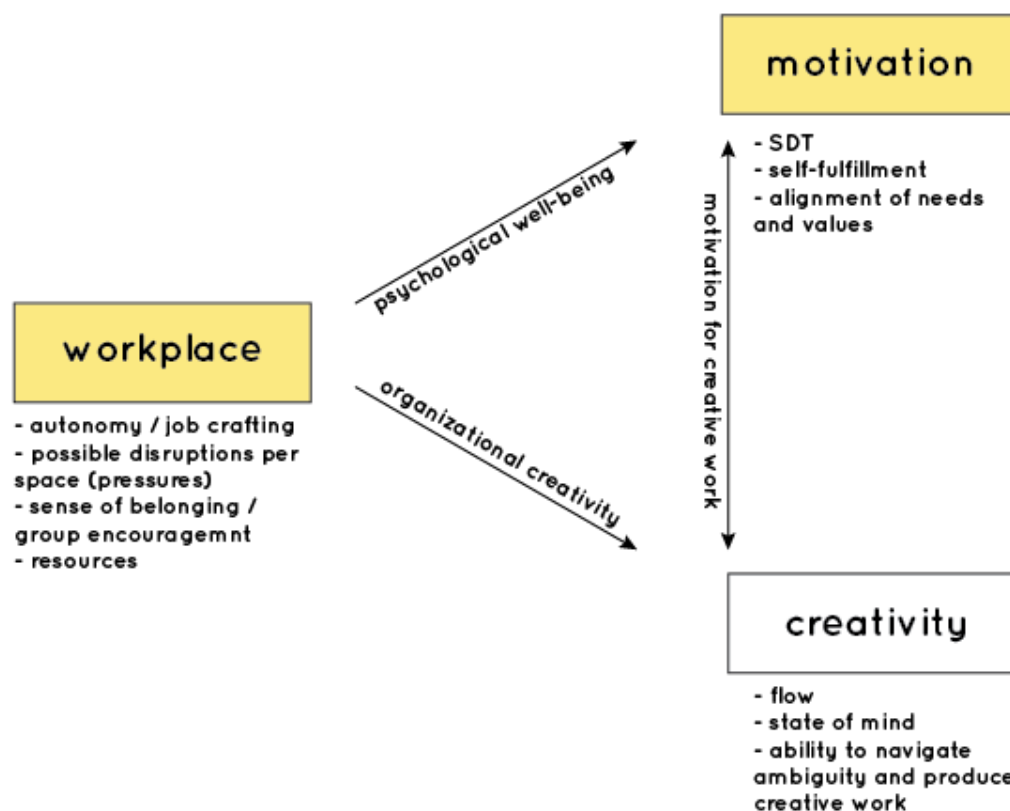
Figure 3: Theoretical Framework & Hypothesis Triangulation – *Workplace* & *Motivation*

Table VII shows the results of the questions regarding actual and preferred workspace and task completion based on percentage. Of the 169 respondents, 92 reported to prefer to work at home

(53.8%) compared to 31 who preferred to work from an office (18.1%). In relation to where the respondents actually work, 123 reported to work from home (71.9%) with 31 working from an office (17%).

Considering the circumstances that now enable more workers to work within a hybrid method, both from home and the office, respondents were asked to indicate the percentage of tasks completed in each domain (see Table VIII). Comparing the mean of the percentage of tasks completed, tasks actually completed at home held the larger percentage (69.72%, SD = 32.18) compared to tasks completed in the office (21.06%, SD = 28.92) and in a co-working space (4.95%, SD = 15.72). The proceeding question regarding preference for tasks completion further indicated that respondents favor work from home (55.95%, SD = 34.35) and other tasks to be completed in an office (29.37%, SD = 32.03) and co-working space (9.16%, SD = 20.47) part of the time.

Table VII – *Distribution of respondents' actual and preferred workplace (in percentages of total number of respondents, n = 169):*
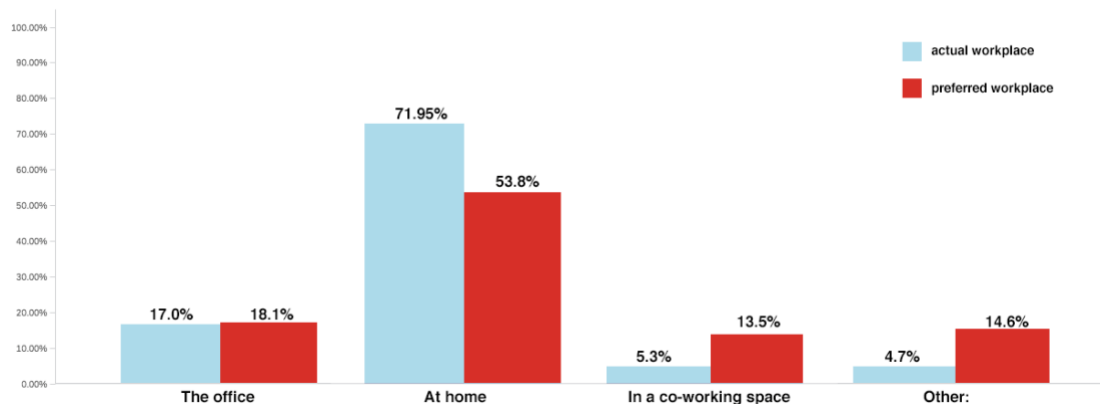
Table VIII – *Respondent's actual and preferred percentage of the completion of tasks in each domain (frequency and in percentages of total number of respondents, n = 169):*

	Tasks at the office		Tasks at home		Tasks in a co-working space		Tasks in other	
Min	0		0		0		0	
Max	100		100		100		100	
	Actual	*Preferred*	*Actual*	*Preferred*	*Actual*	*Preferred*	*Actual*	*Preferred*
Mean	21.06	29.37	69.72	55.95	4.94	9.16	4.27	5.52
S.D.	28.92	32.03	32.18	34.35	15.72	20.47	15.13	17.25

4.3.1 – H1: Linear regressions

To begin, Hypothesis 1 tests the effect on workspace on motivation. Three separate linear regressions were ran for each of the dependent variables *intrinsic, extrinsic,* and *amotivated* (see Table IX). In this model, to control for external effects and isolate the effect of *workplace* on the dependent variables, the socio-demographic independent variables were included viz., *gender, age, household, living environment, continent* and *employment status.*

Primary linear regressions testing for *motivation* in relation to *actual and preferred workspace* (see Table VIII) once more found the model with independent variables provided to be not statistically significant in relation to the dependent variable *intrinsic* motivation (F = 0.994, p = 0.476). Additionally, *extrinsic* and *amotivated* (see Table X) failed to received support through the regression analyses. We observe that *extrinsic* motivation did not have a significant relationship with the independent variables (F = 1.223, p = 0.235). *Amotivated* was also found to not significantly be associated by the independent variables (F = 0.677, p = 0.862).

In addition to the previous models, regressions were then run without *preferred workplace* and *actual workplace* (see Appendix H) with socio-demographic variables only in order to estimate the effect of socio-demographics on the dependent variables. These results control for demographic variables (*gender, age, continent, household, living environment,* and *employment status).* Again, this model did not yield a significant relationship between the dimensions and the dependent variables of *intrinsic* (F = 1.137, p = 0.325)*, extrinsic* (F = 1.376, p = 0.156). and *amotivated* (F = 0.535, p = 0.932).

Regressions were then conducted by including both the independent variables for *actual workplace* and *preferred workplace* together and once again separately. This model yielded no significant relationships between workspace and intrinsic (F = 1.314, p = 0.125), extrinsic (F = 1.274, p = 0.153) and amotivated (F = 0.806, p = 0.789) based on the dimensions included. Based on results of the linear regressions for *intrinsic, extrinsic*, and *amotivated* showed both approaches failed to establish any significant relationships. From this exercise, we found *preferred workspace* and *actual workplace* when run in tandem did not yield significantly different results when ran in insolation from each other (see Appendix G) Therefore, we utilize the results of this study through the combination of *actual workplace* and *preferred workplace* in the linear regressions.

Table IX – *Linear Regression: effect of workplace on intrinsic, extrinsic and amotivated (independent variables: preferred workplace, actual workplace, gender, age, continent, household, living environment, and employment status) (n = 169)*

DV: *intrinsic*	Sum of squares	df	Mean Square	F	Sig.
Regression	13.915	23	0.605	0.994	0.476[b]
Residual	87.615	144	0.608		
Total	101.530	167			
DV: *extrinsic*	Sum of squares	df	Mean Square	F	Sig.
Regression	26.774	23	1.164	1.223	0.235[b]
Residual	137.060	144	0.952		
Total	163.833	167			
DV: *amotivated*	Sum of squares	df	Mean Square	F	Sig.
Regression	14.726	23	0.640	0.677	0.862[b]
Residual	136.268	144	0.946		
Total	150.994	167			

Table X – *Regression results for the effect of workspace on DV: intrinsic, extrinsic, and amotivated. Standardized beta coefficients with standard errors in parentheses.*

	Dependent Variable: *Intrinsic*	Dependent Variable: *Extrinsic*	Dependent Variable: *Amotivated*
CONTINENT - Europe	-0.027 (0.187)	0.005 (0.261)	0.140 (0.255)
CONTINENT - Asia	0.054 (0.276)	0.127 (0.400)	0.070 (0.392)
CONTINENT - Africa	0.040 (0.835)	-0.072 (1.061)	0.038 (1.038)
CONTINENT - Australia	-0.064 (0.801)	-0.055 (1.005)	-0.046 (0.984)
LIVE – Suburb/Small town	-0.022 (0.163)	-0.093 (0.238)	-0.094 (0.233)
LIVE – Rural area	-0.118 (0.494)	0.046 (0.837)	0.129 (0.819)

LIVE - Other	-0.123	-0.055	-0.019
	(0.612)	(0.786)	(0.233)
HSHOLD – Individual	-0.089	0.167*	0.059
	(0.205)	(0.279)	(0.273)
HSHOLD – Living with roommates	0.120	0.119	-0.197**
	(0.200)	(0.286)	(0.280)
HSHOLD – Living with other family members (no children)	-0.085	0.274**	0.107
	(0.256)	(0.397)	(0.388)
HSHOLD – Living with family including children	0.070	0.128	-0.001
	(0.198)	(0.282)	(0.276)
AGE	-0.023	-0.109	-0.063
	(0.009)	(0.012)	(0.012)
GNDR – Female		-0.106	-0.140
		(0.222)	(0.217)
GNDR – Male	-0.029		
	(0.152)		
GNDR – Non-binary/non-conforming	0.044	-0.061	-0.194*
	(0.323)	(0.530)	(0.518)
GNDR – Prefer not to say	0.109	0.180**	-0.017
	(0.829)	(1.052)	(1.030)
EMPLYMNT – Employed + freelance	0.109	-0.068	-0.106
	(0.203)	(0.284)	(0.278)
EMPLYMNT – Freelance fulltime	0.097	0.154	-0.095
	(0.178)	(0.246)	(0.241)
WORK_ACTUAL – The office	-0.020	0.120	0.029
	(0.177)	(0.468)	(0.458)
WORK_ACTUAL – In a co-working space	0.101	-0.034	-0.124
	(0.294)	(0.590)	(0.577)
WORK_ACTUAL – Other	0.063	-0.132	-0.064*
	(0.315)	(0.688)	(0.674)
WORK_PREFER – The office	0.024	0.031	0.051
	(0.176)	(0.232)	(0.227)
WORK_PREFER – In a co-working space	0.047	0.061	-0.063
	(0.191)	(0.287)	(0.281)
WORK_PREFER - Other	0.106	-0.009	-0.209**
	(0.191)	(0.264)	(0.258)

*p < 0.10, **p < 0.05, ***p < 0.01

Due to this study's aim of analyzing the relationship between motivation levels and a change of workplace, a tertiary analysis was run and selected cases of respondents who indicated that they work at home but have a preference for one of the other domains provided in the questionnaire (n = 62) (see Appendix I). Consequently, this model further supported an insignificant relationship between workplace in regards to the three dependent variables of *intrinsic motivation* (F = 1.264, p = 0.261), *extrinsic motivation* (F = 1.173, p = 0.326) and *amotivated* (F = 0.715, p = 0.776).

