

Engaging the body, appropriating a corporate wellness programme

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Abstract

Purpose – The purpose of this contribution is twofold: at the empirical level, it is shown how in the relationship that subjects are encouraged to construct with their bodies major implications for workers' well-being can be found; at a theoretical level, attention is drawn to the importance of framing the different practices workers may display towards digital wellness programmes not just in terms of acceptance or resistance, but also in terms of appropriation.

Design/methodology/approach – Empirically, this study concentrates on the pilot study conducted by a large manufacturing firm that decided to implement a digitally assisted corporate wellness programme. The experimentation involves a sample of the company's workers. The 24 participants were interviewed at the beginning, during the programme and at its end, for a total of 69 interviews. Interviews were transcribed and analysed through a template analysis.

Findings – This research emphasizes how workers' well-being manifests in the relationship subjects are fostered to construct with their body and, in parallel, how workers may play an active and unpredictable role in corporate wellness programmes.

Originality/value – Differently from the current literature that frames workers' reactions towards digital corporate well-being initiatives in mainly polarized ways, this contribution leads to a less dichotomic and more nuanced interpretation of the "impacts" wellness programmes may have, showing how workers may display practices not just of acceptance or resistance, but also of appropriation.

Keywords Worker well-being, Corporate wellness programme, Wearable technology, Body, Appropriation

Paper type Research paper

Introduction

Corporate well-being initiatives are increasingly implemented in organisations (Dale and Burrell, 2014; Segercrantz *et al.*, 2020), especially with the support of digital technologies, such as so-called "wearable" devices (Giddens *et al.*, 2017; Smith *et al.*, 2019).

According to optimistic readings, wearable devices are a powerful tool for increasing the efficiency of wellness programmes, as they help employees to make healthier choices by

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The present paper is the result of a fully collaborative effort by the three authors. If, however, individual responsibility is to be assigned for academic reasons, Filippo Andrei wrote the "Research Setting and Methodology" section, and the paragraph entitled "Performing exercises with the kinesiologist: the body-as-process"; Attila Bruni wrote the paragraphs entitled "Beyond acceptance and resistance: users and technological appropriation", "Performing exercises with the bracelet: the body-as-result", "Waiting for the kinesiologist, appropriating the programme" and the Discussion; Lia Tirabeni wrote the Introduction, the paragraph entitled "Workers' well-being and wearable technologies in corporate wellness programme" and the Conclusion.



rewarding positive behaviour through encouraging messages, instant feedback and attractive visuals or thanks to processes of gamification (Fritz *et al.*, 2014; Giddens *et al.*, 2017; Burns *et al.*, 2012; Fogg, 2003; Paluch and Tuzovic, 2019). Conversely, critical approaches frame wearable technologies and the interest organisations display in corporate well-being programmes as a further means of control and exploitation of workers' bodies (Maltseva, 2020; Pitts *et al.*, 2020; O'Neill, 2017). From this perspective, wearable devices and corporate well-being are seen as an invasion of workers' personal sphere, in order to improve their productivity and reduce organisational costs related to illness absenteeism (Lupton, 2016). In this vein, wellness programmes and wearable technologies are merely the instruments that organisations use for their own purposes while exploiting the bodily parameters of their workers (Till, 2019).

In this paper, we focus on the experience of a “digitalized” corporate wellness programme from a different angle. We are not interested in evaluating how wearable technologies may increase the efficiency of wellness programmes, make employees healthier or act as a further extension of organisational control and exploitation of workers' body. Rather, our interest lies in describing and analysing how workers may appropriate a wellness programme, skip its technological device, and profit from the overall experience.

Our case is quite unusual, in that we had the opportunity to witness a pilot study set up by a large Italian manufacturing enterprise willing to implement a well-being programme by means of a digital device. The device consists of a bracelet equipped with movement sensors (accelerometers), connected (via Bluetooth) to a screen in front of which the employees perform physical movements and exercises. The pilot study involved two distinct groups of workers – a sample of white-collar and blue-collar workers – for a total of 24 individuals. Half wore the bracelet and performed exercises in front of a screen; the other half acted as a sort of “control group”, performing exercises without the bracelet and under the guidance of a health professional (a kinesiologist).

We will show how, although “smart” in detecting data from the body, the device was not able to help workers engage in a relationship with their own body. Meanwhile, the kinesiologist – while unable to detect data about workers' bodies – was “smart” in making participants aware of their daily movements and in engaging them in a different approach towards the body. More importantly, as we will see, once they realized this difference, participants assisted by the bracelet spontaneously started seeking out the kinesiologist, relegating the digital device to the background.

Our contribution is thus twofold. On the empirical level, concentrating on the joint action of the new device and the kinesiologist, we will see how it is precisely in the relationship subjects are encouraged to construct with their bodies that we can find major implications for workers' well-being. At a more theoretical level, our study draws attention to the importance of framing the different practices workers may display towards digital wellness programmes not just in terms of acceptance or resistance, but also in terms of appropriation (Eglash, 2004). Differently from the current literature, this leads to a less dichotomic and more nuanced interpretation of the “impacts” wellness programmes (and their technologies) may have, illustrating the active and unpredictable role of workers in them.

