

Article

Workspace Integration and Sustainability: Linking the Symbolic and Social Affordances of the Workspace to Employee Wellbeing

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Abstract: Our goal in this paper is to connect workspace design to employee wellbeing and social sustainability. Toward this connection, we introduce and empirically test a new concept of “workspace integration”. This concept refers to the continuum of integration of an employee’s workspace with the organizational, physical space. We further define three workspace affordances that predict the social sustainability of workspace arrangements by influencing employee wellbeing. The three affordances are perceptions of symbolism of the organization and of symbolism of the self, and opportunities for social interactions. We evaluate our theory using data collected from an online survey of British employees ($n = 392$) working in offices at home and/or in the organization in various industries. As predicted, workspace integration positively influences wellbeing directly as well as indirectly via mediation of symbolism of the organization and opportunities for social interactions. The third affordance—symbolism of the self—positively influences wellbeing, but is not affected by workspace integration. Our findings confirm the impact of workspace affordances on employee wellbeing, and thus their utility for the analysis of social sustainability. The findings also contribute to understanding of the differences between workspace symbolism of the organization and of the self, their impact on wellbeing, and thus their implications for social sustainability.

Keywords: work environment; workspace; affordances; symbolism; opportunities for social interactions; workspace sustainability; social sustainability; wellbeing; teleworking; office design



Citation: Vilnai-Yavetz, I.; Rafaeli, A. Workspace Integration and Sustainability: Linking the Symbolic and Social Affordances of the Workspace to Employee Wellbeing. *Sustainability* **2021**, *13*, 11985. <https://doi.org/10.3390/su132111985>

Academic Editors: Hyo Sun Jung and Christina Bodin Danielsson

Received: 24 September 2021

Accepted: 26 October 2021

Published: 29 October 2021

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“ . . . The more days, weeks and months the plague rampages, the more we have the responsibility to keep the university as a ‘place’ as a space that makes for rich and significant academic life . . . The digital space serves us well at this time, but it is not a ‘place’ . . . we must come back as much as possible to the physical . . . [to ensure] continuation of the university as a productive place of meetings, active, busy, alive, kicking and . . . retaining the emotional and social vitality of the community . . . ”

(Letter sent to students, staff and faculty of a large university, May 2021).

1. Introduction

Organizational offices are rapidly becoming an endangered species. New technologies offer near-seamless interactions and transitions between remote and physical organizational offices, allowing effective communication and collaboration among employees within and between organizations [1]. These options are available to employees regardless of whether they work from an organizational office or from remote locations outside the organizational office, alone or sharing space with others [2]. However, as highlighted by the letter quoted above, newly emerging workspace arrangements pose challenges for various core social and organizational dynamics, as well as for scholars studying office design and for managers in organizations. The present study seeks to understand the meaning of

these new types of workspaces, the work arrangements they embody, and their impact on social sustainability.

The ongoing COVID-19 pandemic has demonstrated to managers that organizational performance can continue without a permanent employee presence in the organizational space [3–5]. During the pandemic, many employing organizations continued to perform their work while their employees stayed at home or teleworked [4,6]. However, the influence of such workspace arrangements on employee wellbeing, which is critical for social sustainability, remains an open question. Tuzovic and Kabadayi [5], for instance, found that social distancing regulations reduce employee wellbeing. We expand this question by examining the effects of the integration between the physical spaces where employees perform their work and the spaces owned by the employing organization. We label this construct the employee's "workspace integration" (note that we intentionally refer here to "organizational space" rather than "organization" because, for people working offshore, in co-working spaces or at home, the work is integrated with the organization. They use the organizational information system and are paid by the organizational wage payment system, etc., but their workspace is not integrated with the organizational space).

We define workspace integration as a continuum. At the highest level, there is a full integration of the workspace, such that employees perform all of their work in an organizational space (e.g., [7–9]). At its lowest level, with no integration or full separation (i.e., full telework), all employee work is performed in a non-organizational space (e.g., [3,4]). Low-integration workspaces can be spaces that employees use in their own homes or workspaces in separate locations, such as co-working spaces that are rented by the hour (e.g., [2]). Importantly, these workspaces are physically separate from the organizational space. Thus, our concept of workspace integration differs from what Elsbach [10] (p. 622) defined as "non-territorial workspaces", which refers to shared spaces or "hot-desking" offices, as illustrated in the example of "putting the organization on wheels" [11] (p. 138). Our concept is broader, and encompasses the continuum of types of organizational and non-organizational workspaces, where "non-territorial" shared offices are but one point on this continuum.

This new concept of workspace integration has become particularly relevant during the COVID-19 pandemic, when many employees were forced to relocate their work to their homes or other extra-organizational locations [4]. The need for this new concept also reflects developments in digitalization which have allowed employees—both during and unrelated to the pandemic—to perform their work in different physical locations [1]. Taking a social sustainability perspective, our study examines the impact of these developments on employees' general wellbeing. We build on the basic social-construction argument that employees respond to perceptions of the workspace, which are related but not necessarily identical to what someone else might view as the objective features of the space [12]. For example, a large, spacious space might be viewed as inspiring alienation and hampering social interaction, or as providing power and greater opportunities for interacting with other people.

Our work contributes to research on office design, employee wellbeing and social sustainability in several ways. First, we introduce and empirically test the new concept of "workspace integration", proposing that the extent of the integration of employees' workspaces with the organizational space is a continuum. Conceptually, we suggest that viewing workspaces as either organizational or remote telework is too simplistic. Second, we shift the focus of examinations of office design from the more concrete (light fixtures, size of desk, color of walls) to the more abstract (How integrated is the workspace with the organizational space? What does it symbolize? What opportunities for social interactions does it allow?). This abstraction recognizes the increasingly complex nature of workspace arrangements. Third, we argue that workspace symbolism (i.e., the symbolism of the organization and the symbolism of the self) and opportunities for social interactions are psychological mechanisms that promote employee wellbeing. Finally, we approximate

the impact of novel workspace arrangements on employees' general wellbeing as the foundation of social sustainability.

Next, we first review the relevant theoretical background that allows us to define the concept of workspace integration, and the three workspace affordances that determine the extent to which workspaces influence and improve employee wellbeing. We also review research positioning employee wellbeing as a critical indicator of social sustainability. Based on the review of previous research, we develop and define our research hypotheses. We then describe the methods we used to test these hypotheses and the results of our study, followed by a discussion of the meaning and implications of the results for the social sustainability of workspaces.

1.1. Theoretical Background

Social sustainability—a critical aspect of an organization's ability to maintain the vitality of its employees—is the least studied of the three components of sustainability (the other two are environmental and economic sustainability) [13], and is largely absent from analyses of organizational activities [14]. Building on Vallance, Perkins and Dixon [15], we refer to social sustainability as a quality of social systems that promotes conditions for human welfare. Workspace arrangements must be examined from the perspective of social sustainability in order to ensure committed participation by the workforce. Some research has already associated telework with long-term sustainability (cf. [16,17]). We extend this limited research and link employees' workspaces to social sustainability.