Result 1: As such, there is no statistical evidence supporting **H1**: *Workspace environment effects motivation* and is consequently rejected. Since the null hypothesis is rejected, we can

say there is no significant relationship between *workspace* and *motivation* as reflected in Table IX. Furthermore, we reject **H1a, H1b,** and **H1c,** due to their inability to establish a significant relationship between motivation and the preferred and actual workspace domains of the *office, home,* and *co-working.* Further discussions will analyze other aspects that may influence digital nomad's motivation.

4.4 – H2: The relationship between workspace and creativity
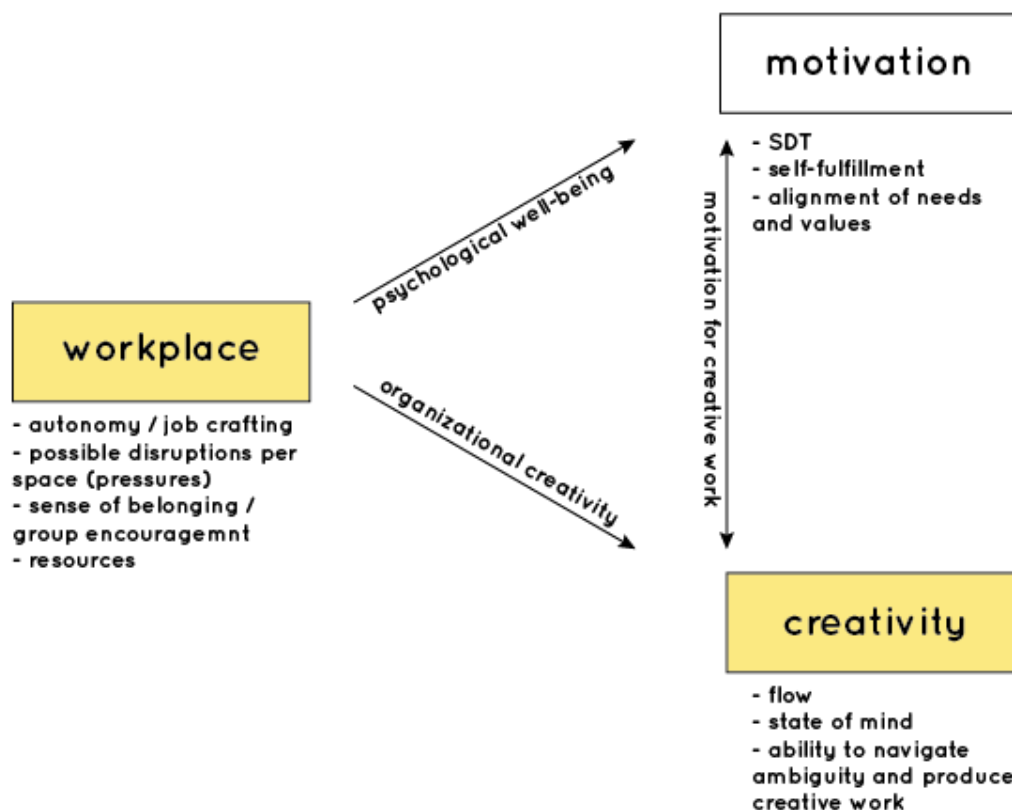
Figure 4: Theoretical Framework & Hypothesis Triangulation – *Workplace* & *Creativity*

To examine the relationship between *workspace* and *creativity* based on Amabile et al.'s KEYS (1996), as previously indicated, a linear regression was not performed as the dataset provides categorical data with additional support from testing the variables through Cronbach's alpha ($\alpha = 0.107$) indicating an unreliable scale. In this sense, items are not closely related enough to produce a valid level of internal consistency and act as a unidimensional unit of analysis. Therefore, it is best to analyze the results of the dataset through descriptive interpretations. The results from for this hypothesis are drawn from the demographic comparisons of the variables

actual workplace, preferred workplace, and *creativity* based on a score of statements derived from Amabile et al.'s (1996) KEYS and Deci & Ryan's (2000) SDT framework of measuring the experience of creativity within the work environment. Respondents were asked to answer these questions in relation to their current (actual) workplace.

Respondents based on the answers from *actual workplace* were asked to rate a scale of 1-4, from never to always or almost always in relation to how they experience the statements (see Appendix J). The majority of respondents in this sample (n=169), 92 report to work from home at the time the survey was administered (53.8%). Table XI shows the frequency and percentages of each statement in relation to feeling the statement *never or almost never, sometimes, often,* and *always or almost always.* The majority of respondents in responded *sometimes* to the statements "I feel distracted by the environment" (52.6%), "I feel connected and supported by my colleagues" (48.5%) and "I feel stressed about the workload" (46.2%). For the item "I feel supported by my supervisor" yielded mostly evenly spread out results from the range of *never or almost never* to *always or almost always.* In regards to respondents reacting to "I feel in control of the day-to-day activities", the majority of respondents indicated a more positive outlook with an evenly distributed response rate across *sometimes, often,* and *always or almost always.* A minority of 11 respondents indicated *never or almost never* (6.4%). Respondents in regards to "I feel personally connected to this environment" shows a higher tendency towards *often* (32.3%) and *always or almost always* (35.7%).

Table XI - *Opinion of respondents on the how often the experience the following items according to actual workspace (frequency and in percentages of total number of respondents, n = 169)*
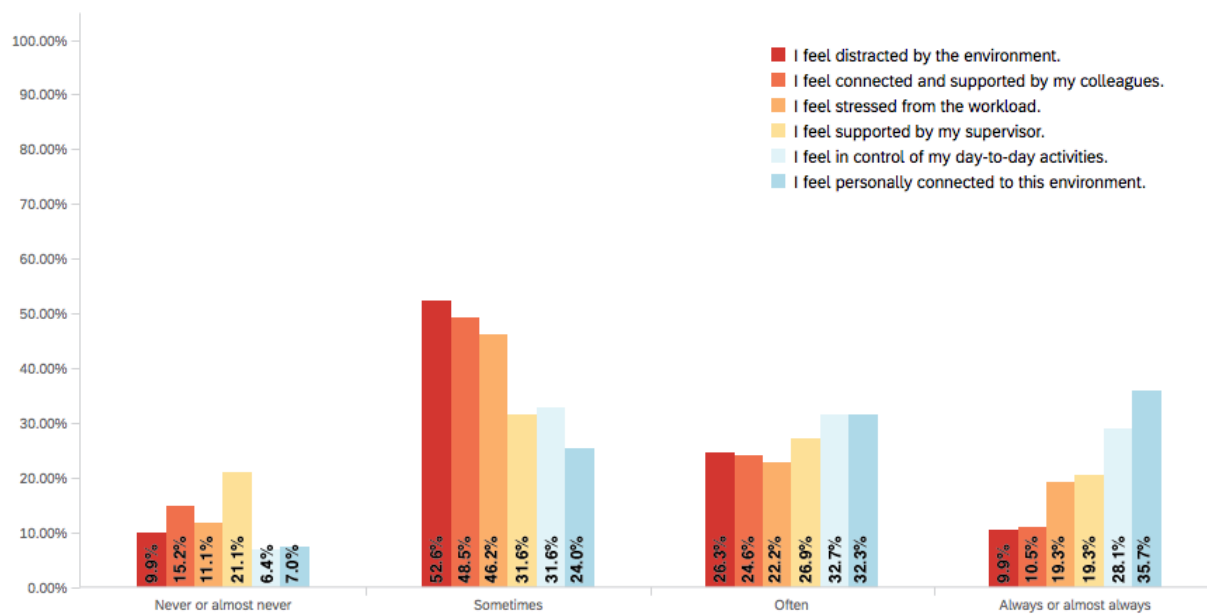
4.4.1 – H2: Linear regression

A single linear regression (see Table XII) was run with the dependent variable *creativity* based on the four-item combined *level of creativity* based on Chang et al.'s (2018) creativity indicator scale. Independent variables included the *actual workplace* and *preferred workplace* alongside the socio-demographic variables of *gender, age, continent, household, living environment,* and *employment status.* This model failed to establish a significant relationship based on the dimensions (F = 1.093, p = 0.360). The beta coefficients of the workspace domains are not high enough to interpret it's economic significance aside from the statistical significance.

Table XII – *Regression results for the effect of actual and preferred workspace on DV: creativity. Standardized beta coefficients with standard errors in parentheses.*

	Dependent Variable: *Creativity*
CONTINENT – Europe	0.037 (0.566)
CONTINENT – Asia	0.229** (0.836)
CONTINENT – Africa	-0.017 (2.528)

CONTINENT – Australia	0.052
	(2.427)
LIVE – Suburb/Small town	0.028
	(0.495)
LIVE – Rural area	0.018
	(1.496)
LIVE – Other	-0.258**
	(1.853)
HSHOLD – Individual	0.070
	(0.621)
HSHOLD – Living with roommates	0.069
	(0.607)
HSHOLD – Living with other family members (no children)	-0.169
	(0.776)
HSHOLD – Living with family including children	0.023
	(0.600)
AGE	0.056
	(0.026)
GNDR – Male	0.093
	(0.459)
GNDR – Non-binary/non-conforming	0.014
	(0.978)
GNDR – Prefer not to say	-0.007
	(2.511)
EMPLYMNT – Employed + freelance	0.158*
	(0.615)
EMPLYMNT – Freelance fulltime	0.009
	(0.539)
WORK_ACTUAL – The office	-0.061
	(0.535)
WORK_ACTUAL – In a co-working space	-0.008
	(0.891)
WORK_ACTUAL – Other	-0.081
	(0.955)
WORK_PREFER – The office	-0.036
	(0.532)
WORK_PREFER – In a co-working space	0.003
	(0.578)
WORK_PREFER – Other	0.137
	(0.580)

$*p < 0.10, **p < 0.05, ***p < 0.01$

Appendix K shows the linear regressions for tertiary analysis of selected cases of respondents who indicated that they work at home but have a preference for one of the other domains provided in the questionnaire (n = 62). Consequently, this model further supported an insignificant relationship between workplace in regards to the dependent variable of *level of creativity* (F = 0.815, p = 0.673).

