

Article

Smart workspaces and the sense of ownership – the impact of the work environment in the emergence of psychological ownership

Mihaela PASCAL ¹

Citation: Pascal, M. (2023). Smart workspaces and the sense of ownership – the impact of the work environment in the emergence of psychological ownership. *Network Intelligence Studies, Year (volume) XI, Issue (21), 75-84*

Received: 11 May 2023

Revised: 29 June 2023

Published: 30 June 2023



Copyright: © 2023 by the authors. Published by *Network Intelligence Studies*.

This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

Abstract: The presence of psychological ownership in a work environment can result in enhanced commitment, increased motivation and a strong sense of loyalty towards the organization. The purpose of this paper is to identify if the smart workspaces, that promote the idea of “our” space, can lead to psychological ownership. Specifically, we investigated how the work environment influences three mechanisms through which psychological ownership emerges: the control over the ownership target, the level of knowledge gained over the target and the investment of the self into the target. We collected the data by conducting 20 in-depth interviews and the results highlight that most of the employees do not feel like they have their own place mainly due to the lack of privacy and the impossibility to personalize the workspace according to their needs. Regarding the three mechanisms studied, the results reveal that employees perceive a restricted level of control over the workspace. Nevertheless, they acknowledge that such an environment actually promotes knowledge sharing and communication among team members. This study also provides recommendations for companies on how to improve employee satisfaction and to foster the psychological ownership.

Keywords: psychological ownership; smart workspaces; control over workspace; employee satisfaction;

Classification-JEL: D23, M14, M30, M31, O35

¹ Alexandru Ioan Cuza University of Iași, Romania

INTRODUCTION

Over the past five years, there have been substantial shifts in the workplace policies implemented by companies operating all over the world. The pandemics determined a large part of the organizations to adopt remote work policies to protect employees and to accommodate the health and safety regulations. As part of this transformation, alongside the option of working from home, various alternatives for workspaces have emerged. These include workations, where individuals work from vacation destinations such as beaches or mountains, as well as the availability of working from hotel rooms or specially designed hubs that offer optimal working conditions. Once the effects of the pandemic subsided, companies started seeking solutions to accommodate both new and existing employees within their current working spaces. In Romania, the top employers are adopting the concept of smart workspaces with the main purpose of increasing collaboration within teams and addressing employee's need for flexibility throughout the workday. Even though the pandemic re-designed the way of working by encouraging companies and employees to reduce the physical contact or common areas, the new policies encourage team bonding in order to enhance innovation and to increase individual and team performance.

In the realm of architecture and urban planning, researchers examine psychological ownership to understand how the design of spaces affects individuals' feelings of ownership and attachment. The individual psychological ownership is defined as the feeling that "the target of ownership or a piece of that target is 'theirs' (i.e., it is MINE!)" (Pierce et al., 2003, p. 86), while the collective ownership has been defined as "the collectively held sense (feeling) that this target of ownership (or a piece of that target) is collectively 'ours'" (Pierce & Jussila, 2010, p.812). Moreover, Pierce et al. (2003, p. 92) state that "the roots of psychological ownership can be found, in part, in three human motives: (a) efficacy and effectance, (b) self identity, and (c) 'having a place'". The last motive, having a place, pertains to fundamental human needs for belonging and security, which are frequently associated with the notion of territory, as well as abstract elements such as native language or local cuisine. Individuals tend to identify themselves with particular territories (a country, city or neighborhood) which they consider their "home". As a result, they are inclined to invest time and effort in incorporating specific elements from their home territory into different environments, including working spaces.

Consequently, the development of psychological ownership can be influenced by the company's ability to create a sense of "home" for its employees. This paper aims to examine the correlation between smart workspaces and psychological ownership, specifically focusing on how three antecedents are influenced: control over the target, getting to intimately knowing the target and investing the self in the target. The objective is not merely to identify the presence of psychological ownership based on these antecedents, but rather to comprehend whether they are manifested and the reasons behind it. Prior research has established that these antecedents can result in significant positive effects for companies, including: increased motivation and engagement (Martinaityte et al., 2020); increased job satisfaction (Van Dyne & Pierce, 2004); affective commitment toward the organization (Brown & Zhu, 2006); enhanced innovation and team creativity (Wei et al., 2019); increased retention and loyalty (Avey et al., 2009; Zhu et al., 2013); organizational citizenship behaviors (Özler et al., 2008).