Workers' well-being and wearable technologies in corporate wellness programmes

According to two famous categories proposed by Umberto Eco (1964) in one of his earliest studies on mass media and culture, it could be said that the debate around corporate wellness presents two opposing stances that can be labelled “integrated” (with respect to most enthusiastic views) and “apocalyptic” (with respect to most critical positions). The former

sees such initiatives as useful tools for improving workers' wellness (Conrad, 1988; Appelbaum *et al.*, 2000; Kreitzberg *et al.*, 2016; Parks and Steelman, 2008; Quick *et al.*, 2015; Huetermann and Bruch, 2019), while the latter underlines the "invasive" and disciplining effects of corporate wellness programmes (Till, 2018; Dale and Burrell, 2014; Ford and Scheinfeld, 2016; James and Zoller, 2018; Harvey, 2019; Purser, 2019; Jammaers and Zanon, 2021). While different in respect of their judgments, both stances share an implicit assumption: namely, the idea that such corporate programmes will directly "impact" workers and organisations (in either a positive or negative way).

This same polarization is replicated in regard to the role so-called "wearable technologies" may play in wellness programmes. While their initial field of application was individual health (Lupton, 2016), more recently these technologies have been used in organisations with the presumed purpose of improving safety (Wilson, 2013) or stimulating workers' physical activity, so that companies have started encouraging people to engage in self-monitoring practices as part of corporate wellness programmes (Till, 2018; Moore and Robinson, 2016).

On the one hand, mainstream studies emphasize the positive effects the adoption of wearable devices may have in increasing the efficiency of wellness programmes by fostering a deeper bodily awareness (i.e. Giddens *et al.*, 2017; Khakurel *et al.*, 2018). Thanks to the standardised parameters and timely feedback offered by digital devices, workers have the ability to self-manage wellness activities without directly interacting with a specialist (Robson *et al.*, 2016). In this way, workers can develop body awareness in an autonomous and rational way, as the data from the wearable devices reflect the actual parameters of an individual's body rather than their perceptions (Rutjes *et al.*, 2017; Maltseva, 2020).

On the other hand, critical approaches underline the emergence of new forms of domination and control connected to these technologies (Zuboff, 2019; Foster and McChesney, 2014). In such a perspective, digital technologies are seen as causes and tools of a general exasperation with working conditions (Constantinides *et al.*, 2018; De Stefano, 2016; Frey and Osborne, 2017; Kellogg *et al.*, 2020; Moore, 2017; Spencer, 2018), with negative consequences on job quality and workers' well-being. Till (2018) observes that these technologies substantially integrate the bodies of the population into the machinery of capitalism through merging the goals of the organisation with people's everyday lives. Particularly, he highlights the fact that the "philanthropic" interest organisations display towards well-being is strictly linked to profit: the main aim of corporate self-tracking initiatives is the "instantiation of a productive ethic through the encouragement of practice of self-assessment and management" (Till, 2018, p. 235). Accordingly, workers are prompted to identify with an ideal worker that is simultaneously healthy and productive.

Parametrizing body performances, "smart" technologies act as managerial strategies aimed at positioning the ideal worker as a responsible subject able to take care of themselves and of their own wellness (Wilson, 2013; Moore and Robinson, 2016; Lupton, 2016). Wearable technologies foster the idea that by gathering data from the body through advanced digital tools it is possible to easily improve health and people's wellness (Ruckenstein and Pantzar, 2017), in the factory as well as in daily life. Factories were the first places where people's activities were measured and quantified: a long time before being equipped with sensors aimed at gathering data from the body, the clock, in its traditional shape, was already a "management accomplice" (Gregg and Kneese, 2019).

For some authors, the possibility of tracking body performances through digital technologies transforms the body into a kind of "measure machine", generating the idea that it is possible to quantify anything, even the self (Swan, 2013; Lupton, 2016). This gives organisations the opportunity for "boosting up" and literally "augmenting" workers (Tirabeni, 2020), turning control into an empowerment rhetoric (Ruckenstein and Pantzar, 2017).

The debate concerning the role of wearable technologies in well-being programmes thus reproduces “integrated” and “apocalyptic” views, in a renewed idea of technological determinism which assumes that digital devices will act as pure tools in the hands of the management and will directly impact various dimensions of workers’ organisational and private lives. More importantly, in both views workers seem to have no other option than to enthusiastically accept or critically resist the adoption of wearable technologies for corporate wellness purposes (O’Neill, 2017; Maltseva, 2020).

As we will shortly see, taking inspiration from the field of Science and Technology Studies (STS) and a non-deterministic approach to technologies, there can be more alternatives and nuanced interactions between technologies and their users.