1.2. Workspace Integration as a Continuum

We regard a "workspace" as any space in which employees do their work, be it an organizational space or a non-organizational space, such as a work-at-home space or a space in any other location (e.g., public co-working spaces). The prior literature has established relationships of office design with organizational culture and work-related attitudes [8,18]. However, the lens of sustainability suggests an influence of the workspace that extends beyond employees' attitudes toward their work to reach multiple aspects of general wellbeing (cf., [19,20]). We develop this line of thought by connecting it to analyses of employees' perceptions of the workspaces they inhabit. Specifically, we propose that analyses of social sustainability must consider the integration of employees' workspaces with the larger organizational context, and in particular, three psychological mechanisms that workspaces inspire.

Research has documented the impacts of the type of organizational office on employees [9]. For instance, cell offices, shared-room offices, open-plan offices, flex offices, and combi-offices differ in their impacts on employees [7]. Studies have also demonstrated the influences of the features and elements of organizational offices (e.g., lighting and density [21] photocopiers and water coolers [22]; noise [23]) as well as the more general and holistic view of the office design (e.g., [24]) on employees. Office features have been shown to affect on-the-job measures such as motivation [25], productivity [26], perceived effectiveness [18], and creativity [27]. The organizational office has also been found to impact work outcomes such as job satisfaction (cf., [23,28]), commitment [29], absenteeism, turnover, sick leave [20,30] and general wellbeing [19,20]. At a more abstract level, Vilnai-Yavetz et al. [18] suggested an analysis of the office environment in terms of three concurrent and independent dimensions, i.e., the perceived functionality, aesthetics, and symbolism of office design, and linked these dimensions to employee approach behaviors. These lines of research converge in showing that work environments affect employees in multiple ways.

A distinct line of research refers to the locations where people perform their work. Focusing on non-organizational workspaces, such research has referred to "telework" or to "work at home [3–6]. Hill, Ferris and Mårtinson [25] for example, described differences among traditional, virtual, and home offices. We view this categorical distinction as being too narrow, given the currently prevailing technological opportunities and workspace

arrangements. Specifically, current workspace arrangements allow people to perform their work in multiple types of spaces, both organizational and non-organizational. Moreover, work can be split between (traditional) organizational workspaces and non-organizational spaces, either at home or other locations.

In this vein, Belzunegui-Eraso and Erro-Garcés [4] distinguished three types of non-organizational workspace arrangements (or, as they label it, teleworking): (i) regular home-based telework; (ii) high-mobility telework (the employees work in several locations on a regular basis, with a high degree of mobility); and (iii) occasional telework (the employees work in one or more places outside the organization only occasionally, and with a lower degree of mobility). We expand this categorization to include our key continuous variable of workspace integration.

In the new workspace arrangements that we analyze, employees can navigate between high- and low-integration workspaces [3]. This occurs, for example, when employees work some days or hours of the week or the month in an organizational office (high workspace integration) and others in their home workspace (low workspace integration). Our broad proposition, which we develop next, is that the extent of integration of employees' workspaces influences their general wellbeing.

1.3. Workspace Integration and General Wellbeing

General wellbeing refers to general life satisfaction and the intensity of positive emotion, or in other words, the happiness and satisfaction of people with their lives [31]. General wellbeing is a central issue for employees and organizations [5] and is critical for social sustainability [13]. Wellbeing is also a key indicator in the evaluation of offices and commercial buildings [32], as some office types increase wellbeing more than others [20].

A separate line of research reports the effects of the workspace (e.g., space suitability, flexibility, usability and controllability; [33]) on employee satisfaction, depending on whether work occurs in organizational or home offices. In this context, aspects of the workspace have been shown to influence more general employee reactions indicating general wellbeing. For instance, telework (or working in home non-organizational workspaces) elicits better employee wellbeing [5] and a better work/life balance [16] than work in an organizational office. A review comparing employee reactions to virtual, organizational, and home offices reported effects on job performance, job motivation, job retention, work/life balance, and personal/family success [25]. This review defined virtual offices as situations where employees use portable means to work from a variety of venues that are separate from the organization, and found that virtual offices have a generally good impact on various aspects of work, but a somewhat negative impact on aspects of personal/family life. The review concluded that home offices have a generally good impact on both work and personal/life elements, whereas the impact of traditional offices is mostly negative.

Earlier research also reported that "telework" increases employee motivation, morale and job satisfaction, leading employees to report higher levels of energy on the job and the more efficient use of time [34]. However, there are also opposing findings. Kraut [35], for example, reported no differences in the job satisfaction of teleworkers vs. non-teleworkers, and Kurland and Bailey [36] reported negative effects of telework on employees' collaboration, resentment and overall motivation. These confusing and contradictory findings support our claim that previous comparisons of home and office work have overlooked a complexity that should be considered. The findings of these studies, therefore, do not allow clear predictions on the relationships between our concept of workspace integration and employee wellbeing. Rather, we pose two competing hypotheses, each of which continues a distinct thread of previous work:

Hypothesis 1 (H1a). *The degree of workspace integration positively influences employee wellbeing (i.e., work in an organizational location improves employee wellbeing).*

Hypothesis 1 (H1b). *The degree of workspace integration negatively influences employee wellbeing (i.e., work in a non-organizational location improves employee wellbeing).*

1.4. Workspace Integration and Perceived Affordances

In addition to proposing that employees' workspace arrangements are a continuum rather than a dichotomy, we argue that employees' responses to their workspace are determined by their interpretations, rather than the objective conditions. We integrate this line of thought with Gibson's [37] suggestion that physical environments create "affordances" for their users. For example, in an analysis of the spaces around water coolers and photocopiers, Fayard and Weeks [22] showed that people tend to engage in social interactions in these spaces, and defined such influences of a physical space as affordances. We propose that the concept of affordances provides a lens that can help unravel the relationships between environments and actors' physical and social behaviors within them. Thus, we use Gibson's theory of affordances to help elaborate how the workspace shapes behavior, and we extend it to consider the symbolic and social affordances of workspaces. In other words, we extend the idea of "affordances" to include perceptions and interpretations of workspaces as psychological affordances that workspaces offer. We define affordances, following Gibson [37], as hints that a physical environment sends to people about how to use or perceive the environment. For instance, affordances lead people to sit on a chair, write on a desk or watch a computer screen because these are the obvious affordances of chairs, desks and screens, respectively.

Multiple authors have interpreted and developed Gibson's conceptualization (for a review, see [38]). A useful development for our analysis is Hommel's [39] theory of event coding, which links Gibson's construct of affordances to the idea that people develop mental representations of artifacts in the environment. Hommel [39] argued that peoples' actions and perceptions rely on mental representations. In this vein, Manca et al. [40] described the physical environment as comprising artifacts that can be barriers or enablers to workplace collaborations. Barriers and enablers include psychological factors, i.e., "psychological affordances".

Spreitzer et al. [41] identified four types of affordances of organizational offices—i.e., affective, identity, social, and knowledge affordances—and suggested that these affordances provide opportunities for employees to generate resources that enhance employees' organizational experience of thriving. We extend this line of thought to propose effects of workspace affordances on employees' general wellbeing. This proposition does not distinguish between organizational and non-organizational workspaces. Rather, it proposes that the effects of the features of the workspace extend beyond work-related objectives (e.g., job performance or satisfaction) to include effects on employees' general wellbeing (i.e., the satisfaction of people with their lives), and thus on social sustainability.