To collect the data, we conducted in-depth interviews with 20 employees from four distinct companies that have implemented smart workspaces. The sample was a convenience one, as we focused on selecting participants based on their working conditions rather than demographic criteria.

LITERATURE REVIEW

The architectural and design aspects of the physical workspace adopted by an organization can foster a sense of ownership among employees, both on an individual and collective level. This sense of ownership is aimed at influencing job performance and, ultimately, the overall perception of the organization. Pierce et al. (2003) define three antecedents of psychological ownership: control of the target; intimate knowledge of the target and self-investment into target. Control refers to the actions that the individual can take on the target to achieve the desired outcomes. As per Peck and Luangrath (2023), a higher level of perceived control corresponds to a stronger psychological ownership. The control is experienced at a cognitive level and serves as an instrumental function (Pierce et al., 2003). The second antecedent, intimately knowing the target, refers to the level of knowledge an individual comes to acquire about a specific target. Thus, individuals who get to know an object in depth, tend to feel a pronounced sense of ownership because they feel more connected to it. Within an organizational context, knowledge acquisition can be enhanced by presenting employees with the

organization's values, mission, and vision statements. Additionally, providing opportunities for involvement in various projects can help individuals gain a comprehensive understanding of the bigger picture. The third antecedent, self-investment, refers to the resources that an individual dedicates to the target: time, effort, money, energy or attention (Peck & Luangrath, 2023). Individuals frequently invest a part of themselves into their working space, considering the significant amount of time they spend there. As part of this investment, the workspace becomes an extension of their self, ultimately defining their identity in relation to others (e.g., "this is my workspace").

Frequently, companies make investments in the creation of comfortable and innovative workspaces to convey their organizational culture and to shape the desired image among both internal (employees) and external stakeholders. Furthermore, there is a compelling economic rationale behind the adoption of open workspaces, aiming to maximize desk utilization and reduce costs by accommodating more employees in a smaller area. The new workspace policies encompass strategies such as 1) hot desking, where employees are encouraged to select a different desk each day on a first-come-first-served basis, and 2) hoteling, which educates employees to reserve their desk in advance based on availability and personal preference. According to Worek et al. (2019, p.85), the concept of smart workplaces has emerged to address different activities and fulfill the needs of employees by providing a range of facilities such "concentrated work areas, network areas where informal exchange with colleagues occurs, meeting rooms, project areas and areas for phone calls". By adopting this working approach, the organizations offer less or no empowerment to employees to adapt the space to their needs and identity, leading to a decreased job satisfaction, as the personalization is one of the most important factors influencing the emergence of psychological ownership. Kupritz (1998) identified a few aspects that the employees consider important at a workspace: to have an adequate work surface and adequate storage; to have easy access to reference materials; and the teams who work on the same project to be located close together. Moreover, the author mentions some minimum conditions that a workplace should fulfill in order to respond to the employees' need for privacy: "having minimal traffic routed through the worker's area, a conference room, and the workspace located away from the main traffic flow" Kupritz (1998, p. 352). Furthermore, the study concludes that there is no need to provide traditional offices, with doors and floor-to-ceiling solid walls but that employees value spaces that ensure acoustic

and visual privacy. Millward et al. (2007, p. 560) found that assigning a desk to employees will lead to a "stronger team identification and also a strong effect on the perceived value of face-to-face communication" while employees without an assigned desk, "reported valuing electronic engagement more, which was fundamental to their higher organizational than team identification".

Worek et al. (2019) studied the impact of desk sharing (hot desking) on the employee commitment. The results show a negative correlation between desk sharing and the level of commitment, as "the more radically desk sharing was applied, the lower the values of employee commitment are" (Worek et al., 2019, p. 93). Kim et al. (2016, p.210) found a negative correlation between hot desking and productivity, due to "insufficient workspace (desk, storage), difficulties to locate colleagues, waste of time setting-up/packing-up, and inability to adjust/personalize workstations".

