

# **AS STARTUPS GO REMOTE, WHAT HAPPENS TO CREATIVITY?**

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**A QUALITATIVE STUDY ON REMOTE WORK'S EFFECT ON  
CREATIVITY IN STARTUPS**

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# **As startups go remote, what happens to creativity? - A qualitative study of remote work's effect on creativity in startups**

## **Abstract**

Since the COVID-19 pandemic, remote work policies have been increasingly adopted by start-up companies. As creativity is needed for startups to bring new ideas to the market, it is relevant to understand how remote work policies might affect creativity. This thesis aims to find out *how remote work affects creativity in startups*, by conducting a qualitative study. To assist the study, a combined model of Media Richness Theory and Amabile's KEYS model for organizational creativity, created an understanding of how predictors of creativity might be affected depending on the media for communication in remote and office work environments. Data was collected from 12 semi-structured interviews with employees from five startups with a technical product. This cross-sectional study found that remote work affects creativity in startups by diminishing the positive relationship that encouragement and serendipity has on creativity. On the other hand, it is also found that remote work amplifies the positive relationship that resources have on creativity. Regarding autonomy, remote work negatively affects creativity in collaborative situations, and positively affects creativity when working individually. This study could assist startups in their navigation of remote work policies as well as provide an understanding of the effect that it has on creativity. The study could further provide a new perspective of remote work environments to existing research on creativity.

### **Keywords:**

Creativity, Start-ups, Remote work, Media Richness Theory

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## Definition Table

Term	Definition
<i>Remote work or telecommuting</i>	the substitution of telecommunications and/or computers for commuting work (Nilles 1975)
Creativity	the generation of novel and useful ideas (Amabile 1988)
Start-ups	a startup is an organization formed to search for a repeatable and scalable business model (Blank 2010)

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# 1. Introduction

## 1.1 Background

Remote work, also known as telecommuting, is a topic that has existed ever since the 1970s (Nilles 1975). More recently, the world has seen an increased capability of information and communication technologies with greater availability of high-speed internet (Allen, Golden et al. 2015). This technological shift, in combination with the COVID-19 pandemic, has forced businesses to rethink their work practices to allow for remote work (Subudhi, Mishra 2022). The resulting increase in remote work has made a lasting impact as 72% of workers prefer flexible work practices over returning to the office full-time (Jackson 2022). Many companies in the technology sector announced that they would allow for work-from-home practices after the pandemic, as in the case for Facebook, Square, Slack (McLean 2020, Benveniste 2020).

The new world of remote working creates both challenges and opportunities for companies. A study based on interviews with remote work professionals found that some of the most positive outputs are cost-reduction and flexibility for promoting work-life balance, while challenges include communication and technical problems, in addition to management challenges (Ferreira, Pereira et al. 2021). Further, another study also found work-life balance and individual performance as benefits, while there are obstacles in social aspects (Babapour Chafi, Hultberg et al. 2022). Another obstacle with remote work is that it can become more difficult to share and acquire information (Yang, Holtz et al. 2022).

Topics that have garnered significant research attention thus far is how remote work affects productivity and work-life balance (Hackney, Yung et al. 2022, Rañeses, un Nisa et al. 2022, Ollo-Lopez, Bayo-Moriones et al. 2010). However, the field of creativity in remote work context remains largely unexplored, even though certain aspects related to creativity have been explored (Konrad-Märk 2021).

Working from home has been found to have a positive influence on employee creativity as it provides benefits in terms of flexibility, comfort, and less distractions (Fukumura, Schott et al. 2021, Tønnessen, Dhir et al. 2021, Vega, Anderson et al. 2015). Other researchers find that there are fundamental psychological reasons why we need to be physically present to enable creativity and innovation (Garlatti Costa, Bortoluzzi et al. 2022). On the other hand, some believe that remote work and less face-to-face communication has a potential to improve group creativity and ideation (Thompson 2021). By contrast, a laboratory study showed that participants focusing on a screen

during video conferencing will be inhibited in their idea generation because the screen prompts a narrower focus (Brucks, Levav 2022).

Creativity is an interesting topic to study as it is important for employee job performance (Gong, Huang et al. 2009), and organizational competitiveness (Oldham, Cummings 1996). One special type of organization that needs creativity and innovation are startups as they need to bring new ideas to a market and commercialize them (Spender, Corvello et al. 2017). Interestingly, in a post-pandemic era, 70% of startups listed on Y Combinator's job marketplace offer possibilities of working remotely, in order to attract talent, reduce costs and increase flexibility (Teare 2022). This presents an interesting challenge for startups to navigate: they need to consider remote work possibilities with potential effects in creativity. Consequently, the aim of this study is to explore what the effects on creativity are for startups in a remote work context.

## 1.2 Research gap

Existing research on remote work's effect on creativity have mainly investigated what certain aspects of remote work has on creativity, through quantitative or laboratory studies (Garlatti Costa, Bortoluzzi et al. 2022, Alvarez-Torres, Schiuma 2022, Thi Minh Ly, Tien Thanh et al. 2023). As a result, studies do not provide a comprehensive understanding of creativity in a remote setting. Our aim is to dissect the root causes and investigate *how* remote work affects creativity.

## 1.3 Purpose and Research Question

Considering the importance of creativity for startups (Spender, Corvello et al. 2017), especially in a remote work environment, combined with the lack of comprehensive studies in the subject, the main purpose of this study is to gain a deeper understanding of how creativity is affected by remote work in startups.

The study aims to answer the question:

*How does remote work affect creativity in startups?*

To assist in the study of creativity, Amabile's KEYS model (Amabile, Conti et al. 1996) will create a base for understanding about the predictors of creativity. Remote work places employees in a new environment where the media for communication changes, and to understand this change in creative communication, this study will use Media Richness Theory (Daft, Lengel 1986) in conjunction with Amabile's KEYS model.



## 1.4 Delimitation

The study is delimited to startups with a technology focus, in the Stockholm geographic area. For the sake of comparability, the study is delimited to startup companies with less than 80 employees with core operations in technology as they may have similar experiences of remote work effect on creativity with similar working environments or challenges.

## 2. Previous research

This episode will describe previous research of remote work, creativity, as well as the intersection between these two.

### 2.1 Remote work

Remote work is sometimes known as “telecommuting”, which is to use Information and Communication Technologies to reduce or eliminate daily commutes to and from work (Nilles 1988). There are two ways to telecommute, where the first, and more common method, is to work from home, and the latter is to commute to a center located closer to one’s home than the main office.

Telecommuting became highly prevalent during the pandemic (Belzunegui-Eraso, Erro-Garcés 2020), with a lasting impression to continue working remotely after the pandemic (Da Silva, Georgarakos et al. 2023). Since then, scholars have studied various aspects of remote work (Green, Tappin et al. 2020, Jaiswal, Arun 2020).

One research topic in a remote context is productivity, such as how remote work moderates the impact on productivity through different factors (Galanti, Guidetti et al. 2021). A systematic review has found that there is debate on remote work’s effect on productivity, with studies showing positive, negative, or mixed results (Hackney, Yung et al. 2022)

Other studies investigated the effect on work-life balance (Elbaz, Richards et al. 2022), where some studies found that working from home negatively affected the work-life balance (Palumbo 2020). Others have explored the different strategies that employees use to manage work-life balance in a remote setting (Caringal-Go, Teng-Calleja et al. 2022).

Within existing literature, one topic where there remains questions is regarding creativity, for example how it is affected in virtual or remote teams and how it might be replicated in a virtual context (Konrad-Märk 2021, George, Lakhani et al. 2020, Reiter-Palmon, Kramer et al. 2021, Grözing, Irlenbusch et al. 2020).

## 2.2 Creativity in a remote work context

In this study, the definition of creativity is “*the generation of novel and useful ideas*” (Amabile 1988). Taken one step further, the definition of organizational creativity is “*the act of creativity that takes place as the result of the interactions within a complex social system*”, as based on studied literature (Plucker, Beghetto et al. 2004, Mumford 2011).

Some researchers argue that there is little doubt of face-to-face interactions positively influencing creativity, but that it remains uncertain to what extent this can be replicated in a virtual setting (George, Lakhani et al. 2020). Another study reveals that remote teams tend to be more effective at brainstorming compared to face-to-face teams (Kniffin, Narayanan et al. 2021). Other research argues that the shift to remote work may have a potential to improve group creativity and ideation (Thompson 2021). By contrast, some find that video conferencing has negative effects on idea generation, due to narrower cognitive focus of focusing on a screen (Brucks, Levav 2022).