Result 2: Due to the categorical dataset of *creativity* within the context of workspace based on Amabile et al.'s (1996) provided in this model, descriptive interpretations will be provided

in the discussion. Utilizing Chang et al.'s (2018) creativity scales to create an individu*al level of creativity* in relation to *actual* and *preferred workplace* found no statistical evidence supporting **H2**: *Workplace environment influences creativity,* based on our data collection. Consequently, we reject **H2a**, **H2b** and **H2c**, based on the beta coefficients and yielding no significant relationships between *actual* and *preferred workplace* between the domains of *office, home,* and *co-working.* A more explorative and interpretative discussion is necessary in conjunction with the open answers in order to discuss the relationships with descriptive data collected. These interpretations aim to consider other factors beyond workspace that may influence creativity from iteration to implementation.

4.5 – H3: The relationship between creativity and motivation
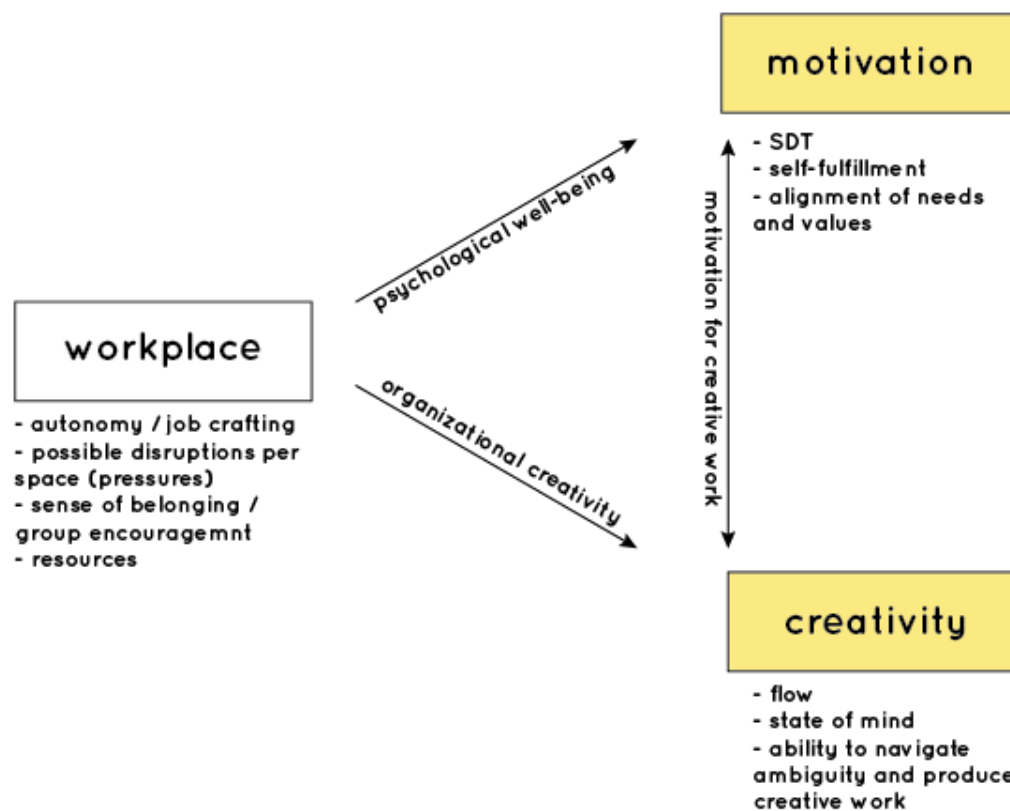
Figure 5: Theoretical Framework & Hypothesis Triangulation – *Motivation & Creativity*

Respondents were asked to rate on a scale of 1-10 the importance of items related to motivation for creativity before COVID-19 (*pre-COVID*) and during COVID-19 (*post-COVID).* Of the items provided (see Table XIII), all items scored relatively on the higher end of the spectrum in regards to prior to the pandemic. However, both *autonomy/freedom* (M = 8.11, SD = 1.81)

and *access to resources* (M = 8.17, SD = 1.89) were rated the highest. This was also reflected through the during the pandemic items where again *autonomy/freedom* (M = 8.31, SD = 1.86) and *access to resources* (M = 8.21, SD = 2.01) scored slightly higher than the other items.

Table XIII – *Descriptive statistics: Motivation pre-COVID-19 and post-COVID-19 (scale 1 (not important) – 10 (very important) (n = 169).*

Please indicate how important (1-10) the following statements are for creating design work	Pre-COVID: Mean	Pre-COVID: Std. Deviation	Post-COVID: Mean	Post-COVID: Std. Deviation
Encouragement for expression of creativity from colleagues	6.88	2.327	6.83	2.570
Autonomy/freedom	8.11	1.810	8.32	1.864
Access to resources	8.17	1.891	8.21	2.012
Reduced pressure from workload	7.19	2.291	7.73	2.284
Reduction of distractions/interruptions	7.25	2.392	7.94	2.204

4.5.1 – H3: Linear regressions

Hypothesis 3 was further analyzed using the same combined *level of creativity* score used for Hypothesis 2 in relation to the variables created for *intrinsic, extrinsic,* and *amotivated* to test the influence of creativity on motivation. Again, three separate linear regressions were conducted for each dependent variable in relation to the independent variables collected from this study that include socio-demographic variables of *gender, age, continent, household, living environment,* and *employment status*. The key dependent variable for this model included *level of creativity* based on the combined score from the four items included based on Chang et al.'s (2018) creativity scales.

In relation to *intrinsic motivation*, creativity was found to have a significant relationship (F = 4.083, p = < 0.001) (see table XIV). On the contrary, *extrinsic* (F = 1.354, p = 0.163) and *amotivated* (F = 0.693, p = 0.815) failed to receive support through this model as none of the dimensions had a significant effect. Based on the beta coefficients (see Table XV), *level of creativity* is positively associated with *intrinsic* motivation whereas *level of creativity* has a negative association with *extrinsic* motivation. While these results may not be definitive, they reflect an inherent tendency for creatives to be more tied to intrinsic factors than extrinsic ones.

Table XIV – *Linear Regression: intrinsic, extrinsic and amotivated & creativity (independent variables: creativity, gender, age, continent, household, living environment, and employment status)*

DV: *intrinsic*	Sum of squares	df	Mean Square	F	Sig.
Regression	33.538	18	1.863	4.083	<0.001[b]
Residual	67.992	149	0.456		
Total	101.530	167			
DV: *extrinsic*	Sum of squares	df	Mean Square	F	Sig.
Regression	26.774	18	1.279	1.354	0.163[b]
Residual	137.060	149	0.945		
Total	163.833	167			
DV: *amotivated*	Sum of squares	df	Mean Square	F	Sig.
Regression	14.726	18	0.648	0.693	0.815[b]
Residual	136.268	149	0.935		
Total	150.994	167			

Table XV – *Regression results for the effect of creativity on DV: intrinsic, extrinsic, and amotivated. Standardized beta coefficients with standard errors in parentheses.*

	Dependent Variable: *Intrinsic*	Dependent Variable: *Extrinsic*	Dependent Variable: *Amotivated*
CONTINENT - Europe	-0.047 (0.160)	0.083 (0.229)	0.010 (0.230)
CONTINENT - Asia	-0.056 (0.235)	0.088 (0.336)	0.112 (0.338)
CONTINENT - Africa	0.046 (0.712)	0.023 (1.019)	-0.025 (1.024)
CONTINENT - Australia	-0.092 (0.691)	-0.038 (0.989)	-0.063 (0.995)
LIVE – Suburb/Small town	-0.047 (0.137)	-0.062 (0.196)	-0.074 (0.197)
LIVE – Rural area	-0.107 (0.413)	0.035 (0.591)	-0.061 (0.594)
LIVE - Other	-0.003 (0.536)	-0.064 (0.767)	-0.060 (0.771)
HSHOLD – Individual	-0.117 (0.175)	0.019 (0.251)	0.067 (0.252)
HSHOLD – Living with roommates	0.107 (0.166)	-0.105 (0.238)	-0.092 (0.239)
HSHOLD – Living with other family members (no children)	-0.002 (0.218)	0.007 (0.312)	0.121 (0.314)
HSHOLD – Living with family including children	0.046 (0.168)	-0.043 (0.240)	0.076 (0.241)
AGE	-0.010 (0.007)	-0.041 (0.010)	-0.085 (0.010)
GNDR – Male	-0.062 (0.128)	0.076 (0.183)	0.061 (0.184)
GNDR – Non-binary/non-conforming	0.032 (0.277)	-0.013 (0.396)	-0.045 (0.399)
GNDR – Prefer not to say	0.114 (0.703)	-0.022 (1.006)	0.178** (1.011)

EMPLYMNT – Employed + freelance	0.038 (0.173)	-0.126 (0.248)	-0.091 (0.249)
EMPLYMNT – Freelance fulltime	0.110 (0.146)	-0.085 (0.209)	0.126 (0.210)
Level of creativity	0.496*** (0.023)	-0.151* (0.034)	-0.080 (0.034)

*p < 0.10, **p < 0.05, ***p < 0.01

Result 3: Based on these findings, there is little evidence supporting **H3:** *Creativity has an effect on motivation* despite finding support for **H3a:** *Creativity is positively correlated with intrinsic motivation.* Since **H3b** and **H3c** in regards to extrinsic and amotivated respectively failed to receive support this research cannot conclusively and fully support **H3** and therefore accepting the alternative hypothesis that creativity does not have a significant effect on motivation.

5 – Discussion

A quantitative study may be dubious when assuming causality between the variables explaining why many of this study's findings yielded little significance for the sample examined. While there may be relationships in the sample between the variables of workplace, motivation, and creativity, there may not be a strong enough relationship to reflect in the statistical models.

A single model conducted during this study proved a significant relationship linking the level of creativity an individual possesses with higher levels of intrinsic motivation regarding creative work. While this study could not distinguish a significant relationship between workspace and the three aspects of motivation, evidence still indicates support for previous studies with the additional lens of the COVID-19 pandemic. Additionally, inferences drawn from the descriptive statistics suggest how to continuously support creatives regardless of workspace. Furthermore, findings in relation to this research's sub-question further challenge the future function of the office space. Based on the findings, suggestions allude to a complete reframing of work itself and how to build a better and sustainable workforce within the economy.

5.1.1 – Connecting workplace, motivation and creativity

Despite this study's inability to prove a significant relationship between workspace and motivation, these findings bolster Markusen's (2013) notion that artists who work everywhere are not necessarily tied to industry-rich centers. Reflecting on the sample collected for this study, most respondents indicated that they lived in an urban environment but worked at home due to the pandemic. A lack of a significant relationship between preferred and actual workspace with motivation suggests that artists are motivated by a multitude of factors, and workspace is just one of them. This study can infer that creative individuals are not as personally tied to the features of a workplace as they are other intrinsic and extrinsic factors that enable individuality and freedom of choice. This finding further supports the notion that digital nomads tend to choose and craft their environment independently from their work and can create anywhere as long as resources are readily accessible for self-fulfillment.

This research further supports the notion that the workspace alone cannot serve as the main driver to motivate individuals. These findings add to De Paoli & Ropo's (2017) argument of spatial manipulation contriving physical aesthetics on what is thought to stimulate creative motivation. The relationships between workspace and motivation derived in the models call

upon management practices to think beyond physical surroundings. Respondent data based on Amabile et al.'s KEYS (1996) measuring the importance of statements in relation to creative work indicates a prioritization of *autonomy/freedom* and *access to resources* from the items provided in the survey instrument. These findings add to the impression that creative workers' motivation extends beyond just an aesthetically pleasing physical environment. Creative workers highlight a shift towards the ability and flexibility to appease basic needs. Thus, the physical space is simply the framework in which creatives can manipulate and modulate it according to their individual needs and intensity of cognitive processes. These needs extend beyond the different phases of the creative process and basic needs to maintain a well-kept home life, as most respondents prefer working from home. However, autonomy and freedom shouldn't be taken to the extreme where the manager is entirely hands-off where workers function in a vacuum detached from the rest of the team.