In the literature, we can find a number of factors that proved to have a positive impact on the emergence of psychological ownership. Knight and Haslam (2010, p. 166) showed that empowering employees to decorate their own working space would lead to an increased productivity and to an enriched psychological comfort and organizational identification. Pierce, O'Driscoll and Coghlan (2004, p. 507) showed that when individuals experience control over their job and work environment they will nurture feelings of ownership for their job and the organization. Moreover, the authors demonstrated that the perceived control mediates the relationship between ownership and technology, the results showing that "when individuals felt that they had control over their work, the potentially negative impact of a routine technology that embedded control in the system was ameliorated" (Pierce, O'Driscoll and Coghlan 2004, p. 527). Brown and Zhu (2016, p.55) investigated the relationship between ownership and territorial behavior in organizations and concluded that the two concepts reinforce one another, explaining that "territorial behaviors are not simply about expressing ownership over an object (e.g., this is mine) but are centrally concerned with establishing, communicating and maintaining one's relationship with that object relative to others in the social environment (e.g., this is mine and not yours!)".

METHODOLOGY

The present study is qualitative in nature aiming to gain in-depth insights from employees who work in smart workplaces on how they experience

psychological ownership and why they are feeling this way. An additional purpose is to identify improvement directions that companies can implement in order to empower employees with greater control, knowledge and opportunities for self-investment, thereby fostering and enhancing psychological ownership. As part of this study, we conducted 20 in-depth interviews based on a structured guide containing 12 open-ended questions, divided in four main sections: a) general perceptions regarding the smart workspaces; b) the level of perceived control over the working environment; c) the familiarity gained through this type of working environment; and d) the self-investment into the ownership target. The sample for this study comprised employees from four distinct corporations, who work in back-office roles as well as management or experts positions. The sample included 15 women and 5 men, with ages between 25 and 45 years. The selection criteria required participants to be employed by a company that had implemented a smart workplace style and to work from the office at least one day per week, if not exclusively.

Following data collection, we employed an emergent coding procedure to identify the primary themes expressed by the participants and analyze their frequency. To provide a comprehensive understanding of how the antecedents of psychological ownership are activated in this particular work environment, we utilized Atlas software.

RESULTS

In the first part of our interviews, we investigated how the workspace accomplish employee's need to have a place. The results indicate that the majority of participants do not perceive having their own personal space ("my place"), due to three main reasons. Firstly, their space is not physically separated from their colleagues, resulting in a lack of privacy throughout the workday. Secondly, there is a not much available physical space for them to carry out their daily tasks. Lastly, participants don't have the opportunity to personalize their workstation with personal objects significant to them. In Figure 1 we can observe that the lack of privacy can cause emotional stress to the employees because of the way in which the work equipment is arranged, offering visibility to the general public on the activity carried out ("I feel suffocated and it seems to me that if I talk too much with someone using the internal chat I will be asked why I am talking instead of working"). Moreover, the lack of privacy is

associated with noise, lack of concentration and a lack of a delimitation between "my space" and the space of "my colleagues". Nevertheless, a part of the respondents declared that the smart workplace fulfils their need to have a place through the availability of various equipment at all times, as well as the opportunities for collaboration with other team members, enabling the sharing of knowledge and personal experiences. There were only two persons who mentioned that they try to personalize the desks by adding their favorite objects of funny memes related to their privacy, but only for short term, as they are not allowed to leave them there at the end of the working day. Despite having multiple options to choose from, none of the available spaces feel personal to the participants, as they are used for short term and have to be standard, not customized.

The study participants used a total of 31 keywords to describe the smart workspaces. Among these keywords, the top four were "exposure" and "comfort," both with four mentions each, followed by "socializing" and "noise," each with three mentions. These keywords provided valuable insights into both positive and negative aspects of the workplace, allowing us to identify the main categories that fall within these two dimensions. In the negative dimension, we identified three categories related to privacy, physical and psychological comfort and environmental factors (Figure 2) while the positive dimension comprised three categories related to collaboration and socialization, physical and psychological comfort, and an additional category referred to as "other," which encompassed keywords such as color, technology, and dynamism (as illustrated in Figure 3).

Asked about the type of spaces where they feel most comfortable, the respondents associated the concept of "home" or "my space" with the relaxation spaces, such as break rooms, kitchen and kitchenette, mostly because they have the opportunity to socialize and to share personal experiences in a friendly environment. Furthermore, the meditation rooms or the meeting rooms offer a sense of "home" primarily attributed to the privacy they provide and the absence of noise. These spaces enable employees to explore their personal identity rather than solely being part of a collective environment.