One study in the early stages of the COVID-19 pandemic discovered that employees had self-initiated sparks of creativity during the isolation period (Jaiswal, Arun 2020). Another study suggests that digital knowledge sharing is a significant predictor of creative performance in the work-from-home context (Tønnessen, Dhir et al. 2021). Furthermore, one study explores whether high levels of work-home conflict and social isolation in a remote setting can be barriers for creativity (Garlatti Costa, Bortoluzzi et al. 2022).

## 2.3 Creativity

To further understand what factors could affect creativity in a remote work context, it is necessary to investigate previous studies on creativity on a general level. In the context of organizations, the research interest in creativity and innovation has boosted significantly in the last two decades, with many concluding that it is critical for organizational performance (Dess, Picken 2000, Mumford, Hunter 2005, Shalley, Zhou et al. 2004). Factors such as risk-taking, support, challenge and autonomy are consistently mentioned by established researchers as predictors of organizational creativity (Mumford 2011, Amabile, Conti et al. 1996, Ekvall 1996).

Psychological safety is important for creative endeavors as it has been shown to motivate employees to innovate when there is an interpersonal atmosphere that allows for risky creative endeavors (Edmondson 1999). The sense of psychological safety that an employee experiences has a significant effect on feelings of vitality which affects creative work (Kark, Carmeli 2009). Information exchanges between employees in the workplace create trust relationships that can provide psychological safety (Gong, Cheung et al. 2012).

The previous research on creativity in general is made predominantly in physical workplace environments, due to remote work not being a common phenomenon at the time. The previous research on creativity provides the basis for understanding what factors affect creativity, and thus they also act as the foundation when investigating creativity of a remote workplace.

## 2.4 Research intersection

It is the intersection of remote work and creativity which motivates the research topic for this study. Neither remote work nor creativity are new topics in research, however, the intersection between these two are believed to require further research (Reiter-Palmon, Kramer et al. 2021, Konrad-Märk 2021).

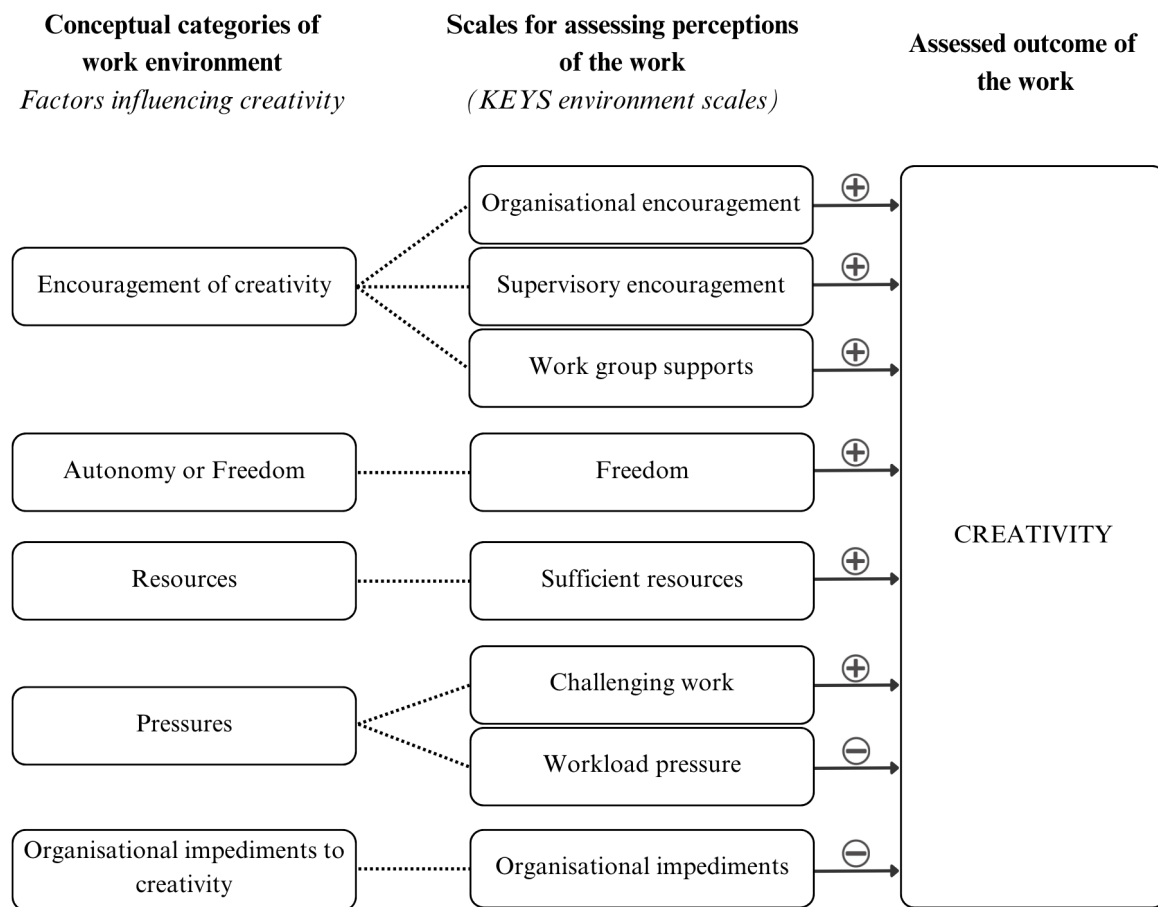
# 3. Theoretical framework

To analyze how remote work affects creativity, the Amabile's KEYS framework (Amabile, Conti et al. 1996) will be used to provide the theoretical lens to understand how different organizational factors can affect creativity. Additionally, since the remote work context places communication in a new and different setting, The Media Richness Theory (Daft, Lengel 1986) will explain how communication can vary in different workplace settings.

## 3.1 Amabile's KEYS framework

The initial research on creativity paid much attention to individual creativity (Mumford 2011). Amabile pinpointed three components of creativity on an individual level: expertise, motivation and creative-thinking skills (Amabile 1983). As the business world evolved, researchers began to pursue a deeper understanding of creativity by investigating how the organizational context and work climate influence creativity (Mumford 2011). During this time, Amabile further pinpointed three organizational-level components of creativity: organizational motivation, management practices and resources (Amabile 1988). Many theories and previous research suggest that organizational creativity is the result of a complex interplay of influencing factors at the level of the individual, group, and organization (Woodman, Sawyer et al. 1993, Mumford 2011).

A comprehensive model bringing all this together to depict organizational creativity, is Amabile's KEYS model (Amabile, Conti et al. 1996).



**Figure 3.1:** Conceptual Model Underlying Assessment of Perceptions of the Work Environment for Creativity (Amabile, Conti et al. 1996)

The KEYS (1996) model was intended to help diagnose how factors of the work environment might influence creativity in an organization. As illustrated in Figure 3.1, Amabile identifies five *conceptual categories* of the work environment: (1) encouragement of creativity, (2) autonomy or freedom, (3) resources, (4) pressures, and (5) organizational impediments to creativity. Extending from each category, *scales* are specified for assessing perceptions of the work environment. Lastly, the relationship between the scales and the creativity outcome is depicted. The scales are either “stimulant scales”, predicted to have a positive influence on creativity, or “obstacle scales”, predicted to have a negative influence.

### 3.1.1 Encouragement of Creativity

Encouragement of creativity as a conceptual model is the most extensive and frequently mentioned in literature (Amabile, Conti et al. 1996). It involves the encouragement of new idea generation and development, which is suggested to appear at three levels of an organization:

### ***(1) Organizational encouragement***

Four organizational-level aspects of encouragement are identified in this scale to have a positive influence on creativity: encouragement of risk-taking, supportive evaluation of new ideas, reward and recognition of creativity, and collaborative idea-flow.

### ***(2) Supervisory encouragement***

For encouragement on a peer-to-peer level with a supervisor, there are several factors positively influencing creativity, such as goal clarity, open interactions and supervisory support of work and ideas.

### ***(3) Work group supports***

Factors on a workgroup level are diversity, mutual openness to ideas, constructive challenging of ideas and shared commitment. Creativity is assessed to be positively influenced if these factors have high prevalence in work groups.

## **3.1.2 Autonomy or Freedom**

A relatively high autonomy in day-to-day work and sense of ownership over work and ideas is suggested to foster creativity on an individual and team level. For example, it is suggested that individuals who perceive themselves to have a choice over how to perform given tasks, generate more creative work.

## **3.1.3 Resources**

Resource allocation is suggested to have a direct positive effect on the creativity levels in a project. Further, the perception of sufficient resources may psychologically lead to increased intrinsic motivation and creativity. Similarly, severe resource restrictions naturally have limitations on how creative individuals can be at work. In a remote work context, resources could be the availability of tools.