In order to extend the study of workspace affordances, we build on Vilnai-Yavetz et al. [18] to identify two types of employee perceptions of offices: the perceived symbolism of the organization and the perceived symbolism of the self. We also propose that the opportunities for social interactions that a workspace allows are an additional element of the perceptions of the workspace [22,42]. Thus, we conceptualize these three sets of employee-constructed perceptions of a workspace—the symbolism of the organization, the symbolism of the self, and opportunities for social interactions—as psychological affordances of the workspace in which employees operate. Importantly, we presume such perceptions to be relevant to any workspace type or location, be it an organizational office, a home workspace, or any teleworking combination of the two. We predict that the degree of physical integration of employees' workspaces with the organization influences the type and extent of the symbolism and opportunities for social interactions that employees perceive in their workspaces, which in turn influences employees' general wellbeing.

Why is our new conceptualization important for scholars of office design, and for management? To illustrate this, think about Jane, who works as a regional sales manager at Company Q. Jane works two days a week from her workspace in the headquarters of Company Q (which our analysis refers to as an "organizational space") and two days at home; on the remaining workday, she meets clients wherever they wish to meet. What does Jane's organizational workspace look like? Is it a private/cell office? A shared space? An

open-plan office? Does her workspace have any personal items that designate it as “Jane’s workspace?” Can Jane meet peers and coworkers while at work? A separate question regards Jane’s home workspace. How is it designed? Is it a separate, designated workspace, or does she do her work in the kitchen or living room? How does the home workspace impact Jane’s opportunities to meet peers and coworkers? Can digital means, such as video chat, enhance these opportunities? Does her home workspace afford any symbolic connection to the organization, perhaps through a company logo on her laptop or notepad? Similarly, when Jane drives to meetings with clients, does her car afford a connection to Company Q? A company logo on the car affords such a connection to a far greater extent than a family car with children’s toys and candy wrappers.

These and similar questions are related to how Jane feels about what we refer to as “the affordances” of her workspaces [37]. Thus, we ask: “To what extent do each of the three workspaces in which Jane performs her work represent Company Q (which we refer to as “the organizational identity”; [43]) or her own values and preferences (which we refer to as “personal identity [44,45]?” We also ask: “To what extent do each of these workspaces offer Jane an opportunity for social interactions? Our theory then integrates these perceptions of an employee like Jane to predict how the combined effects of the three workspaces impact Jane’s general wellbeing.

In this spirit, we propose three types of psychological affordances related to the extent of workspace integration: the symbolism of organizational goals and values (which we refer to hereafter as “symbolism of the organization”), the symbolism of individual goals and values (which we refer to hereafter as “symbolism of the self”), and opportunities for social interactions.

1.4.1. Symbolism of the Organization as an Affordance of the Workspace

Borrowing from Vilnai-Yavetz et al.’s [18] analysis of the workspace in terms of three dimensions—functionality, aesthetics and symbolism—we link workspace integration to the symbolism of workspaces. Vilnai-Yavetz et al. [18] reported positive correlations of office functionality with employee perceptions of job satisfaction and effectiveness, and of office aesthetics with satisfaction. They did not find relationships of symbolism with employee job satisfaction or perceived effectiveness, but their analyses considered only traditional organizational offices (or high-integration workspaces, in the current conceptualization). We propose that expanding this focus to include extra-organizational workspaces will unravel the relationship between workspace symbolism and employee wellbeing.

By expanding the focus of Vilnai-Yavetz et al. [18] to consider non-organizational and virtual workspaces, we add new forms of workspace arrangements to the relevant research. This addition motivates our conceptualization of the continuum of workspace integration, and expands the previous dichotomization into organizational (e.g., [9]) and non-organizational locations (e.g., [4]), into physical (e.g., [32]) and virtual workspaces (e.g., [46]), and into workspaces intended, planned and designed for the employees of one organization (e.g., [22]) and co-working spaces accommodating employees from various organizations (e.g., [2]). Workspace integration posits workspace arrangements as varying along an abstract continuum, from a total lack of integration to full integration with the organizational space. To illustrate this, research considering workspace integration would not regard the mere presence or use of smartphones, tablets and computer screens as being cardinal to analyzing a workspace. Rather, the concept suggests analyses of the extent that these tools are physically embedded within the organizational workspace. Employees use smartphones and laptops for work purposes both in and outside the organizational space. The extent of integration is not related to the use of these devices, since it refers to the space where employees perform most of their work, regardless of the technologies that they use.

Connecting the notion of workspace integration to symbolism is a challenge, as the available work has considered only the symbolism of high-integration workspaces (i.e., spaces within the physical organizational space; cf., [42,47]). A limited number of studies have examined co-working spaces, such as WeWork, as representatives of new and

evolving alternative work arrangements. Bacevice, Spreitzer, Hendricks and Davis [48], for example, reported various organizational and professional messages, norms, and values that compete for employee attention in such “low-integration” workspaces. As is developed next, we build on the available work to propose that the extent of workspace integration affects the nature of the symbolism that workspaces afford.

Schein’s [49] seminal work on organizational culture positioned symbols as representations of the values of the entity in which they are displayed. In this spirit, workspaces have been studied in terms of the symbols they convey (cf. [50]). Vilnai-Yavetz et al [18] proposed that workspaces comprise two types of symbolism: symbolism of the organization and symbolism of the (employee’s) self. Symbols are not passive notions, but rather resources that help people define (to themselves and to others) how they perceive and regard a workspace. We offer two specific predictions connecting the extent of workspace integration to symbolism. Because the symbolism of the organization refers to the messages of a workspace about organizational culture, values, and spirit [49], we expect it to be stronger when the workspace integration with the organizational space is higher. Highly integrated workspaces are more likely to have elements that represent and have been selected by the organization than workspaces that are less integrated or more separate from the organizational space.

Hypothesis 2 (H2a). *The degree of workspace integration positively influences the symbolism of the organization afforded to employees by the workspace.*

1.4.2. Symbolism of the Self as an Affordance of the Workspace

In contrast to H2a, we expect the symbolism of the (employee’s) self to be lower when workspace integration is higher. Symbolism of the self refers to the messages a workspace affords regarding employee identity, values, and personal preferences [44,45]. Elements of a high-integration workspace are under organizational control, and are thus less likely to allow employees to express themselves. On the contrary, the lower the integration of a workspace, the less its features are under organizational control, and the more they can reflect individual employees’ choices and preferences. de Macêdo et al.’s [19] findings, for example, support this prediction by showing that teleworking makes people’s self-image of responsibility, commitment, and autonomy more salient. Hence, our next hypothesis is as follows:

Hypothesis 2 (H2b). *The degree of workspace integration negatively influences the symbolism of the self afforded to employees by the workspace.*

1.4.3. Opportunities for Social Interactions as an Affordance of the Workspace

In an additional prediction, we consider the workspace in terms of affordances of opportunities for social interactions, defined by Spreitzer, Bacevice and Garrett [41] (p, 240) as “the capacity of the physical environment to promote possibilities of social connection”. Elsbach and Bechky [42], and Fayard and Weeks [22] illustrated the opportunities for social interactions that workspaces can allow. In this spirit, we propose that the opportunities for social interactions of the employees are an affordance of workspace integration. Opportunities for social interactions are recognized in ecological psychology research as social affordances. Valenti and Gold [51], for example, identified the social and physical characteristics that an environment must have in order to afford informal interactions. Elsbach and Bechky [42], later showed that telework does not allow the spontaneous, informal, and non-work-related chats afforded by on-site workspaces, suggesting that less-integrated workspaces limit employees’ opportunities for social interactions. Studies conducted during the COVID-19 pandemic outbreak have also described how remote or virtual environments leave employees with a lack of physical contact and fewer opportunities for dialogue [6]. Employees often choose to work in co-working spaces in order to address the loneliness and isolation that teleworking can evoke. Co-working spaces such

as WeWork allow people to carry out their work away from home and alongside others, who may or may not be members of the same employing organization [2]. Hence, our next hypothesis relates workspace integration to the opportunities for and nature of social interactions that people can obtain from their workspace.