Regarding the antecedents of psychological ownership, our initial focus was to gain an understanding of how employees can exert control over their work environment. The findings show that the majority of participants do not feel that they can control their environment because there is a high possibility that during the next day they will have to work from a different desk. During the analysis, we

identified the main elements that are related to the lack of control: the work environment and the stress to find the best desk that would ensure the optimal temperature and noise conditions (Figure 4). Regarding the work environment, the main elements that are beyond the control of employees include: impossibility to adjust luminosity and temperature in the common areas, resulting in uncomfortable situations that can affect their productivity; the level of noise; the lack of privacy and the impossibility to personalize their desk. However, there are certain factors that contribute to employees feeling a sense of minimal control: they are able to adjust their work equipment (standing desks, ergonomic chairs, adjustable monitors); there are available additional equipment to help them reduce the noise (headphones) and to improve privacy (laptop privacy films); they have the flexibility to choose from different working spaces during the workday (focus rooms; meeting rooms); they can make short-term adjustments to the ambiance and also have the possibility to negotiate environmental conditions with their colleagues. Furthermore, employees appreciate the flexibility to decide when they work from the office, allowing them to choose days with fewer colleagues present or arrive earlier to select their preferred desk.

During the interviews, two primary directions surfaced as essential areas for employers to prioritize in order to meet and enhance employees' need for control over their workspace: 1) empower the employees by involving them in decisions that directly affect them (e.g. seeking for their opinions before making a decision; offering flexible working programs and allowing employees to choose the most suitable option for their needs); 2) improve workspace policies by providing employees with the opportunity to choose their preferred desk and implementing measures to ensure that the allocation is respected. Allocating individual desks for each employee, which would guarantee privacy and allow for personal customization based on their personality and needs, is another improvement that can be made. Additionally, ensuring the availability of multiple meeting rooms that can be easily booked further enhances the employees' sense of control over their workspace.

The results for the second antecedent of psychological ownership, coming to intimately knowing the ownership target, reveal that employees agree that the open space design encourages the exchange of knowledge that will most often lead to a better understanding of the job requirements and the company. Moreover, the technology employed in smart workplaces plays a crucial role in facilitating communication among employees,

regardless of their geographic locations. It enables flexible working schedules and allows for seamless contact with colleagues who work from home. Smart workplaces enhance collaboration by simplifying the communication process and providing a platform for debating multiple perspectives on various matters. Information is transmitted directly, minimizing the chances of distortion, and reaching all individuals who are impacted by it. On the downside, it should be noted that in smart workplaces, there could be instances where sensitive information is leaked before being officially communicated, primarily due to the absence of clear delimitations between desks. In addition, certain employees have raised concerns about the prevalent use of emails or chat for communication, despite the workspace being designed to encourage direct interaction among colleagues.

According to the participants, there are several actions that employers can take to facilitate knowledge sharing and increase familiarity with the organization. These actions include: 1) organizing spaces for ad-hoc meetings on the floor, which are perceived as less formal and encourage active participation compared to the ones conducted in meeting rooms; 2) creating and utilizing communication corners, such as monitors and news boards, to effectively communicate urgent or important information to employees; 3) enhancing human contact when communicating administrative information. Instead of directing employees to internal portals that can be difficult to navigate, employers should increase personal interaction and provide clear and accessible channels for information dissemination. Furthermore, it is important to improve the efficiency of internal communication processes.

For the last antecedent, the findings reveal that the work environment plays a significant role in facilitating employees' investment of time and energy into their tasks. This is achieved through various means, including: 1) providing proper equipment such as modern desks, comfortable chairs, monitors, and laptops/computers; 2) offering incentives such as coffee, tea, water, fruits, or easy access to snacks, which contribute to a positive and productive work experience; 3) the colors and design of the workspace are also noted to have an impact, helping employees concentrate and channel their energy into their work; 4) the proximity of different types of rooms to the common working area is appreciated by employees, as it saves them time and energy in locating and accessing these spaces. However, it is worth noting that some employees feel that the workspace hinders their productivity and ability to perform at their best.