Beyond acceptance and resistance: users and technological appropriation

In a deterministic approach, technology represents the independent variable that “impacts” organizational dynamics, so that attention is focused on the results it produces at the individual and organizational level. In a less deterministic approach, organizational actors play a crucial role in giving shape to and stabilizing the “result” of a technology. Although still not shared by the mainstream literature (Orlikowski, 2007), it can be said that over the past 30 years a variety of research within and outside the field of organization studies provides evidence for this idea. As in the “classic” study by Orr (1996), one crucial competence of Xerox technicians to avoid continuous breakdown often involved their ability to “repair” the relationship between the photocopier machine and its users. That is, the way the photocopier should have been used with the actual practices of the people using it, to prevent frequent misuses and to stabilize Xerox photocopiers as reliable machines. In the same vein, Suchman *et al.* (1999) highlighted the importance of studying technologies “in practice”, considering and evaluating them not in reference to their technical characteristics and the changes they should bring to the workplace, but in relation to their situated use and the support they can offer to ongoing work and organizational practices. Workplace studies (Luff *et al.*, 2000) have clearly evidenced how human interaction supports the effectiveness and reliability of technologies in organizational settings: as seen in the famous case of the Bakerloo Line, apart from the image from the camera, sometimes it is necessary to indicate or point a finger at the screen to make something or someone “visible”. Susan Leigh Star and colleagues (Star and Ruhleder, 1996; Star and Strauss, 1999) underlined the invisible work that often surrounds the introduction of information technologies in organizations: the possibility for doctors to access updated databases often implies an increase in the work of the nursing staff, who must input the data (Star, 1991a). More generally, studies of information systems have shown the different coping strategies users may adopt in relation to information technology (Beaudry and Pinsonneault, 2005) and, more recently, the constant imbrication (Leonardi, 2013) of social and technological agency or, alternatively, their constitutive entanglement (Barad, 2003; Orlikowski, 2007). And even more generally, theories of practice (Hui *et al.*, 2016) have underlined how objects and technologies play a crucial role in the process of learning and mastering an activity.

This “quick and dirty” list of studies could continue, but it is beyond the interests (and possibilities) of this paper to give an exhaustive account of more than 30 years of research. What is worth noting is that one of the implications of all these studies is that organizational actors do much more than simply accept/reject new technological devices; that there are cases where some actors accept them, while others do not; and that it is not rare that actors accept/reject a new technological device on the basis of the redistribution of competences (and thus, power) it implies.

It could be said that the idea that users of a technology have many more options than those prescribed by the technology itself (and its designers) belongs to and has been one of

the major and distinctive results of an entire field of studies – STS (Oudshoorn and Pinch, 2003). Users may be relevant in the process of designing, producing, marketing, distributing and supporting technically new technologies (Lindsay, 2003), giving rise to neologism such as producers (producer + user). In fact, a fundamental process users may activate is that of technological appropriation (Eglash, 2004). The term “appropriation” – already used by Silverstone (Silverstone and Hirsch, 1992) to indicate a specific phase of the process of domestication of technologies and by information systems researchers to account for the “assessment” of IT by their users (Beaudry and Pinsonneault, 2005) – refers in this case to the co-construction processes that emerge from the use of technologies. As for the concept of domestication, appropriation is also based on the idea that innovation can emerge from use, but with a fundamental addition: power asymmetries are linked to innovation processes. Eglash (2004) refers specifically to social groups located outside the centres of power and techno-scientific production. In fact, technologies are often reinterpreted, adapted and reinvented at the peripheral level. In turn, this “bottom-up” innovation can be re-appropriated by the productive sphere and be re-worked again in the sphere of use (Baldwin *et al.*, 2006). The concept of technological appropriation thus refers to this continuous circulation of technology between centre and periphery, between social groups with more or less power, but in which users can play a role no less important than that of engineers (Eglash, 2004).

Based on the more or less active role users may play, Eglash (2004, p. xi) developed three analytical categories of “creative” appropriation: reinterpretation, adaptation and reinvention. If reinterpretation is the basic form of creative appropriation (in that it refers to a semantic transformation which does not make substantial changes to the use or structure of technical objects, as with “vintage” technologies), reinvention is the most radical (in that it creates new functions through the structural modification of technology, such as computer hacking). Adaptation lies in the middle of this continuum, as it refers to cases in which users modify both the meaning and the use of a technology, but without creating new functions. Adaptation can take the form, for example, of the discovery of affordances (Gibson, 1979) or latent functions of a technology which were not originally foreseen as relevant by the designers.

Borrowing the concept of technological appropriation, in the analysis of our case we will show how workers may appropriate a digitally assisted corporate wellness programme precisely by adapting its “core” and “side” elements.

Research setting and methodology

Our empirical setting is “Alfa” (a pseudonym), a large Italian traditional manufacturing organization. In 2017, Alfa decided to implement a corporate wellness programme based on the adoption of a digital device. A team of consultants comprising social scientists, technology developers and providers, along with experts in the medical field, were involved in the design and implementation of the programme. Together, the consultants, under the supervision of an internal company coordinator, developed a specific wellness programme that was effectively run between 2018 and early 2020, and which implied the adoption of a wearable device, a bracelet equipped with movement sensors (accelerometers) connected via Bluetooth to a screen showing the data detected.

The programme took the form of a pilot study involving two distinct groups of workers: a sample of the company’s white-collar and blue-collar workers, for a total of 24 individuals. White-collar workers were selected randomly from the company’s units, while blue-collar workers were selected by the management within the same assembly line, mainly to avoid organizational problems related to production.

The clinicians defined a set of standardized exercises to be done by the employees to reduce their fatigue and improve their physical well-being. The exercises were identical for all the workers and had to be performed in a dedicated space within the factory plant – the so-called “wellness room”. Half of the selected employees wore the bracelet and were guided in the execution of exercises by a screen in front of them. To give an “experimental” slant to the study, within the same space and at the same time, the other half of the employees did the exercises without any technological support but under the guidance of a professional kinesiologist. The division into the two groups was done randomly, to prevent workers complaining about their allotment. Thus, the research setting gave the opportunity to compare in real-time the “doing” of the kinesiologist and the “doing” of the device in the support of wellness activities.