From the data (see Table XIII), respondents also indicated that *reduced pressure from workload* and *reduction of distractions/interruptions* as relatively important in both pre-COVID-19 and post-COVID-19 based on the scale of importance from 1-10. From the statistical findings, we notice a slight shift upwards of the means from pre-and post-COVID-19, with *reduced pressure from workload* shifting from a mean of 7.19 (SD = 2.291) to 7.73 (S.D. = 2.284). Similar results are reflected through the item *reduction of distractions/interruptions* with a shift from 7.25 (S.D. = 2.392) to 7.94 (S.D. = 2.204). This slight increase of the means indicates that more respondents answered the post-COVID-19 items slightly higher than the pre-COVID-19. Therefore, we can interpret these findings that more respondents indicate that to facilitate creative work in light of the pandemic, they desire fewer pressures from the workload and desire the reduction of distractions and interruptions. As indicated in the data, the majority of respondents preferred to work at home (53.8%) coinciding with the preference to complete the majority of tasks at home. These findings suggest that the impediments at home compared to the office and co-working spaces are less detrimental to the creative process.

In addition, based on the statistical findings concerning the three predominant workspaces (the office, at home, and co-working spaces) influence on creativity and motivation, we cannot conclusively deem one domain as having more benefits over the other. Furthermore, we cannot decisively say one over the other facilitates creativity and motivation to higher levels. Due to the inability to establish any significant relationships between workplace to motivation and creativity further support the desires for different spaces for the

varying cognitive demands of the creative process. The triangulation between workplace, motivation, and creativity is in constant flux and continuously responds to one another, hence the double-ended arrows that flow into each concept.

Furthermore, from the statistical findings of *motivation* concerning *creativity,* we find that creativity is significantly related to intrinsic motivation, supporting Taylor & Kaufman's (2021) research. The data collected using the CTMs distinguish intrinsic motivation towards knowledge and accomplishment through volitional and value determined by the individual rather than the enjoyment of the task for its own sake (Taylor & Kaufman, 2021). These findings add to the discussion as to how creative motivation is guided by personal values, informing everyday behaviors while navigating the ebbs and flows of the creative process. These statistical findings will be further explored with the qualitative data to better understand creatives' underlying value sets to support remote work.

5.1.2 – Facilitating creative motivation towards new management practices

This study's findings also support previous work by Jabagi & Croteau (2018) on supporting gig workers who are more dependent on self-organization and self-motivation through digital labor platforms managers must foster to enhance social connections amongst colleagues. As backed by the data, insights from the initial focus groups add depth by expressing that the work environment goes beyond physical objects and needs to establish an air of trust which cannot be done alone by providing comfortable chairs and an open-plan office layout. With the additional lens of telecommunications and hybrid working methods as a more common working practice, managers are also called upon to facilitate the same sense of social interaction within an environment despite the physical limitations.

Managers are called to then find a balance of creating a structure through clear objectives and timeframes while allowing the individual to self-organize according to the task's demands and maintain a healthy home life. As indicated in the open-answer questions from the questionnaire asking how respondents self-motivated, a predominant theme that arose was that to stay motivated, workers allowed themselves to take breaks while also setting a daily routine. On top of this routine, respondents indicated that they needed additional set objectives and timeframes from managers. However, managers should be more than just an accountability system and continue humanizing the process by foraging personal connections throughout the team dynamic. Thus, these relationships can establish trust and allow the creative workers to

feel connected with their colleagues while also achieving a sense of autonomy over routines and choice of the work environment. This room to be able to self-organize within a set of objectives is best reflected through the following open responses:

> "[I allow] myself breaks. Working from home makes it easier to work more flexible hours, so rather than force trying to find solutions from 9-5, if I'm not feeling motivated, I will give myself the grace to take an hour off and come back to it later." – Respondent 105, Management of Design & Production, USA

> "[I] switch up what place at home I am working from (bedroom, kitchen, living room, schedule digital informal chats to catch up with colleagues, gave regular short coffee breaks, go get some fresh air sometimes." – Respondent 100, Content Marketer, The Netherlands

As established through the data collected, most respondents who worked from home also preferred to work at home. Through the analysis of open answers, the data suggests that creatives prefer the office to serve as a meeting place to lay out the groundwork for projects and to reconnect with colleagues before going back to their personal spaces to focus on the tasks at hand. Additionally, working from home was understood as a more flexible model in which creatives can take a break and take care of more minor household chores and appointments. The flexibility to care of basic needs enabled creatives to feel more motivated and gave them the mental space to produce work. The items used in the survey instrument find creatives intrinsically motivated based on enjoyable feelings, improvement of skills, sense of well-being acquired, and the sense of guilt they would feel by not engaging with creative work. This understanding of intrinsic motivation for creatives expresses the desires of self-fulfillment through self-discovery. To have room for self-discovery requires the achievement of fundamental household needs.

As De Paoli & Ropo (2017) discussed, the workplace is perhaps focused on deterministic and aestheticized practices, contriving what others outside of the process think creatives need to stay motivated and foster creativity. Managers are then called upon to not just consider the physical space and ergonomics of physical objects to support workers, but overall mental health as expressed in the open response:

"Co-workers, particularly supervisors, should be more accepting and willing to work with others during any sort of extenuating circumstance, and they should be more open-minded to how workplace stress can affect one's mental health." – Respondent 158, Senior Graphic Designer, USA

Creative work appears to require support no different than other workers' needs. However, what sets creatives apart is the ability to create new and novel outputs that are beyond the parameters of work. Additionally, rather than replicate the office at home or home at the office, creatives feel more motivated and mentally fit when there is a separation between the two. Work-life balance appears to be important as opposed to Eikhof & Haunschild's (2006) notion, which denotes creatives as more intrinsically motivated by creative work as a vehicle for self-fulfillment by integrating life as a work of art itself. The need for separation is exemplified through the following quotations:

"I don't see an office setting, at least a 5-day work week office setting being realistic to ask of employees, COVID or not. We have shown the world what it means to have a work-life balance, and that amazing work can be produced from the comfort and safety of home." – Respondent 74, Lead Copywriter/UX Writer, USA

"I don't imagine a different office space, but rather a more flexible schedule. Myself and my team have proved we have been able to work seamlessly from home, do we really need to be in the office 40 hours a day/5 days a week?" – Respondent 106, Senior Marketing Manager, USA

This notion further dovetails into the relationship between the workplace and creativity. Creativity, being significantly tied to intrinsic motivation, adds additional support for individual needs while creating.

Opportunities to impediments and distractions are a vital component to Amabile et al.'s (1996) KEYS when analyzing creativity within the workplace. Understandably though, the creative process is not a linear one and requires different cognitive processes to varying phases of the process, alluding to the necessity of different work environments for different stages. This notion is best reflected through the majority of this study's respondents indicating that when looking ahead, they would prefer to do the majority of work at home with a smaller

percentage in an office or co-working space. As the ebbs and flows of the creative process can occur in different environments, so do aspects of life that come up unexpectedly, which can impede upon creatives' sense of flow as illustrated by Martens (2011). Creatives' needs extend beyond the tools to create and require a stable foundation to be able to stray away from the norm and find new opportunities.

Additionally, the data's open answers suggest the need to separate creating work for work and creating work for oneself. Creative work is then shifted back to creating a sense of self-fulfillment through work and a way for creatives to reconnect with themselves and those around them:

> "I've also stopped taking on freelance work so I have all the time needed for my creative projects, which means I can play more and be more relaxed about the work rather than producing something now because I have to." – Respondent 46, Senior UX/UI Designer, Belgium

> "It's hard with two kids to stay motivated. I'd rather be with them and just get the bare minimum done." – Respondent 35, Textile Design Manager, USA

These findings then call into question what managers and industry leaders consider creativity to be and how to instrumentalize it. Who is creativity for at the end of the day? Who is being served through creative efforts? Considering a reassessment of values for creative workers under extraordinary circumstances indicates an added shift of needs within the larger expanse of the economy. In response to this research's central question, testing the influence of workspace on creative motivation is perhaps too narrow. To support and facilitate the arts, industry leaders need to step back and look at the broader expanse of work within the current state of the economy.

5.1.3 – Rethinking creative work and embracing spontaneity towards degrowth

These inferences allude to the need for leisure away and within work to be creatively motivated and stimulated. Rather than focusing solely on organizational tasks and objectives through spatial manipulation, fostering a sense of connectivity throughout the team can be prospered by enabling opportunities to co-create and experiment. These opportunities can include

creativity conventions in which employees are encouraged to experiment and play with materials together. As creativity and innovation are defined by De Paoli & Ropo (2017) within organizational studies by the production and implementation of novel, useful ideas, products, or original outputs, the very issue lies in the focus on the outputs. What appears to be missing in contemporary forms of creative work is the embracement of the initial stages of creativity preceding innovation. Creatives should have the ability to explore and naturally foster emerging opportunities. Fixating specifically on creative outputs as a form of creativity may exploit creative work to the point of exhaustion.

Looking ahead at the state of the economy as it slowly reemerges from a long hibernation due to the COVID-19 pandemic, one of the most significant takeaways was how much was accomplished when resources were limited. The benefits found from remote working found in this study support findings by Wajcman et al. (2010) in which they found workers to be motivated through remote work by actively making decisions on how they utilize telecommunications to find more balance between work and life. The temporal and spatial blurring between work and home appear to have more positive spillovers that outweigh the negatives. As reflected through the data collected, creatives reassessed values, prioritized well-being over creative work, and yet felt more accomplished at work with less. Individuals reconnecting with themselves and finding self-fulfillment promotes the peace needed to enable the ability to explore and spontaneously create. By examining the connection between workplace, motivation, and creativity, this study suggests that the workplace should not necessarily be the main focus for supporting creatives in the developing new working world. Perhaps an entire paradigm shift is needed; aside from adjusting the workspace, the conception of work must be completely reframed.

In response to the sub-question in this study, defining the potential future function of the office requires thinking beyond physical objects and space. The concept of work must be reconsidered, and the economy's instrumentalization of creative workers to the point of exploitation and detriment must be examined. This study's respondents frequently urged the need for humanizing the creative process and alleviating work pressures. This notion is best exemplified through the following response:

"For most of the services-based work, I don't think we need a physical space where to work. I would rather frame the question on the kind of work that we want to do in the office of the future. If my home is my office, then my office is my home. So I want an

office that is human, that allows for mistakes, less profit-driven, more value-driven and less privileged and more inclusive." – Respondent 20, Cultural Producer/Architect, The Netherlands

In conjunction with the data, this response reflects the need for creative work to become more humanizing and establish a sense of connection within creatives and with those around them. Respondents also stressed the need for longer weekends. Longer weekends enable more room to step away from work and have room to explore. Assessing the sample in this study, professional fields indicated tend to be project-based and do not necessarily involve the creatives at the start of the process. Creativity is more of a response rather than a catalyst. Reflecting on the data collected from this study alludes to Latouche's (2009) notion of *de-growth* and how the need for fewer constraints and more intentional projects points towards a more sustainable, inclusive, and diverse ecosystem.