They cite factors such as the need to adjust the work area (e.g., chair, monitor, cables, power outlets) on a daily basis, as well as distractions caused by noise or traffic within the workspace.

The primary advantage facilitated by the workspace is fostering relationships within the team. Employees have the opportunity to develop a deeper connection with their colleagues, leading to the formation of friendships and the discovery of shared interests. The relaxation or socializing rooms are mentioned as having a significant impact on this aspect, while the arrangement and distribution of desks also encourage interaction and communication among team members. To encourage employees to invest more of themselves, companies should allocate resources in two main areas: 1) material objects and 2) communication and employee retention strategies. In the first area, organizations should invest in workspace architecture and design to create more private spaces with appealing designs. They should also expand the range of small incentives offered to employees, such as snacks or promotional materials tailored to each individual's personality and needs. Regarding the second direction, employers should prioritize transparency and accessibility when it comes to promotion opportunities. They should also encourage employee retention by being open to negotiations regarding financial benefits, rather than solely focusing on investing in modern working spaces.

CONCLUSIONS

The primary objective of this study was to examine how smart workspaces affect the activation of the antecedents of psychological ownership. The focus was to explore the influence of the work environment on employees' perceptions of control, knowledge and self-investment in the organization. The results show that most of the participants do not perceive their workspace as their own, primarily due to the absence of privacy and the inability to customize their work environment to suit their individual needs. Furthermore, in terms of the three mechanisms underlying psychological ownership, employees have limited control over the workspace and often need to engage in compromise or negotiations with their colleagues to adjust environmental factors. However, it is worth noting that employees recognize the workspace's positive impact on knowledge sharing and communication among team members, including those from different teams or locations.

This study is useful within the organizational context, particularly as numerous companies worldwide are initiating a return to the office and seeking optimal solutions to meet the needs of both employees and the organization. The findings offer actionable insights that companies should take into account to enhance psychological ownership and, consequently, job satisfaction (Mustafa et al., 2016), organizational commitment (Naeem et al., 2020) and positive work-related attitudes (Zhang et al., 2021) that would derive from it.

One of the limits of our research is the small sample investigated. However, it is important to note that the obtained results align with previous studies indicating that a high density of working spaces can reduce employee control and empowerment (Vischer, 2008). Therefore, our findings are relevant to the current space policies implemented by organizations. Furthermore, the suggestions provided in this study regarding enhancing perceptions of control, knowledge, and self-investment can serve as a basis for future qualitative and quantitative research on manipulating these factors to foster greater psychological ownership among employees.

In conclusion, this study shows that the smart workspaces may not promote the emergence of psychological ownership among employees, mainly due to a lack of empowerment in controlling their work environment and insufficient conditions for self-investment in their job or organization.

Acknowledgements

This work was co-funded by the European Social Fund, through Operational Programme Human Capital 2014-2020, project number POCU/993/6/13/153322, project title "Educational and training support for PhD students and young researchers in preparation for insertion into the labor market"