## **3.1.4 Pressures**

The conceptual category of pressures are categorized into two key scales: (1) *Challenging work*, meaning there is a positive influence on creativity if the pressure is perceived as an intellectual challenge, and (2) *workload pressure*, suggesting that extreme workload pressure can undermine creativity. Time pressure, for example, is generally associated with high creativity if it contributes to the perception of challenging intrinsically-motivated work.

### 3.1.5 Organizational impediments to creativity

Lastly, there might exist impediments such as internal strife, conservatism, rigidity and formal management structures within organizations that will impede creativity, because they tend to decrease intrinsic motivation.

## 3.2 Media Richness Theory

Media Richness Theory (MRT) is a theoretical framework that aims to explain how different communication mediums provide different abilities to convey the complexity of different messages within a time interval (Daft, Lengel 1986).

Communication mediums may be considered rich if they are able to overcome different frames of reference or help clarify ambiguity within a timely manner (Daft, Lengel 1986). Media Richness Theory is considered to be a prescriptive model, which explains when a certain medium is preferable to use. A simple task which is unambiguous, such as deciding upon a meeting time, may be communicated through text, while ambiguous or complex messages might need to be clarified face-to-face.

There are four items that are used to measure the level of media richness.

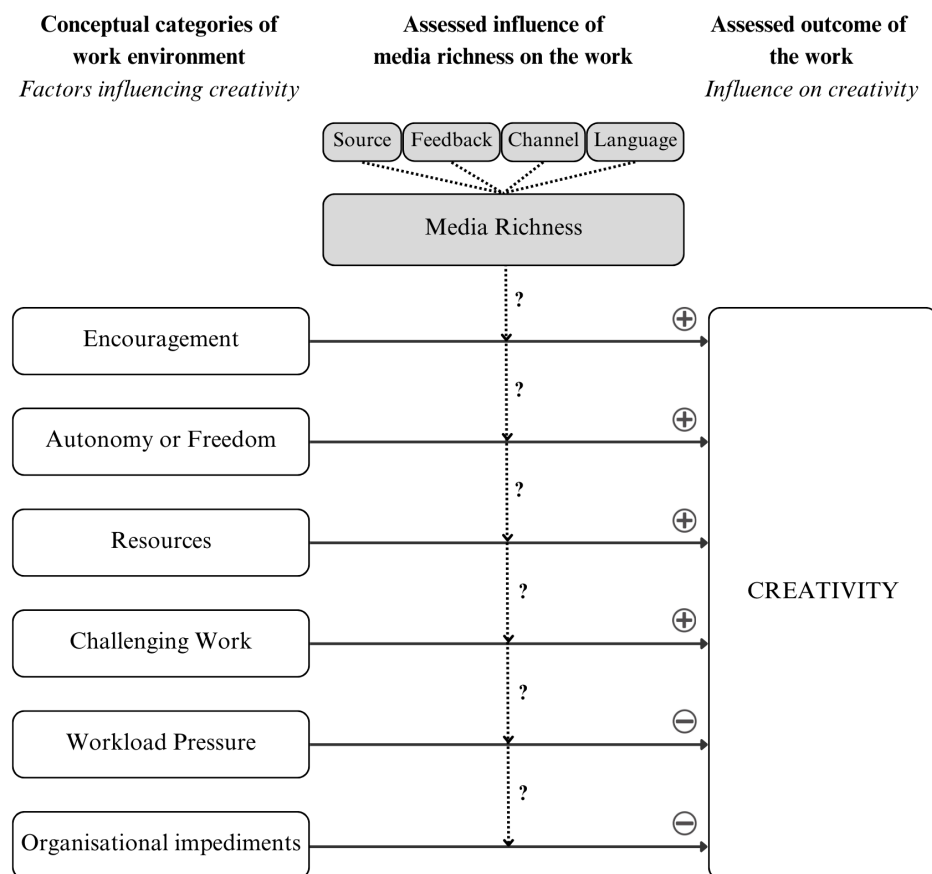
- 1) **Feedback:** Some mediums may be able to provide immediate feedback (such as phone / video calls or face-to-face) while others may not (email, text messages).
- 2) **Channel:** Ability to provide multiple channels. Video calls provide both audio and visual channels, while phone calls only provide audio.
- 3) **Source:** Ability to provide personalisation. For example, rich media, such as face-to-face can be more personal than written memos.
- 4) **Language:** Some mediums support a range of languages, including technical jargons, (such as face-to-face) while other less rich media do not.

Remote work will lead to a change in the mediums used during work. For example, meetings and conversations can either be held face-to-face at a physical office or remotely through video calls and text messages.

In the case of remote work and creativity, the role of media richness is highly relevant as it considers how well complex creative ideas can be communicated through a remote medium, and moreover how the richness affects how well ideas are conveyed and perceived.

### 3.3 Summary of theory

In summary, Amabile's KEYS model explains creativity as being affected by concepts that can either have a positive or negative influence. Media Richness Theory explains how different mediums have different abilities to convey a complex message, with four components explaining the media richness. This study proposes a theoretical model combining the KEYS model and MRT model. The model predicts how remote work, and the various different mediums, have a moderating relationship on the conceptual factors that affect creativity.



**Figure 3.3:** Combined Model of KEYS and Media Richness Theory (Bengtsson & Edholm, 2023)

As seen in Figure 3.3, the combined model depicts how remote work affects creativity by theorizing how media richness might moderate the conceptual factors that influence creativity. The stimulant and obstacle scales (depicted as plus and minus) refer to Amabile's KEYS model. The question marks, on the other hand, represent the potential moderating effect (stimulant, obstacle or no change) that media richness might have on the work environment.

### 3.4 Theory Discussion

Mathisen and Einarsen (2004) examined the reliability of the categorization of KEYS. The model has different scales that measure different things, but these scales were grouped into categories that were too broad. Mathisen and Einarsen suggest that if the categories were more specific, the KEYS model would have been improved.

Furthermore, although the KEYS model is intended to measure perceptions of the KEYS scales with the help of a questionnaire, qualitative interviews may provide a way of measuring perceptions on a deeper level as they help provide underlying reasons for perceptions.

Media richness theory has been criticized for not taking into account personal and subjective views to perceptions of different channels, for example due to varying personal experiences with the channel, topic, communicator or context in which media richness is assessed (Carlson, Zmud 1999). For example, studies have found that text messages, which are considered a less rich form of communication in media richness theory, have been enriched by advancements in technology (Sheer 2010, Sheer 2011). However, this study has chosen not to take these personal experiences into account due to the limited scope of this study.

## 4. Methodology

### 4.1 Method of choice

#### 4.1.1 Research Paradigm

This study uses a constructivist ontology, assuming that social phenomena are constructed by people's understandings and their interactions (Bell, Bryman et al. 2022). This is appropriate since creativity is many times a collaborative effort which involves people making sense of their interactions with and of other coworkers. Furthermore, the study adopts an interpretivist epistemology which aims to understand underlying reasons and how people choose to act. This is suitable given that the study aims to explore how people perceive things that affect creativity, in addition to how they choose to act given those perceptions. This requires the empirical data to be interpreted by how the authors believe reality. The KEYS model assumes that individual perceptions of organizational influences on creativity, and the relationship between these perceptions, are what matters when assessing the work environment for creativity. (Amabile, Conti et al. 1996). Thus, by interviewing individual employees of an organization about their perceptions of the work environment, conclusions about the organizational creativity context can be drawn.



### 4.1.2 Research Method

The study was conducted with a qualitative method using semi-structured interviews. By adopting this approach, the interviewees were able to freely articulate their thoughts on creativity in a remote work context, while the authors could delve deeper into the subject matter by asking follow-up questions, thereby facilitating a more comprehensive understanding. This allows the authors to find an underlying understanding of employees' perceptions and the work environment they belong to, which is important to fulfill the purpose of this study to understand *how* remote work affects creativity in startups. Further, an abductive approach has been used to allow incremental additions or revisions to the theoretical framework, which was necessary for the empirics to narrow down the study to areas that were relevant to the theoretical framework.

### 4.1.3 Research Design

This study used a cross-sectional research design, meaning multiple companies were investigated at one point in time instead of a case study at a single company, which enables a comparison to be made across organizations and contexts (Bell, Bryman et al. 2022), and for various perspectives on creativity in a remote work context for startups. To draw relevant conclusions for the research question it is necessary to investigate several companies.

## 4.2 Data collection

### 4.2.1 Sample

The sample group consists of tech startups in the Stockholm region that allow for remote work, with various different policies. A non-probability sampling method has been chosen where various members of startups have been contacted through email and LinkedIn. Employees were from various organizational levels of seniority, providing both a managerial and employee perspective.