Hypothesis 2 (H2c). *The degree of workspace integration positively influences employee perceptions of workspace opportunities for social interactions.*

1.5. The Impact of Symbolism and Opportunities for Social Interactions of the Employee Workspace on Employee General Wellbeing

Hypotheses 2a, 2b and 2c connect workspace integration to the psychological affordances of symbolism and opportunities for social interactions. Viewing the features of a workspace as affordances [37] is useful as a foundation for linking workspace features with employees' general wellbeing (e.g., [52]).

We make three separate predictions. First, given the strong symbolic effects of office features [50], we expect that the symbolism of a workspace is a relevant predictor of the effects of the workspace. Symbolism is expected regardless of whether the workspace is integral to (high workspace integration) or separate from (low workspace integration) the organizational space. When a workspace includes the symbolism of the organization, we expect the effects of that symbolism to improve employees' general wellbeing. The symbolism of the organization helps to clarify the organizational identity of the employee within the organization (cf. social identity theory; [43]). When employees perceive a good subjective fit with their workspace environment, their mental health and general wellbeing improve. A good person/environment (P/E) fit means a high congruence and minimal discrepancies between the employee's perceived abilities and the perceived work environment (P/E fit theory; [53,54])

Because employee work is, by definition, integral to the organization, the issue here is whether the workspace symbolism communicates this integration. Taken together, social identity theory and P/E fit theory suggest that the more the workspace communicates messages that fit the organizational values and culture, the fewer discrepancies employees experience. In other words, employees whose workspaces convey minimal symbolic messages about the organization are more likely to feel dissonance between their identity as organizational members and the messages of their workspaces. Such employees are likely to report lower general wellbeing. As is consistent with this analysis, Wells [44] reported an association between an organization's policy about workspace personalization and organizational wellbeing. Consequently, we predict the following:

Hypothesis 3 (H3a). *The workspace symbolism of the organization positively influences employee wellbeing.*

Second, when a workspace allows an employee to express personal values, that is, it includes symbolism of the employee him or herself, we also expect the workspace to be more likely to evoke the employee's general wellbeing. Dinc [55] showed a link between office personalization and employee satisfaction. Wells [44] found an indirect effect of workspace personalization that reflects employees' self-values on employee wellbeing, with satisfaction with the workspace and the job as intervening variables. Hence, our next prediction is as follows:

Hypothesis 3 (H3b). *Workspace symbolism of the self positively influences employee wellbeing.*

Our last prediction in this set of hypotheses regards the relationship between the opportunities for social interactions that a workspace affords and employees' general wellbeing. The need for social connections is a central and basic tenant of human mental health and general wellbeing [56]. Opportunities for social interactions are likely to influence

employee motivation and personal wellbeing, given the centrality of social needs [57]. This is true for physical as well as virtual work arrangements [6]. Thus, we propose that the opportunities for social interactions afforded by the workspace are positively related to employees' general wellbeing.

Hypothesis 3 (H3c). *The opportunities for social interactions that a workspace affords positively influence employee wellbeing.*

1.6. Workspace Symbolism and Opportunities for Social Interactions as Mediators of the Relationship between Workspace Integration and Wellbeing

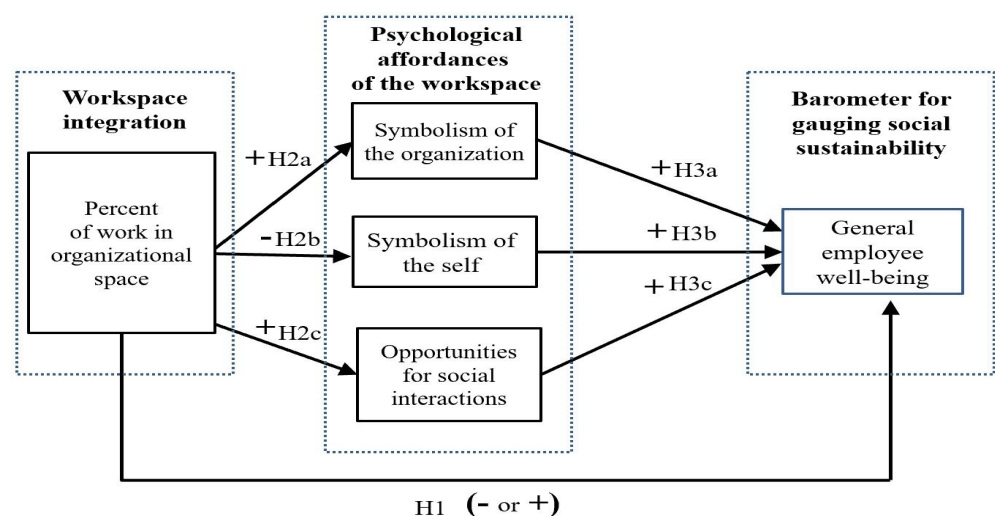
Our final prediction integrates the effects proposed in the preceding hypotheses, and positions employees' perceptions of the symbolism of their workspace and of the opportunities for social interactions allowed by their workspace as mediators of the relationship between workspace integration and general wellbeing. That is, merging Hypotheses 1, 2 and 3 suggests that the three workspace affordances mediate the relationship between workspace integration and general wellbeing. This mediation prediction is supported by, for example, Morrow, McElroy and Scheibe [29] who showed that the relationship between office design and organizational commitment is mediated by employee perceptions of innovation (a symbolic perception in our terms) and collaboration (a perception of the opportunities for social interactions in our terms). Hence, our fourth and final set of hypotheses is as follows:

Hypothesis 4 (H4a). *The workspace symbolism of the organization positively mediates the link between the degree of workspace integration and employee wellbeing.*

Hypothesis 4 (H4b). *The workspace symbolism of the self negatively mediates the link between the degree of workspace integration and employee wellbeing.*

Hypothesis 4 (H4c). *Workspace opportunities for social interactions positively mediate the link between the degree of workspace integration and employee wellbeing.*

Figure 1 summarizes our theoretical research model of workspace integration and social sustainability, and our hypotheses connecting the extent of workspace integration to wellbeing through the three psychological affordances.



(Note: H4a to H4c are mediation hypotheses and do not appear on this graphical model.)

Figure 1. Summary of the research model and the proposed hypotheses.