REFERENCE LIST

- [1] Avey, J. B., Avolio, B. J., Crossley, C. D., & Luthans, F. (2009). Psychological ownership: Theoretical extensions, measurement and relation to work outcomes. *Journal of Organizational Behavior*, 30, 173–191.
- [2] Barth, A. S., & Blazejewski, S. (2023). Agile office work as embodied spatial practice: A spatial perspective on ‘open’ New Work environments. *Scandinavian Journal of Management*, 39 (1).
- [3] Brown, G., & Zhu, H. (2016). ‘My workspace, not yours’: The impact of psychological ownership and territoriality in organizations. *Journal of Environmental Psychology*, 48, 54–64.
- [4] Kim, J., Candido, C., Thomas, L., & de Dear, R. (2016). Desk Ownership in the Workplace: The Effect of Non-Territorial Working on Employee Workplace Satisfaction, Perceived Productivity and Health. *Building and Environment*, 103, 203–214.
- [5] Knight, C., & Haslam, S. A. (2010). The relative merits of lean, enriched, and empowered offices: An experimental examination of the impact of workspace management strategies on well-being and productivity. *Journal of Experimental Psychology: Applied*, 16(2), 158-172.
- [6] Kupritz, V. W. (1998). Privacy in the workplace: The impact of building design. *Journal of Environmental Psychology*, 18, 341-356.
- [7] Martinaityte, I., Unsworth, K. L., & Sacramento, C. A. (2020). Is the project ‘mine’ or ‘ours’? A multilevel investigation of the effects of individual and collective psychological ownership. *Journal of Occupational and Organizational Psychology*, 93(2), 302-327.
- [8] Millward, L., Haslam, S. & Postmes, T. (2007). Putting Employees in Their Place: The Impact of Hot Desking on Organizational and Team Identification. *Organization Science*, 18(4), 547-559.
- [9] Mustafa, M., Martin, L., & Hughes, M. (2016). Psychological Ownership, Job Satisfaction, and Middle Manager Entrepreneurial Behavior. *Journal of Leadership & Organizational Studies*, 23(3), 272-287.
- [10] Naeem, R. M., Channa, K. A., Hameed, Z., Ali Arain, G., & Islam, Z. U. (2020). The future of your job represents your future: a moderated mediation model of transformational leadership and job crafting. *Personnel Review*, 50 (1), 207-224.
- [11] Özler, H., Yilmaz, A., & Özler, D. (2008). Psychological ownership: An empirical study on its antecedents and impacts upon organizational behaviors. *Problems and Perspectives in Management*, 6, 38-47.
- [12] Peck, J., & Luangrath, A. W. (2023). A review and future avenues for psychological ownership in consumer research. *Consumer Psychology Review*, 6(1), 52– 74.
- [13] Pierce, J. L., & Jussila, I. (2010). Collective psychological ownership within the work and organizational context: Construct introduction and elaboration. *Journal of Organizational Behavior*, 31, 810-834.
- [14] Pierce, J., Kostova, T., & Dirks, K. (2003). The state of psychological ownership: Integrating and extending a century of research. *Review of General Psychology*, 7(1), 84-107.
- [15] Pierce, J. L., O’Driscoll, M. P., & Coghlan, A. M. (2004). Work environment structure and psychological ownership: The mediating effects of control. *The Journal of Social Psychology*, 144, 507-534.
- [16] Van Dyne, L., & Pierce, J. (2004). Psychological Ownership and Feelings of Possession: Three Field Studies Predicting Employee Attitudes and Organizational Citizenship Behavior. *Journal of Organizational Behavior*, 25, 439 - 459.
- [17] Vischer, J.C. (2008). Towards an environmental psychology of workspace: How people are affected by environments for work. *Architectural Science Review Volume*, 51(2), 97-108
- [18] Wei, L., Liu, Z., Liao, S., Long, L., & Liao, J. (2019). Collective psychological ownership, status conferral criteria and team creativity. *Acta Psychologica Sinica*, 51(6), 677-687.
- [19] Worek, M., Covarrubias V. B., & Thury, S. (2019). Mind Your Space! Desk Sharing Working Environments and Employee Commitment in Austria. *European Journal of Business Science and Technology*, 5 (1), 83–97.
- [20] Zhang, Y., Liu, G., Xu, S., Cheung, M.W.-L. (2021). Psychological ownership: A meta-analysis and comparison of multiple forms of

attachment in the workplace. *Journal of Management*, 47 (3), 745-770.
[21] Zhu, H., Chen, C. C., Li, X., & Zhou, Y. (2013).
From Personal Relationship to Psychological

Ownership: The Importance of Manager–
Owner Relationship Closeness in Family
Businesses. *Management and Organization
Review*, 9(2), 295-318.