The study includes interviews with 12 different participants at five different companies. All of the participants were to some degree engaged in the technological operations or development of the companies' core products. Their general roles have been defined in the Figure 4.1, with "general role" describing what they generally work with, but not using their specific titles as allow anonymity. All of the companies had a remote policy through which there was no obligation to come to a physical office, with only company B having a co-working space instead of an office.

After 12 interviews the authors concluded that empirical saturation had been reached as many of the same themes had been found recurring in several interviews and little new material had been found.

The decision was made to delimit the study to employees with a direct involvement in the development of the core product, to let the sample be domain specific and thus be easier to compare creative processes. The authors did not investigate links to how gender, role or industry might have influenced the employees perceptions due to the scope of this study and the relevance for the research question.

<b>Interview length</b>	<b>Company</b>	<b>Gender</b>	<b>Industry</b>	<b>General role</b>	<b>Code name</b>
1 hour	A	Male	Financial services	Manager	A1
1 hour	A	Male	Financial services	Engineering Manager	A2
1 hour	B	Male	E-commerce	Manager	B1
1 hour	B	Male	E-commerce	Engineering Manager	B2
1 hour	C	Female	Financial services	Engineer	C1
1 hour	C	Female	Financial services	Designer	C2
1 hour	C	Male	Financial services	Designer	C3
40 minutes	D	Male	Educational services	Engineering Manager	D1
1 hour	D	Female	Educational services	Manager	D2
1 hour	E	Male	E-commerce	Engineer	E1
1 hour	E	Male	E-commerce	Engineer	E2
30 minutes	E	Male	E-commerce	Engineering Manager	E3

***Figure 4.1: Interview sample descriptions***

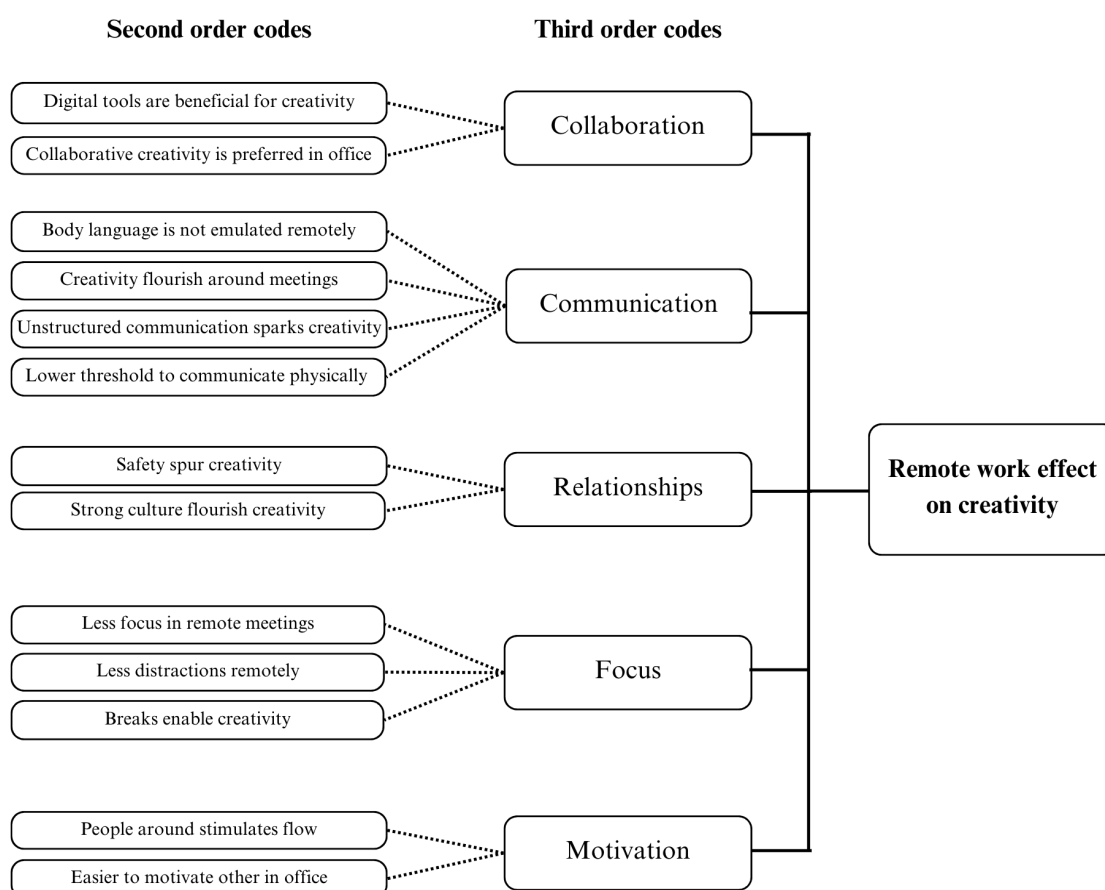
#### 4.2.2 Interview process

An interview guide, fit for semi-structured qualitative interviews, was developed based on key elements in the theoretical framework, with main elements being connected to Amabile's KEYS framework and media richness theory. The choice to perform semi-structured qualitative interviews allowed the interviews to go deeper into subject areas that the interviewees answered elaborately on. Due to individual interviewee preferences, six interviews were held physically at the company's office

and six digitally through Zoom. The interviews were adapted with follow-up questions and points of clarification. The language of the interviews was chosen by the interviewees, with some interviews being held in English and others in Swedish. As such, quotes in Swedish have been translated in the empirics section. One of the authors had the main responsibility of asking questions and steering the interview, while the other had the main responsibility for taking notes, but both authors actively engaged in asking follow-up questions. All interviews were recorded and transcribed.

### 4.3 Data analysis

In accordance with the process of thematic analysis, the transcriptions and notes from the interviews were coded into several recurring themes by looking at similarities and patterns (Bell, Bryman et al. 2022). Both authors individually coded the first interview to align on common first order codes, and then proceeded to split up the coding for the rest of the interviews. After having done first order codes, they were summarized into second and third order themes, as seen in Figure 4.3, to ultimately showcase how the empirical findings relate to remote work's effect on creativity.



**Figure 4.3:** Summary of empirical findings of the research question into second and third level codes (Bengtsson & Edholm, 2023)

## 4.4 Method Criticism

Focusing on a cross-sectional method and interpretivist approach could lead to a lack of transferability in the way that findings are limited to a specific point in time and context. The remote work environment constantly evolves over time and findings from this study can thus not be fully transferred to another point in time. In regard to context, the study's transferability may also be limited due to the fact the sample mainly includes engineers working at a startup with a focus on technology. Employees might have different perceptions in different departments and company types and can thus not be fully transferable across domains. Despite problems with transferability, this study's clear focus and delimitation to startups with a technical core product and interviewees all working close to the product, make the study findings more transferable within the same domain, context and time. The study's approach to use interpretive and semi-structured qualitative interviews may imply that the authors' subjective views can shape both how the research is interpreted and how the interviewees' views are presented. Similarly, when conducting the interviews there is a risk that employees may have been influenced by their own opinion of remote work in how they answered the questions. Additionally, the research approach requires the authors to interpret what perceptions of creativity are similar across interview subjects in order for the conclusions to be drawn validly. The empirical validity could also be questioned due to the limited sample size of 12 interviews. Although, 10 out of 12 interviews had a duration of one hour which gave us considerable time for in-depth insights of employee perceptions and thus somewhat increasing the empirical validity with a deeper sample investigation.

## 4.5 Ethical considerations

In line with Diener and Crandall's four ethical principles: (1) *harm to participants*, (2) *lack of informed consent*, (3) *invasion of privacy*, and (4) *deception*, ethical issues were properly taken into consideration in regard to the interviews and data collection (Bell, Bryman et al. 2022). Before every interview, the interviewees were provided with a GDPR survey that was in accordance with the regulations of the Stockholm School of Economics. In this survey interviewees could read and consent to the conditions of the interview, including recording of interview, storage and deletion of data, and personal anonymity. Anonymity is assured as the authors do not present any names or specific role titles, and can thus not be connected to a specific company or person. The interviews being conducted during work time could be problematic, however, an acceptance of this was assured by the interviewee. Further, the authors aimed to make the interviewees feel secure and clarified that questions did not have to be answered for any reason. In the beginning of each interview, clear descriptions of our study research question and purpose were transparently shared with interviewees.

## 5. Empirical results

This chapter will present the empirical data and serve as the base for answering the research question “how remote work affects creativity in startups”.

Empirical findings show that there are notable differences in how groups and individuals within an organization work on creative tasks, depending on if it is remotely or physically. These findings are categorized into five main themes that could explain how remote work affects creativity: (1) *collaboration*, (2) *communication*, (3) *relationships*, (4) *focus*, and (5) *motivation*.