The very concept of de-growth harkens back to the basics of design studies by Dieter Rams who famously stated, "Good design is as little as possible. Less, but better, because it concentrates on the essential aspects, and the products are not burdened with non-essentials. Back to purity, back to simplicity" (Rams & Harrington, 2016). This very notion of stepping back and going back to basics is needed to ensure a better and safer workforce. By streamlining how we view work, it becomes more assessable, enabling a more diverse and inclusive ecosystem that benefits everyone.

Establishing a relationship between creative motivation and the workplace is perhaps positioned too closely with treating the symptom rather than the cause. By overextending creatives, workspace based on productivity is too focused on the end products. To embrace a sustainable workforce based on de-growth, more significant considerations need to be taken into account as to the diversity of those within the creative field, ranging of all lifestyles and needs. By foraging opportunities for all to play and create spontaneity away from strict schedules, we can instill a better future full of opportunities to create and reconnect with one another.

6 Conclusions

As this study illustrates the triangulation between workplace, creativity, and motivation, we conclude that workplace cannot serve as the sole facilitator of the latter two. Through the statistical findings from the data collected for this study, we cannot determine significant

relationships, but can find a significant relationship between creativity and intrinsic motivation. Yet, there is much to still uncover as to how to define and differentiate intrinsic, extrinsic and amotivated depending upon particular contexts—especially ones under extraordinary circumstances such as a pandemic. These findings bring to light deeper questions about how we frame work and how creatives are instrumentalized as economic catalysts. When considering the influx and weighing the benefits of remote working, motivating creatives goes just beyond the four walls of a space. Creatives in response to the limitations inflicted by the pandemic are given the space to voice their needs and choose personal boundaries over work pressures. Bearing in mind the spatial and temporal aspects to creative work, these findings speak volumes and add to Liegl's (2014) notion that digital nomads can work 'anytime, anywhere'. Rather than contriving creativity, management practices must embrace spontaneity towards new opportunities while allowing creatives the freedom/space to create.

6.1 – Limitations

A questionnaire, while providing a structured and measurable framework, is limiting due to the selection of responses available to the respondent. The closed questions selected for the survey instrument limit the respondent's ability to express themselves individually but also the researcher's ability to go in depth into explanations for the selected answers. Additionally, researcher bias may present itself as problematic due to the researcher being closely tied to the industry based on previous work experience in the design field.

Additionally, digital nomads encapsulate a wide expanse of the creative industries and appear to be evolving with new industries and technologies emerging, such as gaming. Further limitations are due to the pandemic as an ongoing and developing event, causing circumstances to change frequently. Responses recorded for this study indicate one particular moment in time. Furthermore, throughout the course of this research, circumstances changed globally, with virus variant outbreaks in India and the United States slowly returning to normalcy.

Other limitations to consider are due to the scales utilized to measure creativity and motivation. While these measurement scales were selected based on their adaptability for particular contexts, building upon renown work by Amabile et al. (1996) can be problematic as a too narrow approach. Furthermore, when combining new variables for *motivation* and *creativity,* not all items were included in the final variable due to incongruencies in relation to each other. As seen through the factor analysis of both *motivation* split into the three

components of *intrinsic, extrinsic,* and *amotivated,* a single extrinsic item related more with the intrinsic ones. There appears to be a blur as to which items lend themselves to being more or less intrinsic or extrinsic.

6.2 – Suggestions for future research

Expanding beyond this study, it would be interesting to further define the focus of creativity for creatives and explore the new ways these individuals view their role in the post-pandemic economy. Further contributions can build upon the reframing of creativity, innovation, and motivation in light of what the pandemic taught us about being more productive with less. To enrich and add meaning to the data collected for this study, it would be beneficial to add additional qualitative information regarding how creative individuals view creativity and innovation, such as the additional facets of productivity as we look ahead at the foreseeable changing workforce. Further insights into how creatives at work reorient their space would enrich the benefits of working from home and how to support it. Additional research from smaller focus groups within particular companies and professions may also help assess best practices for motivation and stimulating creativity within a particular context.

Additional longitudinal studies would reveal a better understanding of the impact of work-from-home and the changing workforce, as this study was conducted over a shorter period under developing circumstances. Furthermore, as this study proved that workspace alone cannot promote creative motivation, future studies would benefit from implementing practices of degrowth and exploring how these principles can further stimulate motivation for spontaneous creative work. From spontaneity, it would be interesting to see how this aspect of creativity benefits creative workers. Research in understanding and facilitating spontaneity would add dimension to organizational creativity in practice.

7 – References

Amabile, T. M. (1982). Social psychology of creativity: A consensual assessment technique. *Journal of Personality and Social Psychology*, *43*(5), 997–1013. https://doi.org/10.1037/0022-3514.43.5.997

Amabile, T. M. (1983). The social psychology of creativity: A componential conceptualization. *Journal of Personality and Social Psychology*, *45*(2), 357–376. https://doi.org/10.1037/0022-3514.45.2.357

Amabile, T. M. (1993). Motivational synergy: toward new conceptualizations of intrinsic and extrinsic motivation in the workplace. *Human Resource Management Review*, *3*(3), 185–201. https://doi.org/10.1016/1053-4822(93)90012-S

Amabile, T. M., Hill, K. G., Hennessey, B. A., & Tighe, E. M. (1994). The work preference inventory: Assessing intrinsic and extrinsic motivational orientations. *Journal of Personality and Social Psychology, 66*(5), 950–967. https://doi.org/10.1037//0022-3514.66.5.950.

Amabile, T. M., Conti, R., Coon, H., Lazenby, J., & Herron, M. (1996). *Assessing the Work Environment for Creativity Assessing the Work Environment for Creativity. University of Michigan University of Southern California. 39*(5), 1154–1184.

Amabile, T. M. (1998). How to kill creativity. *Harvard Business Review*, Sept/Oct, 77– 87.

Amabile, T. M., & Pratt, M. G. (2016). The dynamic componential model of creativity and innovation in organizations: Making progress, making meaning. Research in Organizational Behavior, 36, 157–183.

Babbie, E. R. (2016). *The practice of social research* (Fourteenth). Cengage Learning.

Biesalski, C. 2016. "Von Reiseexzessen bis zur Homebase - Die Phasen des digitalen Nomadenlebens." http://www.planetbackpack.de/phasen/.

Biesalski, C. n.d. "About." http://www.connibiesalski.com/about/.

Blanda, S. (2021, March 18). *Lauren Hom: From 9 to 5 to Digital Nomad*. Adobe 99U. https://99u.adobe.com/articles/54017/lauren-hom-from-9-to-5-to-digital-nomad.

Bryman, A. (2012). Social Research Methods 4e. Oxford, UK: Oxford University Press.

Caillier, J. G. (2012). The Impact of Teleworking on Work Motivation in a U.S. Federal Government Agency. *American Review of Public Administration*, *42*(4), 461–480. https://doi.org/10.1177/0275074011409394

Capdevila, I., 2015. Co-Working Spaces and the Localised Dynamics of Innovation in Barcelona. *International Journal of Innovation Management*, 19(3).

Chang, Y. S., Lin, H. C., Chien, Y. H., & Yen, W. H. (2018). Effects of creative components and creative behavior on design creativity. *Thinking Skills and Creativity*, *29*(March 2018), 23–31. https://doi.org/10.1016/j.tsc.2018.05.007

Cnossen, B., Loots, E., & van Witteloostuijn, A. (2019). Individual motivation among entrepreneurs in the creative and cultural industries: A self-determination perspective. *Creativity and Innovation Management*, *28*(3), 389–402. https://doi.org/10.1111/caim.12315

Coworking.com. (n.d.). Coworking.com. Retrieved November 15, 2013, from http://coworking.com/

Csikszentmihalyi, M. (1997). *Creativity: flow and the psychology of discovery and invention*. HarperPerennial.

David, E. (2014). *Digital nomad case study*. BecomeNomad.http://becomenomad.com /digital-nomad-case-study/.

De Paoli, D., & Ropo, A. (2017). Creative workspaces – a fad or making real impact? *Journal of Corporate Real Estate*, *19*(3), 157–167. https://doi.org/10.1108/JCRE-09-

2016-0029

De Paoli, D., Sauer, E., & Ropo, A. (2019). The spatial context of organizations: A critique of "creative workspaces." *Journal of Management and Organization*, *25*(2), 331–352. https://doi.org/10.1017/jmo.2017.46

The Economist Newspaper. (2021, April 8). *The rise of working from home*. The Economist. https://www.economist.com/special-report/2021/04/08/the-rise-of-working-from-home.

Eikhof, D. R., & Haunschild, A. (2006). Lifestyle Meets Market: Bohemian Entrepreneurs in Creative Industries. *Creativity and Innovation Management*, *15*(3), 234–241. https://doi.org/10.1111/j.1467-8691.2006.00392.x

Fisher, C.M., Poornika A., Ozumcan, D.C. (2020). A Winding Road: Teresa Amabile and Creative Process Research. In Reiter-Palmon, R., Fisher, C.M., Mueller, J.S. *Creativity at Work: A Festschrift in Honor of Teresa Amabile* (pp. 35-46). https://doi.org/10.1007/978-3-030-61311-2_4

Florida, R. (2012). *The rise of the creative class: and how its transforming work, leisure, community and everyday life*. New York, NY: Basic Books.

Gilson, L.L. (2020). Teresa M. Amabile: Thought Leadership in Organizational Creativity Research. In Reiter-Palmon, R., Fisher, C.M., Mueller, J.S. *Creativity at Work: A Festschrift in Honor of Teresa Amabile* (pp. 47-52). https://doi.org/10.1007/978-3-030-61311-2_5

Guay, F., Mageau, G. A., & Vallerand, R. J. (2003). On the Hierarchical Structure of Self-Determined Motivation: A Test of Top-Down, Bottom-Up, Reciprocal, and Horizontal Effects. *Personality and Social Psychology Bulletin*, *29*(8), 992–1004. https://doi.org/10.1177/0146167203253297

Hennessey, B.A. (2020). So Much More Than a Graduate Mentor! In Reiter-Palmon, R., Fisher, C.M., Mueller, J.S. *Creativity at Work: A Festschrift in Honor of Teresa Amabile* (pp. 63-73). https://doi.org/10.1007/978-3-030-61311-2_7

Jabagi, N., Croteau, A. M., Audebrand, L. K., & Marsan, J. (2019). Gig-workers' motivation: thinking beyond carrots and sticks. *Journal of Managerial Psychology*, *34*(4), 192–213. https://doi.org/10.1108/JMP-06-2018-0255

Landry, C., & Bianchini, F. (2006). The creative city. *Plan Canada*, *46*(1), 20. https://doi.org/10.4337/9781785363429.00020

Lapsomboonkamol, S., Wiriyapinit, M., Bhattarakosol, P., & Rajchamaha, K. (2020). Motivational factors for knowledge sharing in Co-working spaces: Co-working spaces in Thailand from the management perspective. *Pertanika Journal of Social Sciences and Humanities*, *28*(3), 1835–1854.

Latouche, S. (2009). Farewell to growth. Polity.