At different times – at the beginning, during and at the end of the programme – the 24 participants were interviewed by two of the authors of the present contribution, for a total of 69 interviews. At the end of the pilot study, it was possible to interview again only 21 out of 24 participants (as detailed in Table 1), because at the time of the final interview, two participants were on sick leave, while one individual refused to be interviewed again for personal reasons (see Table 2).

Each interview lasted between 40 and 90 min and aimed to detect the attitude of the employees towards the corporate programme, their interaction with the new technological device and their perceived wellness improvement. The semi-structured interview tried to grasp the perceived experience of the participants (i.e. “The trial with the bracelet has started. Could you please tell us your personal experience?”), and the kinds of problems encountered (“Did you have any problem during the execution of the exercises?” “What were the main problems you encountered during the execution of the

	Number of participants	Participants assisted by the device	Participants assisted by the kinesiologist
<i>Sex</i>			
Male	14	8	6
Female	10	4	6
<i>Age</i>			
<40	2	1	1
40–49	6	3	3
50–61	16	8	8
<i>Education</i>			
Elementary school	11	5	6
Secondary school	3	2	1
High school diploma	4	2	2
Bachelor's degree	3	2	1
Master's degree	1	0	1
Single cycle degree	2	1	1
<i>Job Description</i>			
Blue-collar	12	6	6
White-collar	12	6	6
<i>Years of work in the company</i>			
0–5	3	2	1
6–15	3	0	3
16+	18	13	5

Table 1.
Participants' characteristics

exercises?”). We also relied on the technique of the “interview to the double” (Gherardi, 1990; Bruni and Gherardi, 2001), a research technique where typically the researcher asks the interviewee to imagine training their double to perform their daily work without anyone noticing the exchange. The data generated by this interview technique allows researchers to discover the details of interviewees’ everyday activities, therefore interviews to the double are particularly useful for eliciting the situated knowledge connected to practical activities (Nicolini, 2009). In this study, researchers asked each interviewee to imagine training their double about how to practically perform the activities of the wellness programme. All interviews were recorded and integrally transcribed; selected excerpts were translated into English (for the sake of this and other publications), trying to keep the jargon expressions sometimes present in their Italian version.

Interviews were analysed using template analysis (King, 1998, 2004), a model for coding the content of textual data from transcripts of interviews, fieldnotes or collected documents. Starting from the literature and their expectations, the researcher sets *a priori* themes expected to be relevant to the analysis. Reading through the data, the researcher codes fragments of text related to these themes and, at the same time, defines new themes to categorize data which do not fit with *a priori* themes. Through this, after the coding of a few interviews, an initial template of themes is defined. This template is then applied to the whole dataset, although it can be modified in consideration of what emerges from transcripts. Thus, a template emerges; that is, a system of interconnected categories aimed at interpreting the phenomenon at stake.

In our case, we tried to follow one of the “analytic rules” proposed by Strauss’ “sociology of the invisible”: concepts are verbs, not nouns (Star, 1991b). Coding transcripts using verbs provided two advantages: capturing the sense-making process through which participants gave meaning to the experimentation; and reconstructing the dynamics of interactions participants had with the kinesiologist and with the device during the wellness exercises. The final template allowed us to highlight the different conceptions of the body that emerged between the two groups of participants and the relations established between human and non-human actors during the programme (see Table 3).

The bracelet and the kinesiologist: the body-as-result and the body-as-process
In this section, we first present the experience of subjects wearing the “bracelet”; then, we show the experience of the subjects assisted by the kinesiologist. Concentrating on the joint action of the new device and the kinesiologist, we will highlight the diverse conceptions of the body that stand behind the action of the two, and the implications for participants in terms of their well-being. Finally, we show the process by which, once they realized the difference between being assisted by the digital device or by the kinesiologist, subjects

Table 2.
Summary of
interviewees

Description	No. of interviewees	Interviewees assisted by the device	Interviewees assisted by the kinesiologist
Interviews at the beginning of experimentation	24	12	12
Interviews during the experimentation	24	12	12
Interviews at the end of experimentation	21	11	10

		Engaging the body
		95
(1) Performing the exercises with the bracelet: Body-as-result	1.1 Observing and comparing 1.1.1 Observing colleagues assisted by the kinesiologist 1.1.2 Meeting colleagues during exercises 1.2 Engaging a distal relationship with the body 1.2.1 Following the device 1.2.2 Understanding feedback's device 1.2.3 Performing exercises with the device 1.2.4 Moving the body with the device 1.2.5 Monitoring the body with the device 1.2.6 Understanding the device	
(2) Performing the exercises with the kinesiologist: Body-as-process	2.1 Observing and comparing 2.1.1 Observing colleagues assisted by the device 2.1.2 Meeting colleagues during exercises 2.2 Engaging a proximal relationship with the body 2.2.1 Following the kinesiologist 2.2.2 Understanding body exercises with the kinesiologist 2.2.3 Performing exercises with the kinesiologist 2.2.4 Moving the body with the kinesiologist 2.2.5 Monitoring the body during exercises	
(3) Wearing the bracelet, waiting for the kinesiologist	3.1 Appropriating the wellness programme 3.1.1 Performing exercises at home 3.1.2 Monitoring the body at home 3.1.3 Experimenting with the body 3.1.4 Sneaking into kinesiologist's exercises 3.1.5 Waiting for the kinesiologist 3.2 Joining the kinesiologist 3.2.1 Wearing the bracelet while talking with the kinesiologist 3.2.2 Understanding device's feedback with the support of the kinesiologist 3.2.3 Moving the body with the device and the support of kinesiologist	
(4) Other	4.1 Prepare to perform exercises 4.2 Talking about the project to non-participating colleagues 4.3 Meeting colleagues after performing the exercises 4.4 Moving the body during everyday work	