LIST OF FIGURES

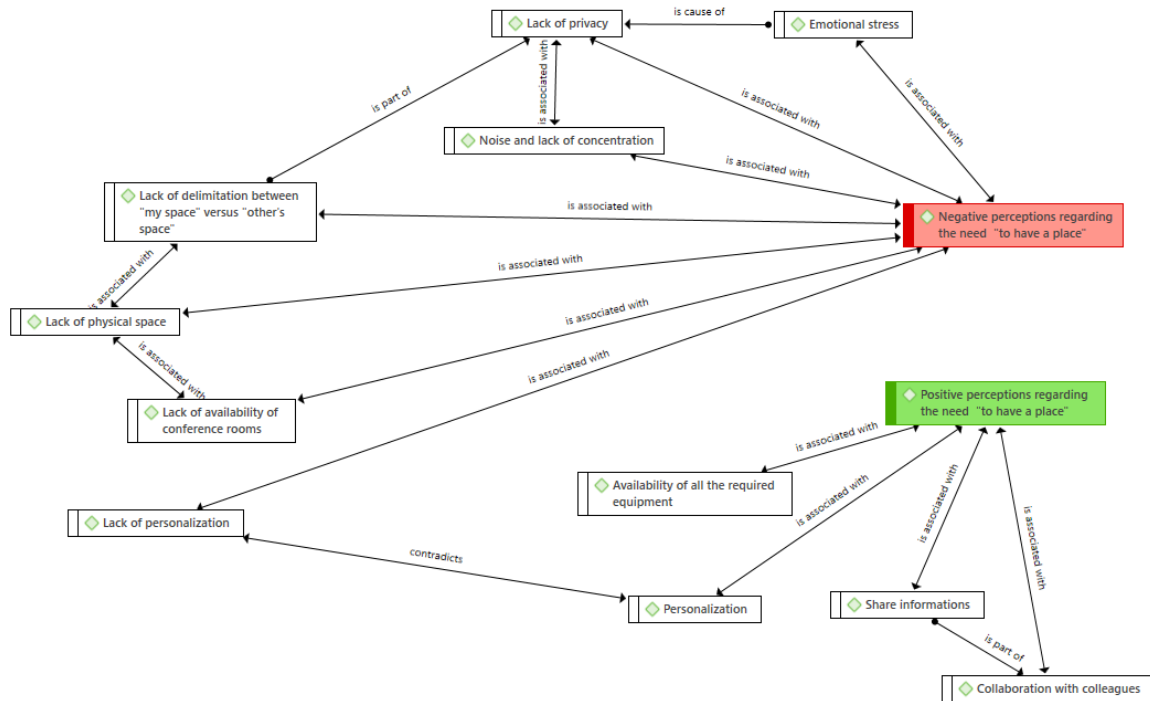


Figure No. 1
Perceptions related to the “need to have a place”
 Source: The author’s own editing (2023)

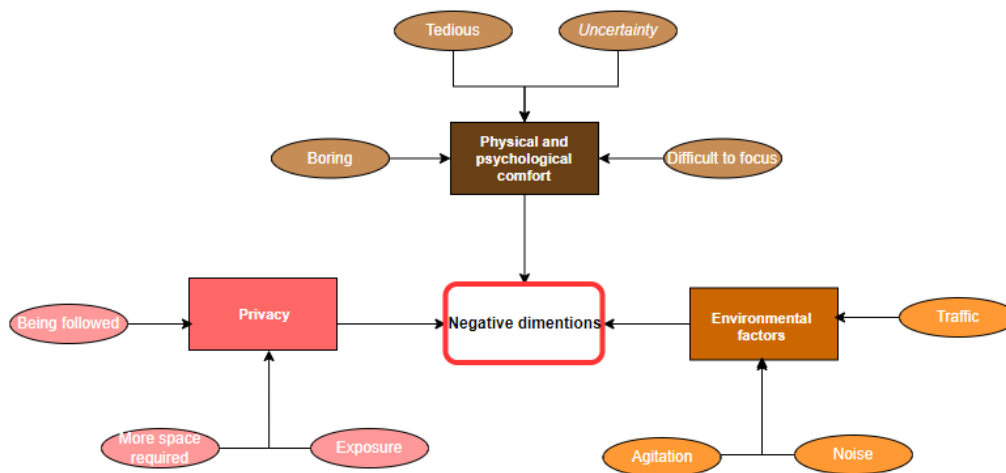


Figure No. 2
Negative dimensions associated with a smart workspace
 Source: The author’s own editing (2023)