2. Methods

2.1. Research Context

In order to test our predictions, we took advantage of the unprecedented situation of the 2020 COVID-19 outbreak and lockdown, which created a natural experiment [58] in which many—but not all—employees performed their work from their home workspaces. In the first months of 2021, some of these employees returned to work fully or partially at their organizational offices, while others continued to work in home workspaces [3–5]. The decision of whether to come to work in the organizational workspace was—in most cases—not up to the employee. Thus, the workspaces of such employees were not a function of their preferences regarding symbolism or the desire for social interactions. The data were collected during the first quarter of 2021, when people in the UK were more or less randomly working either in their organizational office or home workspace due to the COVID-19 outbreak and local lockdown constraints.

Our analysis capitalized on the fact that some home workspaces were closer to the organizational core center, while others were physically or psychologically farther. Some organizations introduced a hybrid workspace arrangement in which employees working full-time arrived at the organizational offices on a partial basis (e.g., two or three days a week) and worked in other workspaces outside the organization the rest of the time. This situation created a natural quasi-experiment of random assignment to workspaces with different levels of workspace integration. Our participants worked in workspaces that ranged from high-integration conditions (i.e., in their organizational offices) to low-integration conditions (i.e., home workspaces). We used this unique opportunity to examine the relationships between employees' perceptions of their workspaces and their general wellbeing.

2.2. Data Collection

We collected the data using an online survey administered through Qualtrics to English-speaking participants on the Prolific Academic platform (an online data-collecting crowdsourcing platform: <https://prolific.ac/>) (accessed on 27 July 2021). Prolific Academic has been proven to provide high-quality data [59]. Each participant received a payout of 1.25 GBP for responding to the entire survey. Walter et al.'s [60] recent meta-analysis demonstrated that the psychometric features and validity of online samples such as ours are equivalent to those of samples obtained from conventional sources.

2.3. Sampling

We prescreened the Prolific respondents according to the following criteria: UK residents who worked during 2020–2021 in offices at home or in their organization, or both (in various industries, such as finance and insurance, government and public administration, information services and data processing, legal services, real estate, broadcasting, higher education, and social assistance). The employment status of the respondents was full-time or part-time, and had not changed due to the COVID-19 outbreak. Of the initial sample of 400 respondents, 8 reported that they worked in other types of workspaces (e.g., co-working spaces and coffee shops); because this group was too small for analysis, they were dropped from the sample. The remaining 392 reported that they worked at home, in the organization or interchangeably in both, and were deemed suitable for the study.

2.4. Sample

The sample comprised respondents ranging in age from 18 to 66 years, with a median age range of 36–45. Of the sample, 58% were female, and 66% had completed an undergraduate or graduate degree. The number of children under 18 of the respondents ranged from 0 to 4, and the total number of people living with them at home ranged from 0 to 8. Regarding employment, most of the respondents were working full-time (85%) and were paid for their work on a monthly basis (88%), and approximately half (46%) had a tenure of 6 years or more. Of the sample, about one third (35%) held a managerial position with 0 to 127 employees under their supervision (direct supervision, mean = 6.3; direct and

indirect, mean = 10.7). Finally (given the pandemic outbreak during the time of the data collection), most of the respondents (74%) reported that their current primary workspace was in their home; 11% worked interchangeably at home and in the organizational office, and 15% reported that their current primary workspace was their organizational office. We intentionally designed the sample to represent a diverse population from different parts of the UK, in order to obtain a panel view of people employed in office work.

2.5. Measures

The survey comprised 35 items. The independent variable was measured by one item, workspace integration, which describes the degree of integration between an employee's primary workspace and the space of their employing organization, on a continuum of 0 to 100%. The respondents were asked to use a slider to indicate, on a scale of 0–100%, how much of their working time they spent in their organizational office (versus at home or at any other location). In order to validate this measure, an additional item measured the integration of the respondent's primary workspace with the organizational space on a categorical scale (1 = organizational office, 2 = organizational and home workspaces, 3 = home workspace, 4 = other types of workspaces. People who noted option 4 were eliminated from the sample). Finally, we cross-checked the two variables to check the validity of our measure. The results of the manipulation check confirmed the validity of the workspace integration variable, as the ANOVA showed that the mean working time spent in the organizational space was 8% for those indicating that they had a home workspace, 46% for those indicating that they had organizational and home workspaces, and 88% for those indicating that they had organizational offices; $F(2, 374) = 279.0, p = 0.000$.

Four constructs measured the three workspace affordances that served as mediators and the dependent variable (see Table 1). For these constructs, and for two additional control variables (COVID-19's influence and the use of electronic communication; see below), the responses to the items were quantified on a 5-point Likert scale ranging from 1 = "strongly disagree" to 5 = "strongly agree". First, workspace affordances were reported. The symbolism of workspace integration was adapted from Vilnai-Yavetz et al. [18], who divided it into two constructs. For the symbolism of the organization (3 items), the respondents were asked to indicate how much their current primary workspace reflected their organizational culture, values, and spirit. For the symbolism of the self (3 items), they were asked to indicate how much their current primary workspace represented who they are, their personal work values, and their preferences. The construct of opportunities for social interactions in the workspace (6 items) was adapted from Russell and Mehrabian [61], and Van Dyne, Graham and Dienesch [62], where the respondents indicated the degree to which their workspace allowed formal and informal social interactions. General wellbeing—the dependent variable—was measured with a 4-item scale adapted from Rosenbaum and Wong [63].

Finally, we recorded six employment variables (tenure, managerial position, employees under direct and indirect supervision, part-time/full-time, and being paid on hourly/weekly/monthly basis) and five demographic variables (gender, age, education, number of children under age 18 living in the house, and the number of people in the house). In addition, we used four attention check items (e.g., what is the first letter of the word DOG? C, T, A or D) and two items that tested the impact of the COVID-19 pandemic on the respondents ("my life has been affected by the COVID pandemic") and the degree to which they used electronic communication in their routine work ("my current work communication relies on virtual and electronic means of communication").

Table 1. Construct validation: CFA loadings of the survey items.

Survey Items	CFA Factors and Loadings			Barometer of Social Sustainability General Wellbeing
	Symbolism of the Organization	Symbolism of the Self	Opportunities for Social Interactions	
My current primary workspace reflects the culture of my organization	0.759			
My current primary workspace represents the values of my organization	0.868			
My current primary workspace reflects the spirit of my organization	0.906			
My current primary workspace represents myself and who I am		0.785		
My current primary workspace shows my personal work values		0.881		
My current primary workspace indicates my personal preferences		0.812		
I currently meet and interact with a lot of other members of my organization			0.815	
My current primary workspace allows me to conduct formal work meetings (pre-arranged or not)			0.424	
I can use my current primary workspace for social interactions with peers and customers			0.600	
I can use my current workspace for informal meetings with other people whom I know through my work			0.435	
I frequently meet other people while I perform my work			0.864	
My work currently makes possible a lot of social interactions with other people			0.844	
I generally feel mentally good				0.876
I generally feel balanced and relaxed				0.858
I am generally in a good mood				0.897
I generally feel physically good				0.705

Model fit: Chi-square = 313.08, df = 96, $p < 0.001$, NFI = 0.92, CFI = 0.95, TLI = 0.93, RMSEA = 0.07.