Table 3.
Final template

wearing the bracelet started finding ways to profit from the presence of the kinesiologist as well.

Performing exercises with the bracelet: the body-as-result

When we asked the subjects assisted by the device to “instruct the double” [1] on how to behave when entering the wellness room (that is, the space where the activity took place), answers were quite standardized. The following interview excerpt shows the monotony and the loneliness of doing the exercises with the device:

Well, you should enter the door, say hello if you find someone . . . Then, we have the tacit rule to always wear the same device (. . .) and me, I have the purple one. Thus, you need to wear the purple bracelet and place yourself in front of the screen (. . .) Then, you follow the instructions on the screen. There are three exercises to do. Quite quick. One minute, one minute and half for exercise. You should follow the timings visualized on the screen and supported by a video made by a colleague. It is very easy. The objective of the first two exercises is to make the cue ball as small as you can. (Mr. Green, white-collar, device)

Although some stories were more detailed than others, the reported account is representative of the standardized and concise way in which the interviewees instructed their “double”. Participants accounted for only a few small habits (such as always wearing the same colour

bracelet) or ritual interactions that might take shape before or after the exercises, as if there was anything interesting in their experience. When giving instructions to the double regarding how to perform the exercises, interviewees were telegraphic and focused on “push start”:

The first exercise is . . . practically the push-ups, from one side to the other (. . .). There are three or four rounds. Then, soon after, comes the second exercise. You push “start” again on the computer, I mean . . . and the second exercise is to stand on one leg with the other lifted up . . . Then alternate, first one leg, then the other. There are three rounds (. . .) and then, as you finish, the screen tells you: “Let’s start the new exercise”, and you push “start” again. (Ms. White, blue-collar, device)

As with the above excerpt, in many accounts the new technological device was characterized by its “transparency”. Technology becomes transparent when its use and functioning can be taken for granted, namely when technical and social relations are stabilized (Latour, 2005). From this point of view, the absence of critical episodes or technical breakdowns in the collected interviews testifies to how the new device has been fully accepted by users, so that it becomes a simple “start” command. This does not imply that participants had no doubts regarding the functioning of the new technological device. Most respondents complained about the absence of feedback while performing the exercises and the incomprehensibility of the feedback received at the end of the entire session:

When you are confronted with a technological device that gives you an evaluation, but it does not allow you to understand the mistakes you made or what to improve . . . well, in my opinion in the long-run it becomes a little bit . . . I mean, the only feedback the device gives you is at the end of the session, when it asks you if you liked it . . . yes, sure I liked it! But I’d like much more to know what I have to do for improving me. (Ms. Beard, blue-collar, device)

The feedback given by the device (“excellent”, “good”, “to be improved”) provides information regarding body performance, but it does not allow participants to understand what they need to correct and how to do it. As in the above quotation, users also had to express appreciation regarding their experience, but again, this happened by just assigning a score (expressed in the form of an emoticon). In other words, the only possible interaction between the new device and its users was that of a reciprocal evaluation, which did not allow an improvement in mutual communication and understanding.

In some cases, subjects began to question the reliability of the new technology and to speculate about the results it reported. The next example shows participants’ difficulties in making sense of the feedback provided by the device, as well as their difficulties in understanding what was happening during the experimentation:

Some results were a little bit strange you know. Well, I think that four cue balls one time . . . and then, the next time, only one ball . . . But I noticed that, on the basis of my position, some movements were detected very well by the device, but not others (. . .). I think it is a problem of interface between the sensor and . . . Well, maybe it is calibrated . . . it is very big [the bracelet], it does not position well . . . it is not so well calibrated on the individual arm, so me, for example . . . I have a small arm . . . (Mr. Green, white-collar, device)

Accounts like the one above were common in the interviews and reveal the importance for users to make sense of the way the technology works. As in a typical sensemaking process (Weick, 1995), this “making sense” does not mean understanding in detail the functioning of the device, but rather ordering the overall experience, by noticing some elements, isolating them and trying to establish cause-effect connections (as in the case of the relationship that the last interviewee established between the sensor’s calibration and their arm’s dimension). Technology, on the contrary, does not question how or why an exercise is well-performed one time and poorly just after (as seen in the sentence: “Some

results were a little bit strange”; “Well, I think that four small balls one time . . . and then, the next time, only one ball . . .”).