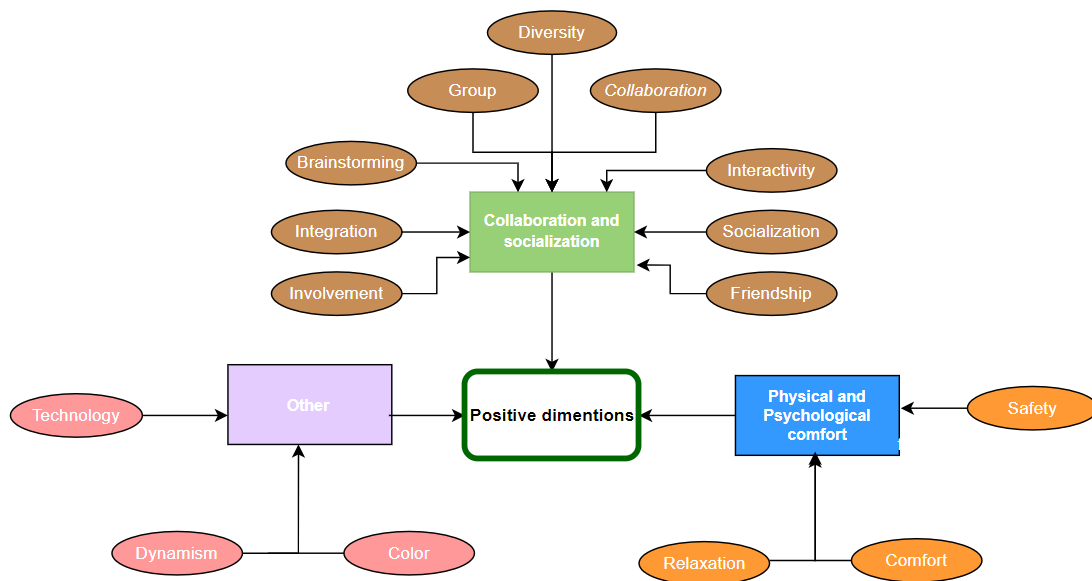


Figure No. 3
Positive dimensions associated with a smart workspace
 Source: The author's own editing (2023)

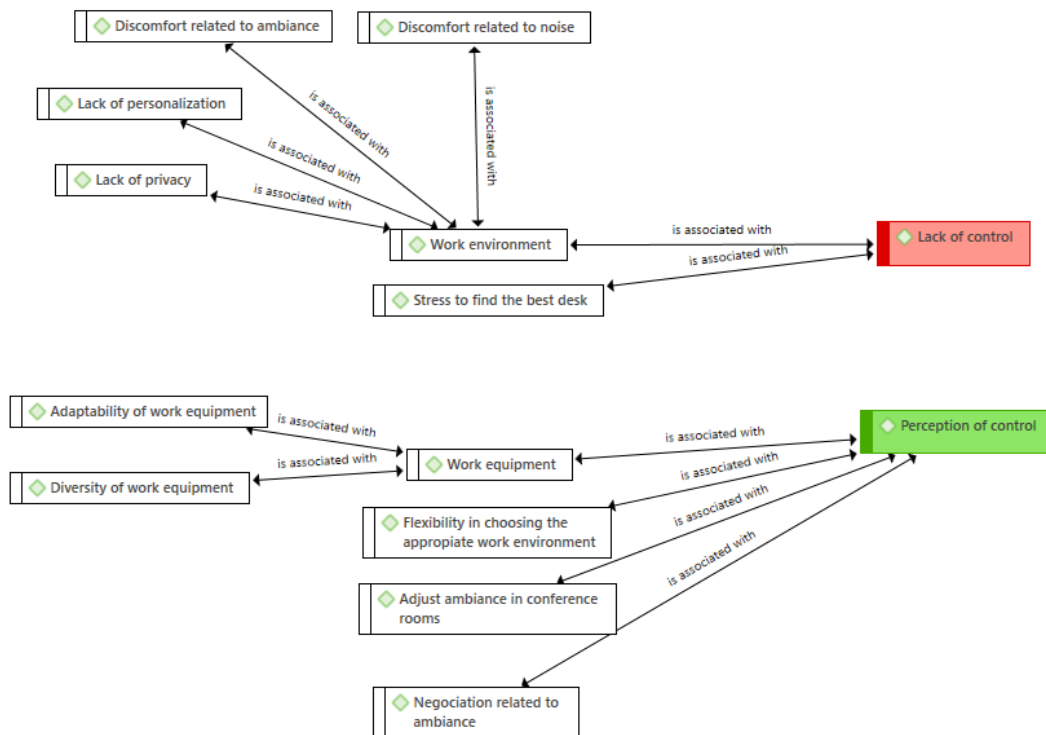


Figure No. 4
Perceptions regarding the control offered by smart workspaces
 Source: The author's own editing (2023)