### 5.1 Collaboration

While collaboration is typically preferred in the office, digital tools are generally preferred over tools at the office.

#### 5.1.1 Digital tools are beneficial for creativity

Several interviewees have expressed that they believe digital tools are useful and specifically beneficial for creativity.

*“I mean [the digital tool Miro is] very useful, like the tool is very, very good.” - B2*

*“Miro, Mural, Figma, are tools we have learned to use as creative platforms, which I think in many ways improve creativity.” - C3*

Additionally, digital tools might be preferred over physical tools, such as whiteboards, because their content is already saved and might also be edited by several people simultaneously.

*“They [the digital tools] are very good and they are so good that you steer away from using whiteboard because [...] everything is saved and there are no complications.” - B1*

However, some respondents argue that it is not the tool itself, but rather the creative feeling conveyed in situations where a physical tool is used.

*“The best tool is a whiteboard in front of you and a coffee pot. [...] Creativity is so much more than just tools. It’s a feeling and that feeling is super difficult to convey and spread digitally.” - B2*

### 5.1.2 Collaborative creativity is preferred in the office

Several interviewees have shown a distinct preference to being physically present in the office when it comes to collaborative creativity, due to a creative feeling.

*“It has proven very very effective [to meet physically for creative work]. [...] It is a completely different feeling. [...] It creates a kind of creativity in the air. [...] You kind of have to breathe the same air in the same room.” - B2*

Furthermore, the office seems to improve creativity because it is easier to start brainstorming at the office compared to remotely, which leads to a preference of being at the office.

*“Collaborative creativity is much easier to get at the office. To start brainstorming together, to bounce ideas and just be curious.” - E1*

*“When I’m at home, I don’t have anyone to bounce ideas off of. [...] I think I have better creativity when I’m around other people at the office. Guaranteed. [...] It’s easier to communicate a thought verbally, than to write in Slack. It should be easy, and that’s why I’m more creative in the office.” - A1*

## 5.2 Communication

A particularly common theme of differences between remote and physical creativity regards communication. The lack of body language in the remote setting seems to play a role in creative communication. It was also found that most creative communication happens *around meetings* and in an *unstructured* way, which certainly seems to differ between the work settings. Furthermore, creativity was found to be dependent on the threshold to communicate.

### 5.2.1 Body language is not emulated remotely

It is more difficult to convey and read body language through video calls, which could limit how well one can show support for creative ideas.

*“It [remote meetings] doesn’t help you much because you can’t see the facial expression of people that makes a difference when you are trying to speak up or explain your idea” - C1*

*“It’s more creative to sit together. [...] I can see you and what you get excited by and think is exciting in a whole different way with body language.” - B1*

*“It [digital meetings] involves technical issues and cognitive load on the brain. It is completely different to look at a person through a camera with the face lagging, than to sit in the same room and read the body language.” - B2*

### 5.2.2 Creativity flourish around meetings

Creative discussions tend to take place directly before or after meetings, when people are gathered in a more informal and relaxed manner, perhaps around the coffee machine. Notably, remote meetings might end without a continued after-meeting talk.

*“[after the meeting] you go take a cup of coffee and a break and that is when creativity develops and a lot of other thoughts begin to bubble up that perhaps didn’t exist when you sat and actively thought about it.” - B1*

*“Most of the creative talk tends to always happen outside meetings. It is often on Fridays when you kind of have stopped working. You just sit and talk.” - C2*

### 5.2.3 Unstructured communication sparks creativity

An interesting empirical finding is the idea of unstructured communication, meaning the more informal and spontaneous conversations taking place in unstructured settings, most often occurring physically at the office. Remote communication forms, like text or video calls, generally tend to be more structured according to respondents, which allows for less unstructured communication where creativity seems to flourish.

*“I would say that innovation at home is maybe more thought-through in some sense, whereas it's more spontaneous at the office” - B2*

*“There are two words for play. ‘Structured play’ and ‘unstructured play’. In the office, you get a bit more of the unstructured [...] and when it's digital, it's very structured. You always book a time, join the call and try to get something done together [when digital].” - E3*

When asked which of the two contributes more to creativity, E3 says that the unstructured *“helps a lot more, it helps a lot more”*

Company E uses the digital tool Discord to help create unstructured and spontaneous communication in a remote setting.

*“Someone overhearing what you’re talking about in the office often leads to creative discussions. That is hard to emulate remotely I believe. [...] But that was not a problem at my*

*previous workplace where everyone was remotely connected to Discord. It became the office. [...] We use Discord as a remote communication tool [at company E as well]. That can give equally as much creativity as a discussion at the office. The odds for it to happen are just a bit lower.” - E1*

The concept of “serendipity” is brought up by one of the interviewees (B2) and is explained as “*what happens over a cup of coffee, like spontaneity*”. This concept of serendipity is indirectly mentioned by several other interviewees as well, when they say spontaneous conversations contribute to creativity.

#### 5.2.4 Lower threshold to communicate physically

The threshold to communicate tends to be lower at the office, which spur spontaneous discussions. This is related to the concept of unstructured communication or serendipity.

*“I prefer the office [for creativity] because there are lower thresholds to ask small questions.”*  
- D1

*“I would say it’s easy to have quick discussions [in the office]. I am more creative when I’m with someone else, can get input and just quickly say something.” - E2*

### 5.3 Relationships

Strong relationships are suggested to improve creativity as it leads to improved culture and a feeling of safety when sharing ideas. These relationships tend to be formed in the office environment, and not so much remotely.

#### 5.3.1 Safety spur creativity

A recurring topic was the difference in how confident the interviewees felt in sharing and discussing their creative ideas with their colleagues. A higher feeling of safety and trust, which by some were referred to as *psychological safety* (D2 and B1), seems to allow for creativity to flourish.

*“It is enough to meet [physically] an afternoon. [...] The ‘magic’ lasts for long, but fades away, so it’s important to keep it up in some way.” - D1*

*“Many of my colleagues are my close friends and we have a very ‘high ceiling’ with each other. [...] You don’t have to think much about how your ideas sound or are received, it is very free and that enables creativity to prosper. [...] That is one of the key aspects of coming to the office.” - C2*



One of the companies (D) puts emphasis into building relationships. D2 says that they *“had dinner at the office together yesterday, to invest time in building up the familiar feeling where people can feel that they are actually comfortable in the team.”*.

One of the respondents feels that managers aren't able to use their charisma to the same extent in a remote meeting, which consequently made the interviewee feel more equal and safe to share ideas. Interestingly, that is why they preferred remote meetings.

### 5.3.2 Strong culture flourish creativity

Some interviewees have expressed that culture and social belonging contribute greatly to creativity. This feeling seems to be created mainly physically and a remote setting could perhaps even harm the culture.

*“A big difference [with remote work] that affects creativity is that the culture definitely is harmed. We lose the entire social context. [...] I think if you just have a very good culture, it will lead to lots of creativity because people feel at home.”* - B1

*“It creates more empathy, trust, belonging and a feeling that you're in the same boat rowing together in the same direction. Compared to remote, when you're sitting alone and don't get the same social exchange.”* - B2

Many of the interviewed companies arrange off-sites a couple of times per year to allow for relationship building. Many argue that relationships are sufficiently built from only a few physical gatherings per year.

*“I think it is important to meet physically every now and then. It doesn't have to be often.”* - E1

*“I believe that everyone having close relationships and the same drive is very important for creativity. [...] This happens very much physically. Either at the office or when everyone meets at an off-site.”* - E2

Although a vast majority of respondents believe the physical environment is best for creating culture, some respondents pinpoint the ability and need of replicating this remotely.

*“I think trying to create a ‘vibe’ not just in person but also digitally, is something that enables creativity”* - E3

*“I don’t think you’re creative if you don’t feel a social connection with the people you work with, and it is very hard to emulate remotely. I think you need some sort of physical contact every now and then. And a strong virtual replacement for the office.” - E1*

## 5.4 Focus

When employees work independently in a remote environment, they tend to feel more focused and in control of their own time. However, a remote environment may lead to less focus when participating in collaborative meetings.

### 5.4.1 Less focus in remote meetings

Some respondents explained how remote meetings may be detrimental to creativity, as people are not fully focused.

*“It’s easier to be half focused digitally [during meetings]. If you have something else you need to fix you can deal with that, while at the same time listening with only one ear, which I think is very bad for creativity. When you’re in a [physical] room then everyone is 100% focused.” - E2*

Respondent E1 *“feels there is more focus if you’re sitting and talking to someone physically. If there is a notification on slack I’m much less likely to click on it and become distracted.”*, suggesting that some are less likely to be distracted in face-to-face meetings.