In conclusion, not having a situated knowledge in the dynamics of interactions (Suchman, 1987), the device provided feedback based on rigidly standardized parameters which did not support participants in ordering the flow of events and their experiences. The body appears as the result of performances, measures and “scores”, so that participants are somehow distanced from it. From this point of view, as we will see, there was a great difference from the approach and the kind of relationship adopted by the kinesiologist.

Performing exercises with the kinesiologist: the body-as-process

At the very beginning, workers had great expectations about the new device. But once the project began, the technology quickly showed its limits, especially compared, and with the kinesiologist. Workers supported by the device were doing exercises at the same time and in the same space as those supported by the kinesiologist, so that the comparison between the technological support and human agency was unavoidable. The following two quotations highlight how the two groups of participants, through mutual observation, compared their experiences. The main difference emphasized by both groups concerns the type of feedback received:

They [colleagues assisted by the kinesiologist] can receive feedback from the very beginning (. . .), instead you have a sequence to follow that's all: you did it well, or you did it bad, but the sequence is that, and that's all (. . .). Maybe the difference is that: in the real-time feedback. (Ms. Greengrocer, white-collar, device)

In my opinion, with the Mister [the kinesiologist] it's much better! Because you have direct feedback. Instead, with the device, I do not have . . . well, if I have to improve something, the Mister corrects me immediately; instead, the technology just tells me: “You performed 100% . . . 80% . . . 60, 70”, but it does not correct me in real-time. (Mr. Bishop, white-collar, kinesiologist)

The possibility of having “real-time feedback” was the first perceived (and in some cases envied) difference by the participants of the two groups. Not surprisingly, having real-time feedback during the exercises was the most appreciated aspect by workers assisted by the kinesiologist:

Many times, during the exercises, he corrects us. I mean, for example, he looks at us and says: “Put up well . . .” . . . uh, do not know, the leg, for example . . . “try to find your balance”, or “keep up your arms”, or he says to me: “Do you feel pain? Put down your arms and keep them on the hip”, because I have pain in the arm . . . and stuff like that. Then he observes . . . (Ms. Levant, white-collar, kinesiologist)

Differently from technology, the kinesiologist does not gather data, but “observes”. And it is exactly by observing and interacting continuously with the participants that he becomes able to give information and “processual” advice oriented to calibrating the exercises in respect to each body and their individual features. The joint use of words (“shoulder closed”) and body contact (“the doctor [the kinesiologist] moves closer to me and pushes my shoulder a bit”) allowed the kinesiologist to offer more efficient, concrete and articulated feedback than that given by the device. Furthermore, the kinesiologist encouraged them not to conceive body activity as confined to a few specific moments dedicated to physical training (such as the ten minute set of exercises prompted by the corporate wellness programme), but to pay attention to everyday corporeal postures. As noted by participants, the kinesiologist observed the movement of workers' bodies on the assembly line before

beginning his work in the wellness room, thus he acquired useful contextual information for proposing targeted exercises.

Then I think he saw how we work . . . we have this posture, because the workstation here, you know . . . and so he told us: “Guys, relax your shoulder” . . . he also taught us how to do it in practice! “Let yourself go down, slowly . . . “You must never do this” . . . He taught us, slowly . . . “Try to do it” . . . (Ms. Mark, blue-collar, kinesiologist)

The last quote shows that becoming aware of one’s own body and assuming the right postures needs time, in both teaching and learning. This “taking time” (“go down, slowly”, “He taught us, slowly”) recalls the holistic approach towards the body that the kinesiologist tried to convey to participants, engaging them in exercises that also implied experimenting with one’s own perception. The following examples of “bodily experiments” proposed by the kinesiologist show how he aimed at increasing participants’ awareness of their own bodies, rather than simply explaining how to execute exercises correctly:

One time he asked us to perform an exercise that . . . well, we were supposed to count to 30 while keeping the eyes closed to see if we were able to stay in balance. Well, I found myself totally in another place (. . .) and well, I was quite shocked by this. So, he explained to me that there may be a part of the body, the right side, or the left, that is more damaged than the other . . . And in fact, I went towards the right side, from this side! (Ms. Beacon, blue-collar, kinesiologist)

He asked us to march quickly, but on the spot (. . .). You should take a tile as a reference point . . . You stay on the chosen tile and march, like a soldier, with your eyes closed and your arms stretched forward . . . and you, in your mind, you think that you are stationary, while instead, after a certain time . . . He gave us, I think, 30 seconds . . . and you find yourself in another side (. . .). None of us has remained in the starting place. That was very cute. (Ms. Wasp, blue-collar, kinesiologist)

These were only two of the many “body experiments” proposed by the kinesiologist that participants reported during the interviews, but they are striking examples of the difference between the experience subjects supported by the kinesiologist and those assisted by the device were having. The exercises proposed by the kinesiologist were “customized” not only according to participants, but they were purposely addressed to engaging participants in a unique knowledge experience (rather than in a functional one, as in the case of the device). This account represents the kind of results this experience produced in some of the participants in terms of awareness of their body:

Practically, he explained . . . well, I do not know if you ever did free diving, or just plugging the nose . . . When you reach the moment when you really miss your breath, the diaphragm begins to contract for its own sake, because you cannot control it. The diaphragm, combined with a small pressure in the liver area, produces a kind of discharge, a vibration in the liver area and so, it shakes . . . and that “shake” – the kinesiologist says – gives you a nice sensation. (Mr. Shore, white-collar, kinesiologist)