Liegl, M. (2014). Nomadicity and the care of place—on the aesthetic and affective organization of space in freelance creative work. *Computer Supported Cooperative Work (Cscw) : The Journal of Collaborative Computing and Work Practices*, *23*(2), 163–183. https://doi.org/10.1007/s10606-014-9198-x

Markusen, A. (2013). Artists Work Everywhere. *Work and Occupations*, *40*(4), 481–495. https://doi.org/10.1177/0730888413504418

Martens, Y. (2011). Creative workplace: Instrumental and symbolic support for creativity. *Facilities*, *29*(1), 63–79. https://doi.org/10.1108/02632771111101331

Mumford, M. D., & Simonton, D. K. (1997). Creativity in the workplace: people, problems, and structures. *Journal of Creative Behavior*, *V31 N1 P1-6 1st Qtr 1997*.

Mumford, M.D. & Fichtel, M.W. (2020). Local Safety Versus Global Risk: Models of the Creative Work Environment. In Reiter-Palmon, R., Fisher, C.M., Mueller, J.S. *Creativity at Work: A Festschrift in Honor of Teresa Amabile* (pp. 99-107).

https://doi.org/10.1007/978-3-030-61311-2_4

Orsini, C., & Rodrigues, V. (2020). Supporting motivation in teams working remotely: The role of basic psychological needs. *Medical Teacher*, *42*(7), 828–829. https://doi.org/10.1080/0142159X.2020.1758305

Oseland, N. (2009). The impact of psychological needs on office design. *Journal of Corporate Real Estate*, *11*(4), 244–254. https://doi.org/10.1108/14630010911006738

Rams, D., & Harrington, C. (2016). *Weniger, aber besser = Less, but better*. Gestalten.

Reichenberger, I. (2018). Digital nomads–a quest for holistic freedom in work and leisure. *Annals of Leisure Research*, *21*(3), 364–380. https://doi.org/10.1080/11745398.2017.1358098

Reid, A., Petocz, P., & Bennett, D. (2016). Is creative work sustainable? Understanding identity, motivation, and worth. *Australian Journal of Career Development*, *25*(1), 33–41. https://doi.org/10.1177/1038416216637089

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, *55*(1), 68–78. https://doi.org/10.1037/0003-066x.55.1.68

Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: basic psychological needs in motivation, development, and wellness*. Guilford Press.

Samani, S. A., Rasid, S. Z. A., & Sofian, S. (2017). The effect of open-plan workspaces on behavior and performance among malaysian creative workers. *Global Business and Organizational Excellence*, *36*(3), 42–42.

Schaurer, I., & Weiß, B. (2020). Investigating selection bias of online surveys on coronavirus-related behavioral outcomes. *Survey Research Methods*, *14*(2), 103-108. https://doi.org/10.18148/srm/2020.v14i2.7751

Spinuzzi, C. (2012). Working Alone Together: Coworking as Emergent Collaborative Activity. Journal of Business and Technical Communication, 26(4), 399–441

Taylor, C. L., & Kaufman, J. C. (2021). The Creative Trait Motivation Scales. *Thinking Skills and Creativity*, *39*(October 2020). https://doi.org/10.1016/j.tsc.2020.100763

ten Brummelhuis, L. L., ter Hoeven, C. L., de Jong, M. D. T., & Peper, B. (2013). Exploring the linkage between the home domain and absence from work: health, motivation, or both? *Journal of Organizational Behavior*, *34*(3), 273–273. https://doi.org/10.1002/job.1789

Vallerand, R. J., & Bissonnette, R. (1992). Intrinsic, Extrinsic, and Amotivational Styles as Predictors of Behavior: A Prospective Study. *Journal of Personality*, *60*(3), 599–620. https://doi.org/10.1111/j.1467-6494.1992.tb00922.x

Wajcman, J., Rose, E., Brown, J. E., & Bittman, M. (2010). Enacting virtual connections between work and home. *Journal of Sociology*, *46*(3), 257–275. https://doi.org/10.1177/1440783310365583

Wheelock, D. C. (2020). Comparing the COVID-19 Recession with the Great Depression. Economic Synopses, 2020(39). https://doi.org/10.20955/es.2020.39

8 – Appendices

Appendix A – Survey

Dear respondent,

Thank you for participating! Introducing myself as Kat Moy and this survey is to collect data for my master's thesis at Erasmus University Rotterdam in The Netherlands where I am studying Cultural Economics and Entrepreneurship. **I look to test the influence of space and environment on a creative worker's motivation.** As a designer turned researcher working from home this past year, I want to define the best practices for staying motivated while working in quarantine.

While an end to the pandemic may be in sight, research indicates arguments on whether working from home or in an office is more productive. However, work-from-home is not necessarily a new concept to artists and creatives. This study, therefore, aims to weigh the pros and cons of working in different environments and looks ahead on how to support creative individuals. Data collected from this survey also seeks to define the new function of the office in hybrid working environments.

In the context of this study, **motivation refers to your individual ability to focus and be productive.** Motivation also includes your ability to instill a sense of optimism while overcoming the ebbs and flows of the creative process.

This survey should take about 10 minutes. While I know your time is valuable, I encourage you to answer the open questions in as much detail as you can offer. Please note all answers will be anonymized in the report and will only refer to your professional title and location. This survey is voluntary but by participating indicates your consent to use the information provided.

This survey will first ask you your background information regarding your work experience and living situation. Questions later on aim to have you express you engage with work environment and creative work.   Again, thank you for your participation as we all try to look ahead and continue exploring ways to keep reconnect with ourselves and others despite spatial limitations.

For any questions/comments/concerns please email: **katmoyresearcher@gmail.com.**
All the best,
Kat Moy

Q1 In which country do you currently reside?

Q2 Which year were you born?

Q3 Gender:

○ Female (1)

○ Male (2)

○ Non-binary/non-conforming (3)

○ Prefer not to say (4)

Q4 Which of the follow best describes your household:

○ Individual (1)

○ Living with roommates (2)

○ Living with partner (no children) (3)

○ Living with other family members (no children) (4)

○ Living with family including children (5)

Q5 Which of the following best describes where you live?

○ Urban/city (1)

○ Suburb/small town (2)

○ Rural area (3)

○ Other: (4) _____

Q6 Please select which best describes your professional field:

○ Film / Photography / Animation (1)

○ Communication Design (Graphic Design / Illustration / Advertising / UI-UX Design) (2)

○ Industrial Design / Service Design (3)

○ Architecture / Interior Design (4)

○ Literature / Creative Writing (5)

○ Fashion Design / Textile Design (6)

Q7 Please indicate your professional title here:

_____

Q8 Employment status:

○ Employed - full-time (1)

○ Employed + freelance (part-time self-employed) (2)

○ Freelance - full-time (self-employed) (3)

Q9 Size of company

○ Individual (freelance) (1)

○ 1-9 employees (2)

○ 10-49 employees (5)

○ 50-199 employees (6)

○ 200+ employees (7)

Q10 Please indicate your art/design education level:

○ High school (2)

○ Bachelor's Degree (3)

○ Master's Degree (4)

○ Ph.D. or higher (5)

○ Trade school (6)

○ Self-taught (7)

○ Other (8) _____

The following statements are personal reflections upon what helps facilitate your creative process before and during the COVID-19 pandemic.

Please use the scale to rate how you feel each attribute is critical to your process and motivation.

Q10 Please indicate how important (1-10) the following statements are for creating design work **pre-COVID:**

	1 - not important (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	8 (8)	9 (9)	10 - very important (10)
Encouragement for expression of creativity from colleagues (1)	○	○	○	○	○	○	○	○	○	○
Autonomy/freedom (2)	○	○	○	○	○	○	○	○	○	○
Access to resources (3)	○	○	○	○	○	○	○	○	○	○
Reduced pressure from workload (4)	○	○	○	○	○	○	○	○	○	○
Reduction of distractions/interruptions (5)	○	○	○	○	○	○	○	○	○	○

Q11 Please indicate how important (1-10) the following statements are for creating design work **during COVID:**

	1 - not important (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	8 (8)	9 (9)	10 - very important (10)
Encouragement for expression of creativity from colleagues (1)	○	(	(	(	(	(	(	(	(	○
Autonomy/freedom (2)	○	(	(	(	(	(	(	(	(	○
Access to resources (3)	○	(	(	(	(	(	(	(	(	○
Reduced pressure from workload (4)	○	(	(	(	(	(	(	(	(	○
Reduction of distractions/interruptions (5)	○	(	(	(	(	(	(	(	(	○

Q12 Which of the following workspaces do you **prefer** to work mostly in:

○ The office (1)

○ At home (2)

○ In a co-working space (3)

○ Other: (4) _____

Q13 Which of the following workspaces do you **actually** work mostly in:

○ The office (1)

○ At home (2)

○ In a co-working space (3)

○ Other: (4) _____

Q14 How often do you experience the following feelings while **creating work in the space indicated above:**

	Never or almost never (1)	Sometimes (2)	Often (3)	Always or almost always (4)
I feel distracted by the environment. (1)	○	○	○	○
I feel connected and supported by my colleagues. (2)	○	○	○	○
I feel stressed from the workload. (3)	○	○	○	○
I feel supported by my supervisor. (4)	○	○	○	○
I feel in control of my day-to-day activities. (5)	○	○	○	○
I feel personally connected to this environment. (6)	○	○	○	○

The following section focuses on your creative work process.

Q15 Please indicate the percentage of design tasks/jobs **completed** in the following spaces (please make sure combined percentage adds up to 100):

_____ At the office (1)
_____ At home (2)
_____ In a co-working space (3)
_____ Other (4)

Q16 Please indicate the percentage of design tasks/jobs **you prefer to complete** in the following spaces (please make sure combined percentage adds up to 100):

_____ At the office (1)
_____ At home (2)
_____ In a co-working space (3)
_____ Other (4)

Q18 Using the scale below, please indicate how the following items relate as to why you engage in creative work:

I engage in creative work...

	Does not correspond at all (1)	Corresponds a little (2)	Corresponds moderately (3)	Corresponds a lot (4)	Correspondents exactly (5)
...because I experience enjoyable feelings. (Q18_1)	○	○	○	○	○
...although it does not make a difference to me and I do not see the benefit from it. (Q18_2)	○	○	○	○	○
...because I want to be viewed more positively by certain people. (Q18_3)	○	○	○	○	○
...in order to attain prestige. (Q18_4)	○	○	○	○	○
...because I would feel bad if I did not. (Q18_5)	○	○	○	○	○
...because of the sense of well-being I feel. (Q18_6)	○	○	○	○	○
...because of the pleasure I feel as I become more and more skilled. (Q18_7)	○	○	○	○	○

Q19 Indicate how far the following statements correspond to how you feel while creating work:

	Does not correspond at all (1)	Corresponds a little (2)	Corresponds moderately (3)	Corresponds a lot (4)	Corresponds exactly (5)
I can handle the materials and assemble deliverables using basic tools. (1)	○	○	○	○	○
I can think of ideas that are different from those of others. (2)	○	○	○	○	○
I feel happy crafting unique projects. (3)	○	○	○	○	○
I am willing to design and craft creative products/ideas. (4)	○	○	○	○	○
I create creative deliverables because the outcomes will be evaluated. (5)	○	○	○	○	○
I find enjoyment in designing/producing creative products. (6)	○	○	○	○	○

This section is open-question for you to express best practices for work-from-home and your vision for the future for the office.

Q20 What are some practices that you do to keep yourself motivated while working from home during the COVID-19 pandemic?