### 5.4.2 Less distractions remotely

A particularly recurring theme regarding focus is that people choose to work at home when they have to focus on a task, because the office environment is distracting. Respondent E1 prefers the autonomy and ability to choose where to work depending on which focus is required for the creativity. Respondents stated that the remote setting is better for individual creativity because you can turn off notification distractions.

*“When you work remotely, I would say that you have more control over all those distractions. I personally have turned off all the notifications and everything, so I don't even see when someone writes, but I open when I believe it is the good time to open.” - A2*

Further, respondents are believed to have more control of their own time when they work remotely. A1 believed that helping others lead to more time pressure for personal tasks, which gives less space to think creatively.

*“At home nobody can come and tap my shoulder and say ‘help me now’. I can choose a bit more. You’ll have to wait an hour. That’s a benefit with working from home, because I can control my time more.” - A1*

*“Text is more natural because it’s asynchronous. [...] I’ll finish it when I need to. That’s a difference between the asynchronous and the synchronous, where in a meeting you’ll have to solve it during the meeting.” - B1*

### 5.4.3 Breaks enable creativity

Remote environments may allow people to a greater extent take breaks and change contexts, during which creative ideas can be sparked. For example, B2 explained “the three B’s of creativity” by which he believed that creative ideas come in three different environments: the bed, the bus or during a bath.

*“I took a bath and that’s when I came up with a terrific idea. [...] I wouldn’t have been able to do it at the office. [...] That’s when the creative idea came.” - B2*

*“If I’m at home then most of them [the creative ideas] will probably come if I’m thinking about it during the walk with my dog. If I’m at the office then it is definitely like next to the people if someone brings up a problem and we start a discussion” - A2*

C2 also mentioned that while the home environment may prompt various distractions related to chores at the home, the change in activities is “*absolutely affecting [creativity] positively*”.

## 5.5 Motivation

When employees feel intrinsically motivated about their work they tend to be more creative. This motivation seems to be stronger when having colleagues around you at the office and also more easily transmittable face-to-face.

### 5.5.1 People around stimulates flow

There are empirical indications that working in the same room physically with other people can stimulate a working flow.

*“There are many people around me that I know are working towards the same goal. There’s something with that that makes you excited. [...] It’s not the same thing to see green icons on Slack.” - C2*

*“It’s easier for me to stay motivated in a group when I feel that I have people around me that are working on the same thing, which can be recreated virtually with text, words and so on, but requires more effort. Oftentimes it doesn’t happen.” - E2*

The motivation from having people around you makes employees more likely to be creative. For instance, E2 *“[...] believe you’re more creative when you’re happy and motivated. That tends to be at the office.”*.

### 5.5.2 Easier to motivate others at office

It is generally believed that it is easier to motivate others and explain goals through face-to-face interactions.

*“I believe that [the CEO] feels he has a very hard time conveying his vision during remote work. I think he prefers telling it face-to-face and push someone to challenge themselves than to do it through telephone or video.” - C2*

*“It might not spread the same way digitally compared to if you’re in the same room. The enthusiasm is maybe not conveyed in the same way. [...] You can’t grab someone’s shoulders and shake them a little. [...] You can’t show your encouragement in the same way.” - B2*

In addition, B2 believed you *“[...] can feel that working from home is a more negative workload pressure. It feels heavier in some way. At the office, you can light up the mood by cracking a joke or pranking someone.”*, suggesting that a motivating atmosphere might be easier to foster when working at the office.

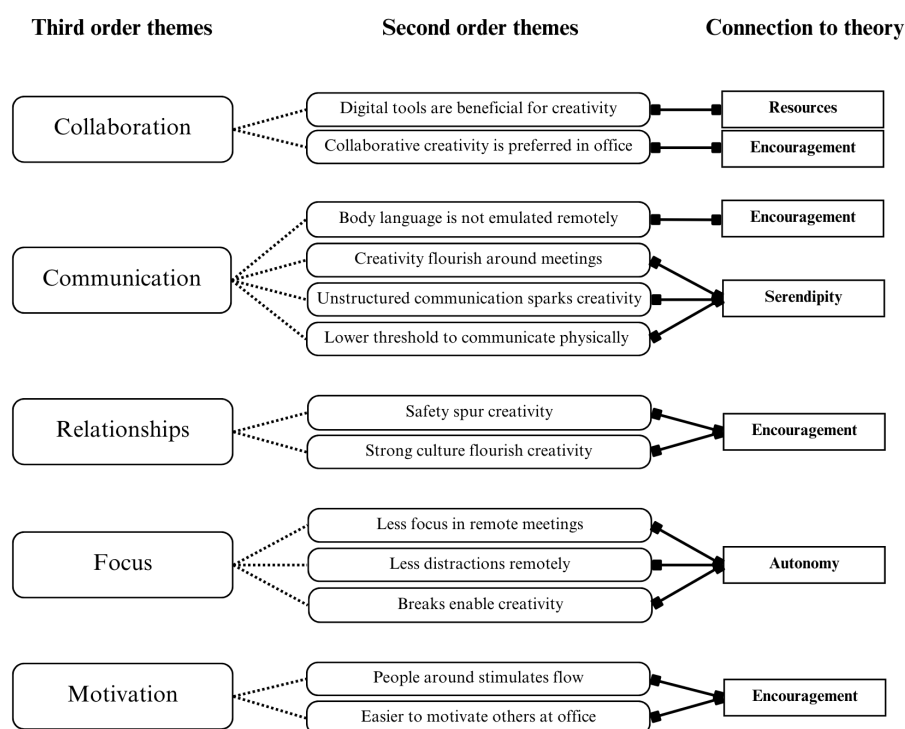
## 6. Analysis

This section will include an analysis of the empirical data with the aim to answer the research question “how does remote work affect creativity in startups”.

### 6.1 Connection of empirical themes to theory concepts

In Figure 6.1, the themes presented in the empirics section are connected to conceptual factors from Amabile’s KEYS model. The authors have been able to connect the empirical themes with three of the conceptual factors described in the KEYS model, while the remaining concepts of *pressure*, *challenge* and *organizational impediments* cannot be linked to any empirical findings. In addition, a theoretical concept *serendipity* has been added by the authors and refers to the idea of finding valuable creative sparks from spontaneous occurrences.

Six of the second-order codes have been connected to *encouragement*, as these all relate to encouragement of creativity. Three second-order codes, belonging to *focus*, relate to *autonomy* because they explain how (1) digital meetings allow for a higher level of control, (2) higher control of distractions remotely, and (3) remote work enables breaks that benefit creativity. Digital tools are related to the concept of *resources* as they explain how adequate remote and physical resources are. Finally, three second-order codes relating to communication have been added to a theoretical concept called *serendipity* since these do not fit within the existing concepts of KEYS.



**Figure 6.1:** Connection of empirical themes to theory concepts (Bengtsson & Edholm, 2023)

## 6.2 Analysis of empirical and theoretical connection

### 6.2.1 Encouragement

#### **Collaboration**

The idea of being able to bounce ideas off of each other and collaborate openly has to do with *organizational encouragement* and *work group support* in the way that it contributes to collaborative idea-flow and mutual openness, as explained in Amabile's KEYS model. It is much easier to bounce ideas in the office than remotely, likely due to immediate feedback, meaning that the face-to-face media has a higher richness. Some respondents explained physical collaborative creativity as a different *feeling* or *creativity in the air*. This likely related to the fact that the richness of communication is higher physically which boosts creativity, and trumps that of the remote environment. As such, remote collaboration may decrease the media richness and therefore have a diminishing effect on creativity.

#### **Communication**

When it comes to communication, *body language* is an evident aspect that relates to encouragement. Body language is harder to interpret or convey remotely, which without it is more difficult to perceive and show support. Consequently, it might be difficult to show mutual openness to others' ideas. In Amabile's KEYS model, lesser mutual support implies lesser work group support, which would diminish creativity. As such, the lack of body language means lower richness, which diminishes the extent to which encouragement can positively affect creativity.

#### **Relationships**

The aspects of safety and culture are improved by relationship-building and relates to the type of encouragement called *work group support*. When meeting physically, people more easily build a sense of *psychological safety*, compared to when working remotely, which respondents say makes it easy and free to communicate ideas. This safety is explained by respondents to positively impact creativity, which aligns with the work group support aspect of the Amabile's KEYS model. Consequently, working face-to-face leads to a higher richness and therefore higher ability to develop safety, implying that remote work can diminish the effect encouragement has on creativity. However, one interviewee felt more equal and safe in digital meetings due to a lower source richness.