The above quotation testifies to how performing the exercises under the guidance of the kinesiologist led to a deeper understanding of one’s own body. In fact, in the above quotation, the interviewee explains the approximate effects that some actions may have on the body (for example, what happens in the diaphragm when breathing) and gives a complex vision of the process that may lead to a sort of sensation of physical wellness. It is precisely through this kind of account that the distance between the experience lived by those supported by the kinesiologist and those supported by the technology vividly emerges. Contrary to the device, the kinesiologist was unable to give feedback on individual performances based on standardized measures and numbers. However, providing step-by-step advice and feedback during wellness activities, the kinesiologist offered participants the possibility to develop a holistic approach to their bodies, and to enter into a closer relationship with it. This distance was also manifest to participants, so that subjects belonging to the group using the bracelet

progressively started to look for the kinesiologist, relegating the new technology to the background.

Engaging the
body

Waiting for the kinesiologist, appropriating the programme

Participants supported by the technological device began encountering the kinesiologist by chance, because on a few occasions he gave them some practical advice regarding the bracelet:

The first time he explained to us how to correctly wear the bracelet, or he simply came closer us to help. (Mrs. Greengrocer, white-collar, device)

After an initial meeting with a technician providing a few basic instructions, participants found themselves “alone” in the wellness room, without assistance. By explaining how to (properly) wear the bracelet and how to perform and to improve the execution of some exercises, the kinesiologist progressively attracted the attention of the participants. As the quotations make apparent, the kinesiologist filled the device gaps in terms of feedback and interaction, giving participants useful suggestions for correctly executing the exercises. Further, differently from the training with the device, which precisely followed the sequences and the duration of the different exercises, the meetings with the kinesiologist often lasted some minutes more than expected. Thus, after some time, once they had finished their training, participants supported by the device started to wait for the kinesiologist to listen to the “titbits” – in one participant’s word – he used to give at the end of each session:

Once the exercises are finished, I wait for the others finishing their exercises with the kinesiologist and then . . . at the end of each session the kinesiologist always gives a suggestion for improving our health and well-being. One time it concerns the cervical, another time the liver . . . or how to do the breathing. (Ms. Red, blue-collar, device)

As this quotation shows, at the core of the experience of the subjects supported by the technological device was the kinesiologist: having just a screen and a video as their main interlocutors, the final meeting with the kinesiologist represented the added value of the entire experience. The following quotation accounts for this latter point, showing how workers’ narratives vividly change when workers “switch” from interaction with the device to that with the kinesiologist:

I take the bracelet, check if it is on or not and wear it on the right arm, with the small indicator placed towards the shoulder (. . .). Then I go toward the first screen, the orange one, and I find it already switched on. I input the password (. . .), so I do the first exercise (. . .). There is a lady [the woman in the video] that gives you instructions, such as: “Put down and repeat the exercise from the other side” that is: bend the right leg and raise the left arm. (. . .) So, the exercise finishes, and you have to touch the screen if you want to go on with the second exercise. It says “Continue” and you should click on “Continue” and exercise number two appears. There is always the same lady that tells you how to start. You start with the legs a little open, the arm raised (. . .). There are some little indicators that close and some little indicators that open and the screen that (. . .) gives you the time, practically (. . .) When finished, emoticons appear on the monitor, you have to say if you were satisfied by the session or not, and so you click, and the results of your exercises are displayed (. . .). And that’s all . . . Then, I remove the bracelet, I put it back in place and then . . . we approach the doctor [the kinesiologist], he gathers us and always says something useful, to everybody (. . .). Me, I told him about my cyst, and he told me to try homeopathic stuff. He told me: “Since you do not want the surgery . . .”, he gave me some advice, he told me: “Try . . .”, and well, it worked well several times . . . I mean . . . I like him so much! (Ms. Red, blue-collar, device)

Reading this account, one may be surprised by the abrupt narrative change that ends the instructions to “the double”. As long as the interviewee describes how to relate and interact

with the device and the movements to be performed, at the core of the discourse there is not the subject and her body, but rather the device itself, with its instructions, timings, screen and confirmation orders. The subject and her body are almost absent because they only perform what the screen shows thanks to “the same lady” (an expression that, again, ironically accounts for the monotony of the situation). When the interaction with the technology ends and the interviewee approaches the kinesiologist her body acquires visibility, and the reciprocity of human action substitutes the normativity of technological functioning. The interviewee speaks about herself, and the kinesiologist listens to her, giving suggestions and leaving her free to decide what to do. The kinesiologist, other than filling the main gaps of the “bracelet” and offering a different perspective on health and wellness, involves the participants as active subjects, allowing the emergence of their bodies, experiences and doubts.

From a symbolic point of view, this narrative leap represents how participants assisted by the device intentionally profited from the presence of the kinesiologist, finding an alternative way to relate to their bodies from the one offered by technology. The kinesiologist allowed the workers to fill the distant relationship engaged with the device, transforming the purely functional analysis and representation of their bodies into a meaningful lived experience. By interacting with the kinesiologist – which was not expected by the programme – workers wearing the bracelet found a tactic (de Certeau, 1984) to appropriate the wellness programme. Because of this process of appropriation, and despite the success of the pilot study in terms of increased self-perceived physical well-being among the participants of both groups, the organisation decided to suspend the originally planned corporate wellness programme.