Some of the background variables represent issues of social sustainability that could moderate the impact of our independent variable and mediators, and could provide alternative explanations to our theoretical framework. Alternatively, they could reveal differences between certain subgroups and other dominant employee cohorts in the processes tested in our model. For example, there may be differences between young and old employees, or between less-educated and more-educated employees. Hence, we include the following as control variables in our analyses: gender, age, education, number of children under age 18 living in the house, managerial position, the impact of the COVID-19 pandemic on the respondent, and the degree to which a respondent uses electronic communication in their routine work.

2.6. Common Method Bias

The independent variable in our model—workspace integration—was measured by participants' indications of how much time they spent in the organizational physical space, alongside an indication of their primary workspace on a categorical scale used as a manipulation check. These are objective measures, and thus are not subject to common

method bias (CMB). In order to further reduce the possibility of participants' automatic responses, which are known to increase the risk of CMB (cf., [64,65]), we used different response types in different parts of the survey (e.g., 5-point Likert scales, categorical response options, 1 to 100 scale sliders, the division of 100% between three options, and attention checks). Moreover, we used Harman's single-factor test to identify possible CMB by employing an exploratory factor analysis constraining all of the items to a single factor (Malhotra et al., 2006). The results showed that a single factor accounted for 37.8% of the total variance, suggesting no serious CMB [66].

2.7. Assessment of the Validity and Reliability of the Research Model and Constructs

Table 1 displays the results of the confirmatory factor analysis (CFA), which support the validity of the research model by showing the high loadings of the items on the respective factors, and satisfactory fit measures. Table 2 presents the values of McDonald's omega, the average variance extracted (AVE), the composite reliability (CR), and the inter-correlations among the study variables. The McDonald's omega and CR values exceeded the 0.70 threshold [67] for all of the scales, and all of the AVEs except one were above the 0.50 threshold, confirming convergent validity. For workspace opportunities for social interactions, the AVE was somewhat lower than 0.5 (0.48). However, because this construct's CR was much higher than 0.6, the convergent validity of the construct is still adequate [68].

Table 2. Reliability and inter-correlations between workspace affordances and general wellbeing.

	McDonald's Omega	AVE	CR	1	2	3	4
1. Workspace symbolism of the organization	0.88	0.72	0.88	0.85			
2. Workspace symbolism of the self	0.87	0.68	0.87	0.55 *	0.83		
3. Workspace opportunities for work social interactions	0.85	0.48	0.83	0.50 *	0.34 *	0.69	
4. General wellbeing	0.90	0.70	0.90	0.48 *	0.59 *	0.49 *	0.84

Note: The square roots of the AVEs (discriminant validity) are on the diagonal. * $p < 0.05$.

3. Results

3.1. Direct Effects of Workspace Integration on Workspace Affordances and Wellbeing

In order to test the research hypotheses positing links between workspace integration, workspace affordances, and general wellbeing (as an indicator of social sustainability), we conducted structural equation modeling (SEM) with AMOS23 software employing maximum likelihood estimation [69]. Gender, age, education, number of children, managerial position, the impact of COVID-19, and the use of electronic communication served as control variables. Following Simmons, Nelson, and Simonsohn [70], and Becker et al. [71], the standardized estimates of the direct effects of the study constructs are displayed in Table 3 twice—without and with the impact of the control variables. The results remained the same after all of the control variables were included in the analysis, confirming the robustness of the research findings and the lack of statistical artifacts.

Our results contribute to the understanding social sustainability by confirming the links between workspace integration, workspace affordances, and general employee wellbeing. The results support the prediction in H1a that the degree of workspace integration positively influences wellbeing (Beta = 0.13, $p < 0.05$), rejecting the rival hypothesis (that the lower the degree of workspace integration (namely teleworking), the higher the wellbeing).

H2a and H2c, predicting that the degree of workspace integration positively impacts workspace affordances of the symbolism of the organization and opportunities for social interactions, respectively, were confirmed; H2b, predicting that workspace integration negatively impacts workspace symbolism of the self, is not supported ($p > 0.05$). All three workspace affordances are positively correlated with wellbeing, supporting H3a, H3b, and H3c (see Table 3).

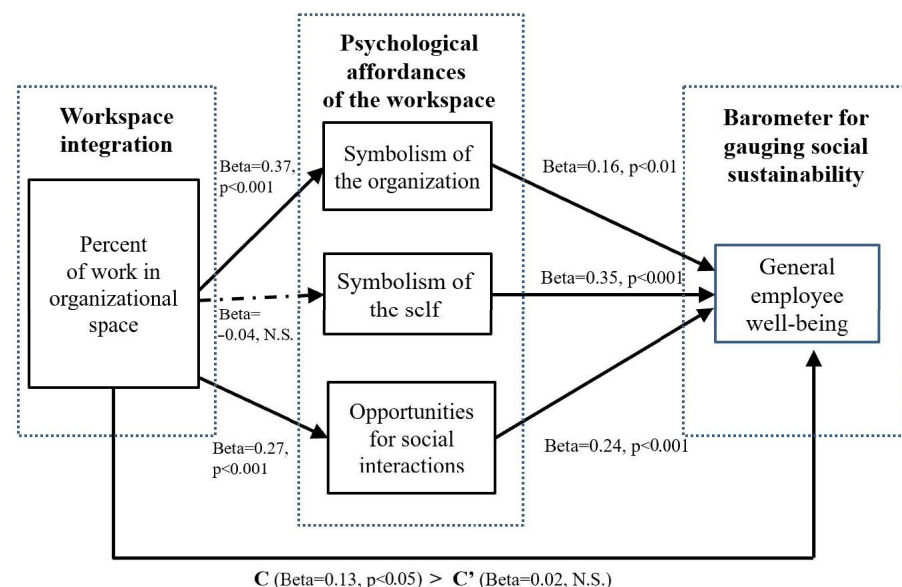
Table 3. Total, direct and indirect effects of workspace integration on general wellbeing, mediated by workspace affordances.

Without Control Variables	Workspace Affordances			Barometer of Social Sustainability
	Symbolism of the Organization	Symbolism of the Self	Opportunities for Social Interactions	General Wellbeing
Direct effects				
Workspace integration	0.37 ***	−0.04	0.27 ***	0.02
Workspace symbolism of the organization				0.16 **
Workspace symbolism of the self				0.35 ***
Workspace opportunities for social interactions				0.24 ***
Indirect effects	0.060 [0.017, 0.103]	−0.018 [−0.056, 0.017]	0.063 [0.034, 0.096]	
With control variables				
Direct effects				
Workspace integration	0.34 ***	−0.04	0.26 ***	0.02
Workspace symbolism of the organization				0.16 **
Workspace symbolism of the self				0.31 ***
Workspace opportunities for social interactions				0.24 ***

** $p < 0.01$, *** $p < 0.001$. Note: indirect effects; significant effects are bolded [95% CIs in brackets].

3.2. Workspace Affordances as Mediators of the Impact of Workspace Integration on Wellbeing

Our final four mediation hypotheses predict that the workspace symbolism of the organization (H4a) and opportunities for social interactions (H4c) positively mediate the impact of workspace integration on general wellbeing. Mediation tests conducted by the bootstrapping of 5000 samples with 95% confidence [72] confirmed these hypotheses. As is consistent with the two hypotheses, these two workspace affordances fully mediate the relationship between workspace integration and social sustainability, as indicated by general wellbeing, as shown in Table 3. In Stage 1, the relationships between workspace integration and each of the two workspace affordances (the mediators) are significant. At the same time, the relationship between workspace integration and employee wellbeing is significant in Stage 2 (C: $\beta = 0.13$, $p < 0.05$), but becomes non-significant in Stage 3 (C': $\beta = 0.02$, $p > 0.05$), when the two affordances are included in the regression and their effects are significant; see Table 3 and Figure 2. H4b, predicting the negative mediation by workspace symbolism of the self of the link between workspace integration and wellbeing, is not supported (see Table 3).