Furthermore, empirics indicate that the aspects of culture, vibe and social belonging, positively affect creativity. This relates to a shared commitment and work group support, as explained in Amabile's KEYS model. It is more difficult to create a shared commitment through relationship-building when

working remotely. This is likely due to a lower media richness of the remote work environment, and specifically the *source* dimension of MRT which seems to be because higher personalisation physically is needed to build relationships. Hence, remote work could be seen to diminish the positive effect encouragement has on creativity.

### **Motivation**

A feeling of *flow* is created by having colleagues physically around you, which makes people feel more motivated about their work. Because this is harder to replicate remotely, it suggests that physical work is more media rich when it comes to encouragement. This richness specifically relates to the aspect of the *channel*, because you can physically see and hear other people, which differs remotely where you can only see digital icons indicating that people are working.

Regarding supervisory encouragement, as explained in Amabile's KEYS model, respondents generally believe it is easier for supervisors to encourage ideas physically. This is because you can actively show your support in multiple ways through more physical enthusiasm, which in terms of media richness means higher *channel* and *personalization* richness. The lower richness weakens the positive effect encouragement has on creativity.

### **Sub-conclusion of encouragement**

All of the mentioned aspects that relate to *encouragement* have shown that remote work has a lower media richness and diminishes the effect encouragement has on creativity. Therefore, as a sub-conclusion, encouragement is moderated by media richness, where being face-to-face (i.e. high information richness) leads to the encouragement being better received. Since remote work leads to less face-to-face interactions, and therefore less information richness, remote work might diminish the effect encouragement has on creativity.

## **6.2.2 Autonomy or freedom**

All aspects mentioned in the empirical theme *focus* relate to the conceptual factor *autonomy*. During digital meetings, employees find it more difficult focusing because they tend to be more easily distracted by other tasks or needs. Perhaps this is because there is lower *channel* richness in digital meetings, as multitasking is less noticeable remotely. The increased autonomy in digital meetings leads to less focus which is believed by respondents to diminish creativity. Interestingly, this contradicts the stimulant scale that autonomy has on creativity in Amabile's KEYS model. This creativity during meetings may be considered collaborative.

However, some empirical findings suggest the opposite, which is that remote work could increase autonomy and control over one's own time. Respondents explained that it is common for employees to be interrupted by coworkers in the office, wanting to discuss something or asking for help. In contrast, the remote environment has an innate feature in which people can choose to read their coworkers' messages whenever they choose, providing a more asynchronous workflow which provides a higher degree of autonomy or freedom for an individual. This asynchronicity could be explained by *feedback* richness as it implies that the remote medium has a lower media richness. Consequently, remote work may lead to less immediate feedback, which in turn increases autonomy and has an amplified positive effect on creativity.

Furthermore, the remote environment leads to an increased autonomy which makes it easier for employees to take breaks from work tasks. While these breaks are believed to have a positive impact on creativity, this aspect does not have any direct connection to media richness, but rather may relate to benefits of the remote environment itself.

The sub-conclusion is therefore that the media richness in a remote setting may moderate the effect which autonomy has on creativity. From a collaborative perspective, the lower media richness during digital meetings may make autonomy's effect on creativity negative. From an individual perspective, the lower information richness during remote work may amplify the positive effect autonomy has on creativity.

### 6.2.3 Resources

When it comes to resources, a finding that seems to differ between the remote and office work environment, is the availability and ability of tools. Due to digital tools being feature-rich, as explained by interviewees, digital tools can be seen as having a high level of media richness, more so than physical tools such as whiteboards. This richness mainly concerns *feedback* richness because a large amount of people can see and edit the document simultaneously with immediate feedback, compared to whiteboards where there is a limit on how many people can be in a room and edit on the whiteboard. However, fewer respondents believed that tools themselves may not always matter but rather the *feeling* in the room.

Thus, media richness therefore has a positively moderated effect on resources and since digital tools are more used in a remote work setting than physical, remote work amplifies the positive effect resources has on creativity.



#### 6.2.4 Pressures, challenges and organizational impediments

During the empirical findings, no observed differences were found between the remote and physical environments relating to the conceptual factors *pressure*, *challenges*, and *organizational impediments*, as explained in the KEYS model. Thus, media richness does not seem to influence the relationship between these factors and creativity.

#### 6.2.5 Serendipity

Interestingly, a conceptual factor has emerged from the empirics as an addition to the original conceptual factors in the KEYS model. This factor is named *serendipity* and refers to the idea of finding valuable creative sparks from spontaneous occurrences. This factor is deemed to be a stimulant scale and therefore has a positive effect on creativity.

The empirics have shown that many creative conversations happen around meetings and that these conversations rarely occur remotely. Perhaps this has to do with employees being in a more relaxed environment, instead of a structured meeting environment, which may imply a higher degree of *source* richness where people can be more personal in the office.

Empirics show that unstructured communication happens more frequently at the office, whereas digital meetings may have a set agenda and thus be more structured. Although unstructured and spontaneous communication might be able to replicate digitally, it is less likely to happen and harder to create. This finding is thus highly related to media richness when it comes to (1) *feedback*, where being physically present allows for more immediate feedback, (2) *channel*, where physical presence provide more channels than remote, (3) *source*, with physical presence having more personal and rich media, and (4) *language*, as there is no expected language or communication norm to follow when physical.

The threshold to communicate is much lower physically because employees can have quick discussions in the office, which tends to not occur as much remotely. Respondents feel more creative when the threshold is lower. Working at the office provides another *channel* where it is possible to see what someone is working on. In addition, this finding also suggests a higher *feedback* richness with more immediate communication.

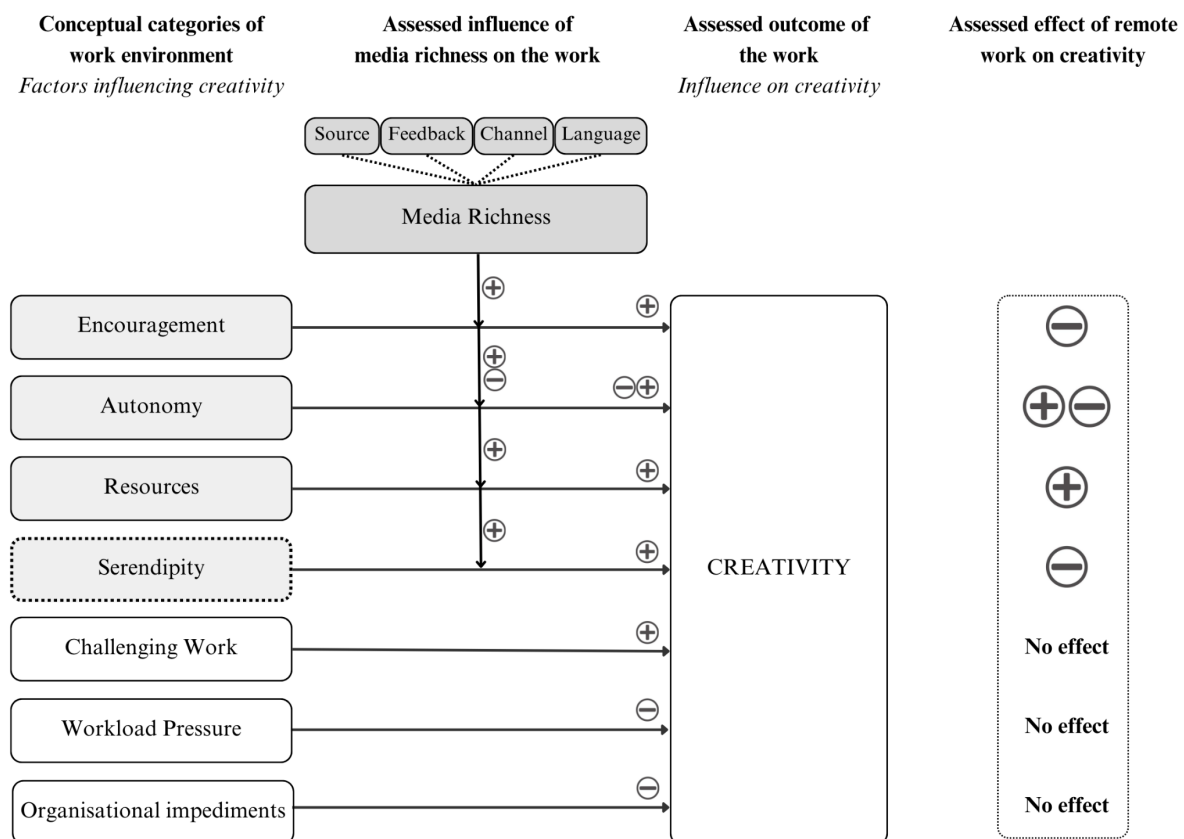
To conclude, all aspects relating to serendipity have a positive impact on creativity. Notably, serendipity is moderated by the media richness where a high media richness is required for the serendipity to have a positive impact on creativity. Therefore, it can be concluded that media richness amplifies the positive effect that serendipity has on creativity.