_____

Q21 Please describe how you imagine the office space in the future to better suit your needs in a post-COVID-19 world:

_____

Q22 Please provide your email here to enroll to stay updated with the research project:

_____

Thank you for your time and participation!

- Kat Moy / katmoyresearcher@gmail.com

Appendix B – Instrumentalization Table & SPSS Codes

THEME	THEORY	CODE IN SPSS	QUESTIONS	RELATION	WEIGHT
MOTIVATION/CREATIVE MOTIVATION	KEYS (Amabile, 1996)		**Please indicate how important (1-10) the following statements are for creating design work pre-COVID:**		
	SDT (Deci & Ryan, 2000)	PRE_KEYS_COLLEUGE	Encouragement for expression of creativity from colleagues		Scale: 1-10
		PRE_KEYS_ATNMY	Autonomy/freedom		Scale: 1-10
		PRE_KEYS_RSRCS	Access to resources		Scale: 1-10
		PRE_KEYS_WRKLD	Reduced pressure from workload		Scale: 1-10
		PRE_KEYS_DSTRCT	Reduction of distractions/interruptions		Scale: 1-10
	KEYS (Amabile, 1996)		**Please indicate how important (1-10) the following statements are for creating design work post-COVID:**		
	SDT (Deci & Ryan, 2000)	POST_KEYS_COLLEUGE	Encouragement for expression of creativity from colleagues		Scale: 1-10
		POST_KEYS_ATNMY	Autonomy/freedom		Scale: 1-10
		POST_KEYS_RSRCS	Access to resources		Scale: 1-10
		POST_KEYS_WRKLD	Reduced pressure from workload		Scale: 1-10
		POST_KEYS_DSTRCT	Reduction of distractions/interruptions		Scale: 1-10
	CMTS (Taylor & Kaufman, 2021)		**I engage in creative work because…**	**CMT SCALES - FACTOR ANALYSIS**	
		CMT_ENJYMNT	…because I experience enjoyable feelings	*intrinsic*	Scale: 1-5
		CMT_BNFT	…although it does not make a difference to me and I do not see the benefit from it	*amotivation*	Scale: 1-5
		CMT_PEER	…because I want to be viewed more positively by certain people	*extrinsic*	Scale: 1-5
		CMT_PRSTG	…in order to attain prestige	*extrinsic*	Scale: 1-5
		CMT_GUILT	…because I would feel bad if I did not	*extrinsic*	Scale: 1-5
		CMT_WELLBNG	…because of the sense of well-being I feel	*intrinsic*	Scale: 1-5
		CMT_SKLL	…because of the pleasure I feel as I become more and more skilled	*intrinsic*	Scale: 1-5
WORKPLACE			**Which of the following workspaces do you prefer to work mostly in:**		
		WORK_PREFER	The office		
		WORK_PREFER	At home		
		WORK_PREFER	In a co-working space		
		WORK_PREFER	Other		
			Which of the following workspaces do you actually work in:		
			The office		
		WORK_ACTUAL	At home		
		WORK_ACTUAL	In a co-working space		
		WORK_ACTUAL	Other		
		WORK_ACTUAL			
CREATIVITY	Creativity scales (Chang et al., 2018)		**Indicate how far the following statements correspond to how you feel while creating work**		
		CRTVTY_BSCTOOLS	I can handle the materials and assemble deliverables using basic tools	domain-relevant skills	Scale: 1-5
		CRTVTY_IDEAS	I can think of ideas that are different from those of others	creativity-relevant processes	Scale: 1-5
		CRTVTY_UNIQUE	I feel happy crafting unique projects	task motivation	Scale: 1-5
		CRTVTY_WLLNG	I am willing to design and craft creative products/ideas	behavorial intention	Scale: 1-5
		CRTVTY_EVAL	I create creative deliverables because the outcomes will be evaluated	percieved behaviroal control/social environment	Scale: 1-5
		CRTVTY_ENJMNT	I find enjoyment in designing/producing creative products	attitude	Scale: 1-5
	KEYS (Amabile, 1996)		**How often do you experience the following feelings while creating work in the space indicated above?**		
		SDT_DSTR_ENVRNMNT	I feel distracted by the environment		Scale: 1-5
		SDT_CNNCTD	I feel connected and supported by my colleagues		Scale: 1-5
		SDT_WRKLD	I feel stressed from the workload		Scale: 1-5
		SDT_SPRVSR	I feel supported by my supervisor		Scale: 1-5
		SDT_ACTVTY	I feel in control of my day-to-day activities		Scale: 1-5
		SDT_CNNCT_ENVRNMNT	I feel personally connected to this environment		Scale: 1-5

Appendix C – Thematic Coding: Interviews & Open Answers
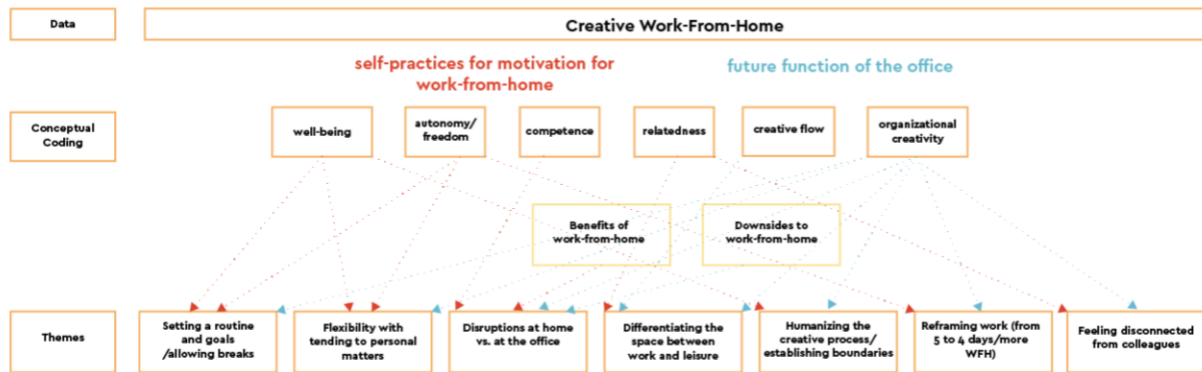
Appendix D – CTMS: Factor Analysis

"I engage with creative work because…"	Relation	Code	Component		
			1	2	3
…because I experience enjoyable feelings.	*intrinsic*	CTM_ENJYMNT	0.659	-0.425	0.019
…although it does not make a difference to me and I do not see the benefit from it.	*amotivated*	CTM_BNFT	-0.289	0.542	0.681
…because I want to be viewed more positively by certain people.	*extrinsic*	CTM_PEER	0.581	0.660	-0.222
…in order to attain prestige.	*extrinsic*	CTM_PRSTG	0.592	0.636	-0.242
…because I would feel bad if I did not.	*extrinsic*	CTM_GUILT	0.650	-0.020	0.499
…because of the sense of well-being I feel.	*intrinsic*	CTM_WELLBNG	0.802	-0.275	0.225
…because of the pleasure I feel as I become more skilled.	*Intrinsic*	CTM_SKLL	0.616	-0.144	-0.078

Extraction Method: Principal Component Analysis

Relability Statistics

Intrinsic		**Extrinsic**	
Cronbach's Alpha	N of Items	Cronbach's Alpha	N of Items
0.713	4	0.788	2
RELIABILITY /VARIABLES=CTM_WELLBNG CTM_GUILT CTM_ENJYMNT CTM_SKLL /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA.		*RELIABILITY /VARIABLES=CTM_PEER CTM_PRSTG /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA.*	

Appendix E – Creativity Scales: Factor Analysis

Indicate how far the following statements correspond to how you feel while creating work (1: does not correspond at all – 5: corresponds exactly)	Relation	Code	*Component*
			1
I can handle the materials and assemble deliverables using basic tools	*domain-relevant skills*	CRTVTY_BSCTOOLS	0.418
I can think of ideas that are different from those of others	*creativity-relevant processes*	CRTVTY_IDEAS	0.642
I feel happy crafting unique projects	*task motivation*	CRTVTY_UNIQUE	0.818
I am willing to design and craft creative products/ideas	*behavioral intention*	CRTVTY_WLLNG	0.786
I create creative deliverables because the outcomes will be evaluated	*perceived behavioral control/social environment*	CRTVTY_EVAL	0.417
I find enjoyment in designing/producing creative products	*attitude*	CRTVTY_ENJMNT	0.745

Extraction Method: Principal Component Analysis

Creativity	
Cronbach's Alpha	N of Items
0.766	4

```
RELIABILITY
  /VARIABLES=CRTVTY_IDEAS CRTVTY_UNIQUE
CRTVTY_WLLNG CRTVTY_ENJMNT
  /SCALE('ALL VARIABLES') ALL
  /MODEL=ALPHA..
```

Appendix F – Demographic Results & Charts

		Gender	Household	Living Environment	Professional Field	Employment status	Size of company	Education level	Calculated Age	Continent
N	Valid	169	169	169	169	169	169	169	168	169
	Missing	2	2	2	2	2	2	2	3	2
Mode		1	3	1	2	1	7	3	29	1

	N	%
Gender		
Female	**111**	**64.9%**
Male	50	29.2%
Non-binary/non-conforming	7	4.1%

Other	1	0.6%
Missing	2	1.2%

Household

Individual	20	11.7%
Living with roommates	23	13.5%
Living with partner (no children)	**76**	**44.4%**
Living with other family members (no children)	22	12.9%
Living with family including children	28	16.4%
Missing	2	1.2%

Living environment

Urban/city	**126**	**73.7%**
Suburb/small town	38	22.2%
Rural area	3	1.8%
Other	2	1.2%
Missing	2	1.2%

Professional field

Film / Photography / Animation	20	11.7%
Communication Design (Graphic Design / Illustration / Advertising / UI-UX Design)	**68**	**39.8%**
Industrial Design / Service Design	35	20.5%
Architecture / Interior Design	17	9.9%
Literature / Creative Writing	13	7.6%
Fashion Design / Textile Design	16	9.4%
Missing	2	1.2%

Employment status

Employment – fulltime	**101**	**59.1%**
Employed + freelance (part-time self-employed)	26	15.2%
Freelance – fulltime (self-employment)	42	24.6%
Missing	2	1.2%

Size of company

Individual (freelance)	48	28.1%
1-9 employees	22	12.9%
10-49 employees	21	12.3%
50-199 employees	19	11.1%
200+ employees	**59**	**34.5%**
Missing	2	1.2%

Education level

High school	2	1.2%
Bachelor's Degree	**113**	**66.1%**
Master's Degree	42	24.6%
Ph.D. or higher	1	0.6%
Trade school	1	0.6%

Self-taught	5	2.9%
Other	5	2.9%
Missing	2	1.2%

Continent

Americas	**120**	**70.2%**
Europe	30	17.5%
Asia	17	9.9%
Africa	1	0.6%
Australia	1	0.6%
Missing	2	1.2%

Appendix G: Workplace & Motivation Linear Regressions Comparisons

Linear Regression: **workplace & intrinsic motivation** *(preferred & actual workspace)* (independent variables: *gender, age, country, household, living environment, professional field, education level,* and *employment status*)

$ANOVA^a$

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	31.789	43	.739	1.314	$.125^b$
	Residual	69.740	124	.562		
	Total	101.530	167			