**Figure 2.** Research findings: The results of the path model analysis.

3.3. Additional Findings

A few significant relationships between the control variables and the study constructs were observed that are not related to the direct effects in the research model. The impact of the COVID-19 pandemic on the respondents is negatively correlated with the workspace symbolism of the organization (Beta = -0.15 , $p < 0.01$), workspace symbolism of the self (Beta = -0.17 , $p < 0.001$), workspace opportunities for social interactions (Beta = -0.1 , $p < 0.05$), and wellbeing (Beta = -0.1 , $p < 0.05$). In addition, workspace symbolism of the self is negatively correlated with education (Beta = -0.18 , $p < 0.001$), and wellbeing is positively correlated with the respondent's age (Beta = 0.1 , $p < 0.05$) and being in a managerial position (Beta = 0.1 , $p < 0.05$). These control variables do not moderate any of the direct or indirect predicted effects, such that these results do not challenge the robustness of our theory and findings.

4. Discussion

4.1. Main Findings

Our findings add to what is known about social sustainability by showing that workspace integration positively influences employees' general wellbeing; the more an employee's workspace is integrated with the organizational space, the higher the employee's wellbeing. We also show that workspace integration positively impacts an employee's sense that the workspace symbolizes the organization and affords opportunities for social interactions. The three workspace affordances we suggest—symbolism of the organization, symbolism of the self, and opportunities for social interactions—positively influence wellbeing, and as predicted, symbolism of the organization and opportunities for social interactions fully mediate the impact of workspace integration on employee wellbeing. However, contrary to our expectations, workspace integration is not related to the workspace symbolism of the self, and this workspace affordance does not mediate the impact of workspace integration on employee wellbeing.

4.2. Implications for Theory and toward Future Research

Our main contribution in this work is the introduction of the new concept of workspace integration, which we propose is a continuum that should be incorporated into research on workspace design. This concept offers two important theoretical contributions. First, most previous research considered workspace arrangements as a dichotomy between organizational and non-organizational workspaces (cf., [4,25]). We promote this theory by adding the notion that workspace arrangements are a continuum of the variation of the extent to which employees perform work in a territory that is physically connected to the organization. This continuum ranges from full integration (performing all of one's work in a space that is physically integrated with the organization) to full separation (performing all of one's work in a space that is totally detached from the organization).

Second, this notion of workspace integration enriches the previous theory, which traditionally focused on office design, by connecting it to the design of workspaces that are not proper organizational offices. Our theory posits that a "workspace" is any space in which employees do their work, be it an organizational space or a non-organizational space. Thus, people working from home have a "work-at-home" workspace, and people working in any other location (e.g., co-working spaces) have a designated workspace that is not part of the organizational space. Given the rapidly increasing prevalence of alternative work arrangements and the high flexibility to integrate work in off-organizational spaces, future analyses of workspaces must attend to this conceptualization. We note that our research examined only office workers, and further research is needed to examine related dynamics in other professions.

An earlier theory presented by Vilnai-Yavetz et al. [18] suggested three dimensions through which employees perceive their workspaces: symbolism, functionality and aesthetics. In their original work, Vilnai-Yavetz et al. demonstrated the effects of functionality and aesthetics, but did not find significant effects of symbolism. Our analyses here do show

the effects of perceived symbolism. The key difference is that, in the current work, we expand the notion of workspace design to include any workspace in which employees work, whereas Vilnai-Yavetz et al. followed the canon of previous research and stayed within the realm of organizational workspaces and job satisfaction. By adding the analysis of extra-organizational workspaces and general wellbeing, we extend the impact of employee perceptions (of workspace affordances) to social sustainability.

Our review of previous research suggested an indecisive relationship between the new construct of workspace integration and wellbeing. Consequently, we offered competing predictions of either a positive or negative relationship. Our findings of a positive relationship affirm the importance to employee wellbeing of a recognized physical workspace that is designated as an organizational space. The quote with which we opened this paper illustrates the managerial recognition of the link between physical organizational workspaces and social sustainability, perhaps affirming the idea of place attachment, as discussed by Low and Altman [73].

Our findings further confirm our theoretical analysis of three aspects of workspaces as affordances: the symbolism of the organization, symbolism of the self, and opportunities for social interactions. All have positive effects on employee wellbeing, implying that they enact something of importance to employee experiences at work and demonstrating their utility for the analysis of social sustainability. Our analysis of the features of the workspace as affordances is also useful for understanding social sustainability by suggesting mechanisms that help explain the effects of the workspace on employees. We showed that the relationship between workspace integration and employee wellbeing is mediated by the symbolism of the organization, and by opportunities for social interactions. There may, however, be additional features of a workspace that help promote these mechanisms, which could and should be explored in future research. For example, Spreitzer et al. [41] suggested a role of emotions as affordances of the physical workspace. Emotions have been confirmed to mediate the effects of retail and service environments on customers (cf. [46]). Bitner [74] suggested that emotions might also be mediators of the effects of service environments on service employees. In this spirit, we propose that emotions might be mediators of the effects of workspaces on employees.

The lack of a relationship between workspace integration and the workspace symbolism of the self raises a theoretical question on the differences between the symbolism of the organization and the symbolism of the self. It appears, from our data, that the symbolism of the self is construed by employees as an affordance that does improve personal (general, non-work) wellbeing but is not related to workspace integration or a mediator of the link between workspace integration and employee wellbeing. In other words, the symbolism of the self that is afforded by the workspace, or by aspects of the workspace that communicate personal employee values and self-identity [44,45], is important for people in general and employees in particular, regardless of where they perform their work. Social sustainability can benefit from the personalization of workspaces, whether at home, the organization, or any other physical or virtual location.

The symbolism of the organization communicated by a workspace [49,50], on the other hand, is context-dependent, and contributes to employees' wellbeing as a function of the extent of workspace integration with the organizational physical space. Previous analyses of workspace symbolism (e.g., [18]) failed to notice this essential difference between the symbolism of the organization and the symbolism of the self. The lack of distinction of the effects of these types of symbolism on employees in previous works may reflect the omission of the symbolism of workspace integration. Hence, the addition of the notion of workspace integration helps disentangle missing elements in previous research on symbolism.