## 7. Discussion and Conclusion

### 7.1 Answer to Research Question

The study has investigated the effect that remote work has on creativity in startups. Through 12 qualitative interviews with startup employees, the aim has been to answer the following research question: *How does remote work affect creativity in startups?*

The study has used a combined theoretical model consisting of Amabile's KEYS model and Media Richness Theory. Empirical findings have been connected to theoretical aspects of the model. The difference in environment between remote and physical settings are analyzed through the lens of media richness. The conclusion, summarized in Figure 7.1, is that there have been found four work environment factors which are moderated by the degree of media richness on their effect on creativity. Three of these factors are from the original KEYS model, *encouragement*, *autonomy*, *resources*, while *serendipity* is a concept that has been added to the model. The remaining three conceptual factors have not been found to be moderated by media richness.



**Figure 7.1:** Depiction of how remote work affects creativity (Bengtsson & Edholm, 2023)

The way media richness moderates the various conceptual factors describes how remote work affects creativity as a whole.

### **Encouragement**

Higher media richness amplifies the positive effect encouragement has on creativity. Remote environments lead to lower media richness, which diminishes the effect encouragement has on creativity.

### **Autonomy**

For collaborative creativity, a higher media richness amplifies the positive effect autonomy has on creativity. Remote environments lead to lower media richness, which diminishes the effect autonomy has on collaborative creativity.

For individual creativity, a higher media richness diminishes the positive effect autonomy has on creativity. Remote environments lead to a lower media richness, which amplifies the effect autonomy has on individual creativity.

### **Resources**

A higher media richness amplifies the positive effect resources have on creativity. Remote environments lead to a higher media richness, which amplifies the effect resources has on creativity.

### **Serendipity**

A higher media richness amplifies the positive effect serendipity has on creativity. Remote environments lead to a lower media richness, which diminishes the effect serendipity has on creativity.

### **Workload pressure, challenging work, and organizational impediments**

Remote work has not been found to influence workload pressure, how challenging work is perceived, nor organizational impediments.

## **7.2 Contribution and Implications**

Previous research has uncertainties regarding how innovation is replicated in a virtual setting (George, Lakhani et al. 2020, Grözinger, Irlenbusch et al. 2020). This study could be argued to contribute to decreasing this gap in research. Furthermore, several scholars express concerns whether creativity can be transferred into a remote context (George, Lakhani et al. 2020). This study might help in showing

*how* a remote context affects various factors that contribute to creativity. In addition, to the best of the author's knowledge, this study is unique in the way that it analyzes organizational creativity through the lens of remote work using Media Richness Theory.

In line with Thompson's (2021) work, this study found that digital tools could improve creativity and ideation. This study contradicts some research by showing that collaboration at the office is preferred and that employees have less focus in remote meetings, harming creativity (Kniffin, Narayanan et al. 2021), which on the other hand is in line with other research (Brucks, Levav 2022, Garlatti Costa, Bortoluzzi et al. 2022).

As remote work recently has become a popular policy, not least for startups, it is important for practitioners to consider how remote work affects creativity. This study could give insights into how work environment factors that affect creativity are affected by remote work. Encouragement might be harder to convey in a remote environment which negatively affects creativity. Further, regarding *autonomy* and employees' control of their own time, collaborative creativity might be negatively affected by remote work, whereas individual creativity is improved by remote work. Furthermore, the remote environment may lead to the use of digital tools which are more beneficial for creativity than those that are physical. Interestingly, the physical environment seems to be a strong contributor to spontaneous and serendipitous conversations that allow new ideas to form. Lastly, the perceived feeling of workload pressure and intellectually challenging work doesn't seem to be affected by remote work, and nor does organizational impediments.

### 7.3 Limitations

Empirical findings are subject to potential bias and errors depending on how the authors have interpreted the data. Additionally, the theoretical framework constitutes the basis for which concepts were investigated, which means there might be other factors that could affect creativity. For example, *serendipity* is a factor which has been found outside of Amabile's KEYS model. As such, there may be other factors that remain to be investigated on what effect remote work has on them. Finally, the interview subjects are all employed at tech startups which might make our conclusions difficult to transfer to other company types or domains.

### 7.4 Suggestion for Future Research

This study has investigated a theoretical model which combines remote work through the lens of Media Richness Theory and creativity through Amabile's KEYS model. Since this study found a conceptual category outside of KEYS (namely *serendipity*), one might consider investigating this further or use a different model of organizational creativity that brings up other factors as contributors

to creativity. In terms of this study's usage of a qualitative method, future research might investigate quantitatively how the different conceptual categories of Amabile are moderated by media richness. Regarding the sample of interview objects, future studies could expand the sample size and characteristics, for example beyond startups and in domains other than tech.

## 7.5 Conclusion

The study found that remote work affects creativity in startups through various factors. Creativity is negatively affected by remote work in three ways: encouragement is more difficult to convey remotely, creative collaborations are less focused remotely, and there are less spontaneous discussions for new ideas. However, creativity is positively affected by remote work in two ways: individuals can control distractions at home, and feature-rich digital tools may aid creativity.

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# Appendix

## Interview Guide

### Initial questions

- Please briefly explain what XX does and the tech product you offer.
- Please explain your role and your main tasks.
- What does the remote work policy look like at your company?
  - How do different teams or people at the company choose to work?
- In what situations do you personally choose to work remotely vs physically?
- What are your general perceptions on your personal arrangement?
- When do you feel most creative?

### Organizational encouragement

The following question are about organizational encouragement at XX

- To what degree is risk-taking encouraged at your company?
- How does the idea generation process look like at your company?.
- How might the encouragement of risk-taking and idea generation differ in a remote vs physical setting?
- Could you give an example of when you've received support for an idea that you've presented in a remote or physical setting? How do you think this situation might be different if you presented it in the other type of setting?
- On the other hand, could you please give an example of when you have supported someone else's idea? How might your support differ in a remote or physical setting?
- Could you describe in what ways creative work is rewarded and recognized in your organization? How might creative ideas be rewarded or recognized differently in a remote vs physical setting?
- Could you give an example of how creative ideas are collaborated across a team or the organization? How is this different in a remote or physical setting?

### Supervisory encouragement

- Describe your relationship with your supervisor, specifically in terms of goal setting, interactions and their support. How do your interactions differ remotely vs physically?
- How are your goals different when working remotely and physically?
- To what extent is there trust between you and your supervisor?

### Work group encouragement

- How do work group meetings differ remotely and physically?
- Which people do you meet physically and which do you meet remotely?
- Can you describe who you meet physically? Can you describe who you meet remotely?
  - From which teams and roles do they belong to?
- Can you describe who you meet in a non-work setting from your company?
- To what extent is there trust between you and your team?

### Knowledge sharing

- How do you share knowledge inside your team?
- How do you share knowledge outside your team?
- How might the knowledge sharing be different when working remotely vs physically?

### Other questions

- What are some things that might block your creativity?
- What are potential distractions that you might encounter physically vs remotely?

### Freedom / autonomy

- Can you explain how your tasks might be divided between a physical and remote setting?
  - How interesting do you perceive these tasks to be?
  - How challenging do you perceive these tasks to be?
- To what degree would you say that your day-to-day tasks are autonomous or controlled?
  - What might potential differences be in autonomy between physical and remote settings?

### Resources

- Can you describe a situation when you have worked creatively and generated a specific idea, either as a team or individually?
- What tools can you use to aid in a creative process when working remotely? What about physically?
  - How useful do you perceive these tools to be?
  - In what situations do you learn how to use them?

### Pressures

- Where do you feel the workload pressure to be the most excessive, in a remote or physical setting?
  - How do you as an individual perceive this workload, as a positive challenge or negative stress?
- In which setting do you feel the most time-pressured?
- How might the time pressure affect creativity?

### Organizational impediments to creativity

- When you perform creative work, do you feel that there are organizational factors influencing your creativity positively or negatively?

### Media Richness Theory

- When you're sitting at the office and suddenly you get a new idea, what do you do?
  - What about when you're working remotely?
  - How efficient do you believe this process to be?
  - From both the remote and physical perspective, how are these ideas developed or implemented?
- What media do you use for communication, physically vs. remotely?
- Specifically when communicating new ideas between employees, how well do you perceive these different media to communicate your message clearly and efficiently?