[a.] Dependent Variable: Intrinsic

Linear Regression: **workplace & intrinsic motivation** *(preferred workspace)* (*independent variables: gender, age, continent, household, living environment,* and *employment status*)

$ANOVA^a$

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.682	20	.634	1.049	$.410^b$
	Residual	88.848	147	.604		
	Total	101.530	167			

[a.] Dependent Variable: Intrinsic

Linear Regression: **workplace & intrinsic motivation** *(actual workspace) (independent variables: gender, age, continent, household, living environment,* and *employment status*)

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.960	20	.648	1.076	.381[b]
	Residual	88.569	147	.603		
	Total	101.530	167			

a. Dependent Variable: Intrinsic

Linear Regression: **workplace & intrinsic motivation** *(actual and preferred workspace combined) (independent variables: gender, age, continent, household, living environment,* and *employment status)*

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13.915	23	.605	.994	.476[b]
	Residual	87.615	144	.608		
	Total	101.530	167			

a. Dependent Variable: Intrinsic

Linear Regression: **workplace & extrinsic motivation** *(preferred & actual workspace)* *(independent variables: gender, age, country, household, living environment, professional field, education level,* and *employment status)*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	44.385	38	1.168	1.261	.170[b]
	Residual	119.448	129	.926		
	Total	163.833	167			

a. Dependent Variable: Extrinsic

Linear Regression: **workplace & extrinsic motivation** *(preferred workspace)* *(independent variables: gender, age, continent, household, living environment,* and *employment status)*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24.455	20	1.223	1.290	.195[b]
	Residual	139.379	147	.948		
	Total	163.833	167			

a. Dependent Variable: Extrinsic

*Linear Regression: **workplace & extrinsic motivation** (actual workspace)*

(independent variables: gender, age, continent, household, living environment, and *employment status.*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24.808	20	1.240	1.312	.180[b]
	Residual	139.025	147	.946		
	Total	163.833	167			

a. Dependent Variable: Extrinsic

*Linear Regression: **workplace & extrinsic motivation** (actual and preferred workspace combined) (independent variables: gender, age, continent, household, living environment,* and *employment status)*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	33.664	23	1.464	1.553	.069[b]
	Residual	104.640	111	.943		
	Total	138.304	134			

a. Dependent Variable: Extrinsic

*Linear Regression: **workplace & amotivation** (preferred & actual workspace)*

(independent variables: gender, age, country, household, living environment, professional field, education level, and *employment status)*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	32.380	38	.852	.927	.595[b]
	Residual	118.614	129	.919		
	Total	150.994	167			

a. Dependent Variable: Amotivated

*Linear Regression: **workplace & amotivation** (preferred workspace)*

(independent variables: gender, age, continent, household, living environment, and *employment status)*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10.737	20	.537	.563	.932[b]
	Residual	140.257	147	.954		
	Total	150.994	167			

[a.] Dependent Variable: Amotivated

Linear Regression: **workplace & amotivation** *(actual workspace)*

(independent variables: gender, age, continent, household, living environment, and *employment status.*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.591	20	.630	.669	.852[b]
	Residual	138.403	147	.942		
	Total	150.994	167			

[a.] Dependent Variable: Amotivated

Linear Regression: **workplace & amotivation** *(actual and preferred workspace combined)*

(independent variables: gender, age, continent, household, living environment, and *employment status)*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19.233	23	.836	.926	.564[b]
	Residual	100.204	111	.903		
	Total	119.437	134			

[a.] Dependent Variable: Amotivated

Appendix H: Linear regressions – motivation without workplace variables

Regression results for the effect of socio-demographic independent variables on DV: *intrinsic, extrinsic,* and *amotivated*. Variables for *workplace* and *creativity* absent. Standardized beta coefficients with standard errors in parentheses.

	Dependent Variable: *Intrinsic*	Dependent Variable: *Extrinsic*	Dependent Variable: *Amotivated*
CONTINENT - Europe	-0.020 (0.183)	0.006 (0.230)	0.074 (0.230)
CONTINENT - Asia	0.042 (0.266)	0.096 (0.333)	0.058 (0.334)

CONTINENT - Africa	0.051	-0.026	0.022
	(0.816)	(1.024)	(1.027)
CONTINENT - Australia	-0.064	-0.068	-0.046
	(0.791)	(0.993)	(0.995)
LIVE – Suburb/Small town	-0.047	-0.074	-0.062
	(0.157)	(0.197)	(0.198)
LIVE – Rural area	-0.111	-0.061	0.036
	(0.473)	(0.594)	(0.595)
LIVE - Other	-0.117	-0.041	-0.029
	(0.599)	(0.752)	(0.754)
HSHOLD – Individual	-0.075	0.060	0.006
	(0.200)	(0.252)	(0.252)
HSHOLD – Living with roommates	0.138	0.088	-0.114
	(0.190)	(0.233)	(0.239)
HSHOLD – Living with other family members (no children)	-0.076	0.133	0.030
	(0.249)	(0.312)	(0.313)
HSHOLD – Living with family including children	0.073	0.072	-0.051
	(0.192)	(0.241)	(0.241)
AGE	-0.011	-0.088	-0.048
	(0.008)	(0.010)	(0.010)
GNDR – Male	-0.018	0.054	0.063
	(0.146)	(0.183)	(0.183)
GNDR – Non-binary/non-conforming	0.031	-0.045	-0.013
	(0.317)	(0.399)	(0.399)
GNDR – Prefer not to say	0.125	0.176	-0.025
	(0.805)	(1.011)	(1.013)
EMPLYMNT – Employed + freelance	0.120	-0.104	-0.150
	(0.197)	(0.247)	(0.247)
EMPLYMNT – Freelance fulltime	0.117	0.125	-0.087
	(0.167)	(0.210)	(0.211)

*$p < 0.10$, **$p < 0.05$, ***$p < 0.01$

Appendix I: Linear regressions – workplace & motivation with change in preferred and actual

Regression results for the effect of *workplace* on DV: *intrinsic, extrinsic,* and *amotivated* with respondents who indicated they work from home but prefer to work *the office* or *co-working*. Standardized beta coefficients with standard errors in parentheses. ($n = 136$)

	Dependent Variable: *Intrinsic*	Dependent Variable: *Extrinsic*	Dependent Variable: *Amotivated*
CONTINENT - Europe	-0.339*	-0.250	-0.085
	(0.348)	(0.452)	(0.391)
CONTINENT - Asia	0.082	0.088	-0.034
	(0.427)	(0.555)	(0.481)
CONTINENT - Africa	-0.030	-0.111	-0.084
	(0.900)	(1.170)	(1.013)
LIVE – Suburb/Small town	0.159	-0.262*	-0.196
	(0.292)	(0.380)	(0.329)

LIVE – Rural area	-0.078	0.026	-0.254
	(1.212)	(1.575)	(1.364)
LIVE - Other	-0.089	-0.085	-0.016
	(0.864)	(1.124)	(0.973)
HSHOLD – Individual	-0.017	0.192	0.174
	(0.357)	(0.464)	(0.402)
HSHOLD – Living with roommates	0.236	0.094	-0.152
	(0.311)	(0.404)	(0.350)
HSHOLD – Living with other family members (no children)	0.081	0.206	0.080
	(0.437)	(0.568)	(0.492)
HSHOLD – Living with family including children	0.114	0.186	0.042
	(0.329)	(0.428)	(0.371)
AGE	-0.076	0.042	0.162
	(0.021)	(0.028)	(0.024)
GNDR – Male	-0.154	0.027	0.016
	(0.286)	(0.372)	(0.322)
GNDR – Non-binary/non-conforming	-0.207	-0.066	0.135
	(0.866)	(1.126)	(0.975)
GNDR – Prefer not to say	0.156	0.217	-0.063
	(0.899)	(1.168)	(1.011)
EMPLYMNT – Employed + freelance	0.329	0.142	0.056
	(0.372)	(0.484)	(0.419)
EMPLYMNT – Freelance fulltime	0.194	0.322*	-0.063
	(0.297)	(0.386)	(0.334)
WORK_PREFER – In a co-working space	0.058	0.226	-0.231
	(0.300)	(0.390)	(0.337)
WORK_PREFER - Other	0.096	0.030	-0.413*
	(0.296)	0.350	(0.303)

*p < 0.10, **p < 0.05, ***p < 0.01

Appendix J – Distribution of workplace impediment survey items

Opinion of respondents on the statement (frequency and in percentages of total number of respondents, n = 169): "I feel distracted by the environment."

Never or almost never	Sometimes	Often	Always or almost always
17	90	45	17
9.9%	52.6%	26.3%	9.9%

Opinion of respondents on the statement (frequency and in percentages of total number of respondents, n = 169): "I feel connected and supported by my colleagues."

Never or almost never	Sometimes	Often	Always or almost always
26	83	42	18
15.2%	48.5%	24.6%	10.5%

Opinion of respondents on the statement (frequency and in percentages of total number of respondents, n = 169): "I feel stressed about the workload."

Never or almost never	Sometimes	Often	Always or almost always
19	79	38	33
11.1%	46.2%	22.2%	19.3%

Opinion of respondents on the statement (frequency and in percentages of total number of respondents, n = 169): "I feel supported by my supervisor."

Never or almost never	Sometimes	Often	Always or almost always
36	54	46	33
21.1%	31.6%	26.9%	19.3%

Opinion of respondents on the statement (frequency and in percentages of total number of respondents, n = 169): "I feel in control of my day-to-day activities."

Never or almost never	Sometimes	Often	Always or almost always
11	54	56	48
6.4%	31.6%	32.7%	28.1%

Opinion of respondents on the statement (frequency and in percentages of total number of respondents, n = 169): "I feel personally connected to this environment."

Never or almost never	Sometimes	Often	Always or almost always
11	54	56	48
7.0%	24.0%	32.2%	35.7%

Appendix K – Workplace & level of creativity with change in preference and actual workplace

Regression results for the effect of *actual and preferred workspace* on DV: *level of creativity* with respondents who indicated they work from home but prefer to work *the office* or *co-working*. Standardized beta coefficients with standard errors in parentheses.

DV: *creativity*	Sum of squares	df	Mean Square	F	Sig.
Regression	80.454	18	4.470	0.815	0.673[b]
Residual	224.880	41	5.485		
Total	305.333	59			

	Dependent Variable: *Creativity*
CONTINENT – Europe	0.053 (0.064)
CONTINENT – Asia	0.0156 (1.291)
CONTINENT – Africa	-0.020 (2.719)

LIVE – Suburb/Small town	0.237
	(0.883)
LIVE – Rural area	0.084
	(3.662)
LIVE – Other	-0.122
	(2.612)
HSHOLD – Individual	0.113
	(1.079)
HSHOLD – Living with roommates	0.204
	(0.939)
HSHOLD – Living with other family members (no children)	-0.275
	(1.320)
HSHOLD – Living with family including children	0.059
	(0.995)
AGE	0.053
	(0.064)
GNDR – Male	0.258
	(0.866)
GNDR – Non-binary/non-conforming	-0.139
	(2.618)
GNDR – Prefer not to say	0.015
	(2.716)
EMPLYMNT – Employed + freelance	0.190
	(1.125)
EMPLYMNT – Freelance fulltime	0.041
	(0.897)
WORK_PREFER – In a co-working space	-0.120
	(0.906)
WORK_PREFER – Other	0.080
	(0.813)

$*p < 0.10, **p < 0.05, ***p < 0.01$