Our finding on the symbolism of the organization confirms our prediction, but the broader effect of the symbolism of the organization might conflict with the symbolism of individual values. A good example is the "hot-desking" or "non-territorial workspaces" studied by Elsbach [10] (p. 622). West and Wind [11] described the design of these

shared spaces as manifesting organizational policy, noting that by putting the desks and chairs of the organization “on wheels” (p. 138), the organization strengthens its culture and values, and can respond more effectively to changes in the business environment. However, employees striving for privacy or for a personal space to decorate may experience a dissonance that can hamper their general wellbeing. Hence, contrary to the effect of the symbolism of the self, the effect of the organizational symbolism of a workspace depends on the extent of the fit between the employee and the organization’s values and preferences [75]. When identification increases, the employee’s experience becomes more meaningful and encouraging [41]. We call for future research to explore the conceptual differences between the symbolism of the self and the symbolism of the organization in order to explain these different dynamics and further improve social sustainability.

Our theory also requires further research regarding the relationships between the three workspace affordances that we examined. We analyzed them as independent yet concurrent perceptions of workspaces by employees. However, there may be interdependence between the afforded symbolism and the availability of social interactions, as mentioned, for example, by Tann and Ayoko [76] and by Spreitzer et al. [41]. Byron and Laurence [45], for example, suggested that the objects with which employees personalize their workspaces (or objects that people feel are absent from the workspace) symbolize to other people various ideas about an employee, which can clearly influence the afforded opportunities for social interactions. Thus, symbolic representations of the self can help people find common ground, inspire a common understanding of the work experience, and lead other people to share personal information, all of which can lead to improved social sustainability. In short, additional research is needed to elaborate the relationship between symbolism affordances and perceived opportunities for social interactions.

4.3. Implications for Social Sustainability and Management

Our additional findings show that the COVID-19 pandemic negatively impacted employees’ senses that their workspaces symbolize the organization and the self, as well as workspace opportunities for social interactions and wellbeing. Namely, the stronger the effect of the pandemic on employees, the more negative their perceptions of work-related and general life aspects, which poses a challenge to the social sustainability of organizations globally. These findings suggest that the effects of the pandemic may be broader than recognized, perhaps because of the transition it imposed on people’s working lives. Changes in workspace design will likely be among the post-pandemic managerial challenges. Workspaces on the full range of the “workspace integration continuum” will need to be tested for their ability to meet safety and health regulations. Open-air, physically distant spaces appear to be necessary to allow work meetings and informal interactions that comply with social distancing regulations. The “side effects” of such changes reported here certainly have implications for social sustainability, and will require managerial attention. In sum, our findings are generally encouraging in terms of social sustainability, but reveal a few challenges. Importantly, we found a general pattern that the demographic variables included in our models as control variables do not moderate the effects predicted by our theoretical model, which suggests that the workspace affordances we propose as mechanisms driving employee wellbeing are equally relevant to employees regardless of gender, age and education. However, because the short- and long-term effects of COVID-19 have been shown to be greater in marginalized groups (e.g., poor people, [77]), further research is needed to understand the interrelationships between our study variables and possible threats to social sustainability.

4.4. Limitations

Like all research, there are limitations of our study that must be acknowledged. First, we found negative relationships of the background item “My life has been affected by the COVID pandemic” with all three affordances and general wellbeing. People’s sense of symbolism of the organization, symbolism of the self, opportunities for social interac-

tions and their general wellbeing were generally lower among respondents who reported feeling a strong sense of influence of the pandemic. This suggests a possible general halo effect [78] of the COVID context on their responses. Because the links predicted by our model were not affected by these variables, we do not construe this as a major limitation of the generalizability of our findings. Second, of the initial sample of 400 respondents, only 8 reported that they worked in other types of workspaces, such as co-working spaces [2] or workspaces with a high degree of mobility [4], rather than in the organizational office or the home workspace. Because this group was small, we excluded it from our analysis. Future research can focus on this specific group of employees to obtain more data, expand our analyses, and establish our conceptualization. Third, our theoretical model and conceptualization suggest that workspace integration impacts workspace affordances, employee wellbeing, and the impacts of the three affordances on employee wellbeing. While workspace integration is objective information that the respondents reported about their work arrangement and cannot be influenced by workspace affordances and wellbeing, the constructs we study are subject to self-report biases, leaving open the possibility of opposite-direction influence or a mutual-direction relationship. However, the rationale for our hypotheses proposes impacts of workspace design and affordances on employees, as reflected in the research model, rather than the other direction, offering construct validity to our interpretations. Fourth, and finally, the concept of workspace integration that we introduce suggests that employees can divide their working time between several locations. However, while our independent variable indeed measured the percentage of time spent in each workspace, employees were asked to report their perceptions of workspace affordances only regarding their primary workspace. Future research should use a more sophisticated questionnaire that is able to represent the complexity of this variable.

5. Conclusions

Our findings confirm previous arguments about the impact of workspace affordances on employee wellbeing, and add the important connection of perceptions of the workspace with social sustainability. Our key contribution is the introduction of the new concept of workspace integration. Focusing on this construct reveals differences between the influences of the workspace symbolism of the organization and the workspace symbolism of the self. Both impact employee wellbeing, but only the symbolism of the organization mediates the link between workspace integration and employee wellbeing. Given the current complexity of work environments globally, with employees who formerly worked in organizational offices increasingly performing their work outside organizational physical spaces, traditional analyses of office design appear to be too simplistic and less relevant. New thinking is required, and we hope the conceptualization we introduced will contribute to these efforts. For instance, intranets and organizational social media platforms such as Slack (<http://www.slack.com/>) (accessed on 27 July 2021) are rapidly becoming integral parts of organizational workspaces. Therefore, the design of such platforms must afford the symbolism of the organization, the symbolism of the self, and opportunities for social interactions for employees. These affordances are particularly critical for vulnerable employees who cannot get to work in the organizational space on a regular basis.

By extension, an omnichannel approach to employees' workspaces is needed. This idea builds on the omnichannel approach in retailing, which defines the goal of reaching every single customer [79]. Integrating virtual workspaces with physical (in- and off-organization) workspaces will attend to the needs of diverse populations, and will afford each employee the symbolism of the organization, the symbolism of the self, and social interactions. Thus, our work widens the concept of and thinking about workspace design, and links it to social sustainability.

Author Contributions: Conceptualization, I.V.-Y. and A.R.; Data curation, I.V.-Y. and A.R.; Formal analysis, I.V.-Y.; Investigation, I.V.-Y. and A.R.; Methodology, I.V.-Y.; Project administration, I.V.-Y.; Writing—original draft, I.V.-Y. and A.R.; Writing—review and editing, I.V.-Y. and A.R. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: The study was conducted according to the guidelines of the Declaration of Helsinki, and approved by the Institutional Review Board (or Ethics Committee) of the Ruppin Academic Center (protocol code 96).

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study as part of their agreement to participate in the Prolific platform survey.

Data Availability Statement: The data reported in this manuscript will be available in a publicly accessible repository during the review process.

Acknowledgments: We thank Tevel Mark for help in the data collection, Shaked Gilboa and Yaniv Kanat-Maymon for statistical advice, and Dawn Schmidt for language editing. Funding in support of the research was provided by the research authority of the Ruppin Academic Center, and by the Yigal Alon Chair for the Study of People at Work of the Technion—Israel Institute of Technology. These are the sole sources of support for the research. Funding from these sources was used for the data collection, statistical consulting, and additional technical aspects of the work.

Conflicts of Interest: The authors declare no conflict of interest.

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