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Exploring the Virtual Cubicle: A Phenomenological Study on Immersive Telecommuting

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Abstract—This study explores the phenomenon of immersive telecommuting in virtual worlds, focusing on its implications for organizations and employees. Conducting a phenomenological study, the author of this study observed a week-long experiment where employees of a French SME used the virtual world Virbela for work. Interviews revealed positive aspects such as timesaving, collaboration facilitation, and enhanced team cohesion. Avatars were noted as significant, fostering personal connections. Technical challenges were minor. Participants favored immersive telecommuting over traditional remote work due to several reasons such as a reduced feeling of loneliness. The study ends with some limitations and recommendations for future research.

Keywords—immersive telecommuting, virtual worlds, remote work, avatar, phenomenological study

I. INTRODUCTION

Virtual Worlds have been used for years sometime as games, learning platforms, or even for work as an extension of the physical offices of an organization. For example, *Metaverse* by Havas aims to conduct job interviews on The Sandbox, specifically in a custom-built facility on a plot of land purchased for €120,000 in 2022 [1]. Several virtual platforms have emerged such as Teemew, Horizon Workrooms, WorkAdventure and Kumospace.

Telecommuting is defined by Cambridge Dictionary as “the activity of working for a company but staying at home and communicating with an office by computer and telephone” [2]. For our research, we defined immersive telecommuting in a virtual world as followed: “a despatialized way of work, during which, workers are connected to a virtual world allowing them to communicate and collaborate with other members of the organization.” Despatialization is a concept popularized by Laurent Taskin and is defined as the loss of physical and psycho-sociological proximity, and in other words, the psycho-sociological effects due to the physical distance of workers [3], [4].

This topic has interested researcher from different countries and field of expertise: Reference [5] is a study on the effect this way of working could have on the migration of inhabitants from megacities to rural areas in South Korea. Reference [6] is a study investigating the use of a metaverse as a virtual workplace. In another study, researchers interviewed individuals who had experienced in-person, hybrid, and work in a metaverse [7]. Unlike our study, not all participants had necessarily used a metaverse for work, and the interviews did not necessarily occur after a week of work in a metaverse. Thus, the responses they obtained were based on previous experience on different platforms depending on the respondents. As of today, there were not a study published

to describe working in a virtual world from the participants’ point of view.

This leads us to the following issue: What is the lived experience of working in a virtual world? To address this issue, we propose several research questions: What are the characteristics of working in a virtual world? How are team cohesion and sense of belonging maintained in a virtual world? What is the role of the avatar in the context of working in a virtual world?

To answer these questions, we have decided to conduct a phenomenological study.

II. METHOD

At the beginning of this study, a company contacted the author to let him observe them as they were planning on working remotely but connected in a virtual world. For ease of understanding, this organization will be referred as the ABC Company. The latter was already allowing telecommuting, but never via a virtual world. This was going to be the first time being all physically separated but virtually in the same place.

Semi-structured interviews were conducted following a week of experimentation from November 27, 2023, to December 1, 2023. During this week, all employees were required to logged-in to the chosen virtual world: Virbela. They were not allowed to use other internal communication means (emails, phone calls, SMS, WhatsApp). During the week, there were team meetings and some team building activities. Even when one was not in a meeting, the instruction was to stay connected.

We have decided to conduct a phenomenological study, because this method allows the study of perceptions and expectations that individuals have regarding new innovations, but more importantly it “describes the common meaning for several individuals of their lived experiences of [...] a phenomenon” [8], [9], [10]. The objective of our phenomenological study was to describe what it meant to work in a virtual world for a French SME.

We conducted 8 semi-structured interviews. These interviews were conducted remotely and recorded with the interviewee’s consent. The participants’ profiles were varied, both in terms of position, type of contract, years of experience, and seniority in this company.

For data analysis, we followed the steps suggested in the literature [8], [11], [12], [13]. In a phenomenological study, the author’s experience and stereotypes should not be mentioned or at least should not interfere with the interviewee’s experiences. For that purpose, the author must

recall all his memory about his experience, write them down, and set them apart [9]. After transcribing the interviews, we read them several times to identify significant statements from each interview. Each significant statement was associated with a formulated meaning, which was then clustered under a theme. The last step is to use all the themes and formulated meanings to write a composite summary of the phenomenon.

III. RESULTS

From 8 interviews, we collected a total of 107 significant statements, which enabled us to develop 15 themes.

Overall, participants highlighted various positive aspects of immersive telecommuting, including timesaving, practicality for collaboration, and team cohesion. Indeed, when an employee wanted to have some information, instead of calling and texting, the employee just had to simply use an avatar to move around the virtual workroom and go to another employee's office to ask for that information. Usually, when they were telecommuting without the virtual world, they had to send a message via WhatsApp and wait for the answer (which can take hours, or even days). Plus, the fact that they could use an avatar to move around the virtual office gave a sense of presence. Notably, the creation of avatars emerged as a distinctive feature, with most respondents forming personal connections with their virtual counterparts. Aside from scheduled meetings, almost everybody had the opportunity to engage in spontaneous conversations with each other. Moreover, some found it easier to interact virtually than usually. While technical challenges were acknowledged, they were generally minor and did not significantly disrupt operations. However, having a second computer display seemed to provide a better user experience. Even though having an avatar was helpful for this week, the avatar creation process can take some time depending on the individual. Thus, some limited themselves to basic characteristics, while others delved deeper into customization. For those who did not find themselves in the platform's offered options, beyond avatar's appearance, it was the image it could convey to others that mattered.

Comparisons between traditional and immersive telecommuting revealed a preference for the latter due to perceived drawbacks of traditional remote work, such as feelings of loneliness and sadness.

IV. CONCLUSION

Through this study, our aim was to make organizations understand, on one hand, the benefits and risks that immersive telecommuting in a virtual world can bring, and on the other hand, for virtual world developers, to report the features favored by employees and thus adapt their current solutions. From a theoretical point of view, immersive telecommuting has never been studied using a phenomenological method. Like any study, ours has some limitations. First, we conducted this study based on a week of experimentation. If the experience had lasted longer, the employees might have demonstrated other behaviors (weariness, recurring episodes of fatigue, etc.). We suggest that future studies in this field test with other virtual worlds and longer experimentation durations. And second, our study

was based on one virtual world. Future research should see how the participants react when it is another virtual world. Last but not least, future research could use other theories to analyze this subject, such as the Unified Theory of Acceptance and Use of Technology 1 (UTAUT 1) to understand the organizations' acceptance of working in a virtual world [14].

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