Discussion

As our case shows, workers may act differently than by simply accepting or refusing corporate wellness programmes, opening up other unforeseen possibilities.

From the beginning, workers had a positive stance towards the wellness programme and great expectations about the new device, so (for example) they only rarely questioned the “ownership” of their data or raised privacy issues. However, as the programme started, they quickly reconsidered the device and their enthusiasm towards it. As shown, from the participants’ point of view the digitally assisted wellness programme was not engaging enough, in particular because of the standardized interaction it entailed and the (low) quality of the feedback offered by the device. However, workers did not develop forms of resistance or indifference, such as disregarding the feedback, or displaying scepticism and distrust towards the overall programme. On the contrary, positive as they were, participants started questioning it, trying to make sense of their experience: how to improve movements; how to properly wear the bracelet; how to interpret the feedback offered by the device.

Thus, although enthusiasm for the device soon subsided, curiosity about the overall programme and personal well-being did not. Participants maintained an active stance, observing their colleagues performing the exercises with the kinesiologist and consulting each other during informal moments and coffee breaks. It was precisely by actively observing and interacting that participants assisted by the “bracelet” realized that their experience within the programme could be improved.

Drawing on the concept of technological appropriation (Eglash, 2004), we argue that workers appropriated the programme by activating its “latent functions”, for example by enacting practices such as joining the kinesiologist at the end of the training or waiting for the kinesiologist’s “titbits”. They began mixing the different elements entailed by the programme (the bracelet, the kinesiologist, colleagues in the “control group”), thus enacting a creative combination not foreseen by the programme’s designers and the management of the organization. Although not actively involved in the design process, in so doing workers were

able to (re-)gain a central role, centring their experience instead of the “effects” the adoption of a digital device can have in the introduction of a corporate wellness programme.

In short, although the well-being programme was focused and purposefully designed around the introduction of a specific technological tool, workers spontaneously deviated from the company’s original plan and appropriated it, by juxtaposing what was intended as the core of the programme (a new wearable device: “the bracelet”) with one of its “side components” (a human actor: “the kinesiologist”).

As we have shown, the device and the kinesiologist engaged participants in a slightly different experience and relationship with the body. According to our analysis, the device engaged workers in a distal relationship with their body, whereas the kinesiologist engaged them in a more proximal approach. As originally observed by [Cooper \(1992\)](#), in philosophy, physics and sociology, the distinction between distal and proximal thinking is an old one: while the distal refers to effects and outcomes, namely “finished” things and objects, the proximal concerns processes, that is, “unfinished” things. In their famous paper, [Cooper and Law \(1995\)](#) stated that distal privileges order, boundaries and functions, while proximal focuses on fuzziness, connections and processes. Wearing the bracelet, the participants entered a relationship with their body made up of numbers and parameters that, paradoxically, distanced them from their bodies by juxtaposing what their bodies were doing to what “a” body should do. In contrast, the kinesiologist engaged participants in a proximal relationship with their body, in which the body is not detachable from the subjective experience. In a distal relationship, “the destination is more important than the journey”, whereas in a proximal one “to travel is better than to arrive” ([Cooper, 1992](#), p. 373). Accordingly, we may argue that within the distal relationship with the body fostered by the device, the body performance (expressed through the “scores” from the device) is more important than “getting in touch” with one’s own body. On the contrary, in the proximal relationship with the body allowed by the kinesiologist, understanding the body and building a meaningful relationship with it is more important than achieving “good scores”.

These considerations highlight the need to look at workers’ well-being not as the result of the action of specific technological devices but as a process that articulates through the continuously established relationships and configurations between subjects and their bodies. By partly violating the company’s pilot test, workers shed light on the emergence of different relationships and forms of engagement with their bodies, depending on the encounters they had with humans, technology or both.

Conclusions

Rather than perpetuate the dichotomy between “apocalyptic” and “integrated” in regard to the evaluation of the “impacts” digitally supported well-being programmes may have in organizations, in this paper we highlighted how workers may do much more than demonstrate acceptance or rejection. In our case, workers did not actively reject nor passively accept the corporate programme, rather they appropriated it by deviating from the management plans and adapting it to their interest.

Focusing on appropriation dynamics can be fruitful as it allows us to overcome the traditional understanding of workers involved in wellness programmes as “receivers” of management choices and actions, highlighting a more nuanced distribution of power (and agency) in organizational processes ([Miele and Tirabeni, 2020](#); [Bruni et al., 2021](#)). Not dismissing the idea that wellness programmes and wearable technologies are managerial artefacts that aim to integrate workers into the logic of productivity ([Dale and Burrell, 2014](#); [Till, 2019](#)), our point is that, as for any other artefact or technology introduced by the management of an organization, there may be unforeseen dynamics that emerge from their

introduction. In this vein, our purpose was not to evaluate whether wearable devices may increase the efficiency of wellness programmes (see, e.g. [Paluch and Tuzovic, 2019](#)) or if they act as further means of control for disciplining workers and invade their private lives (see, e.g. [Maltseva, 2020](#)). Rather, we wanted to highlight the importance of paying attention to workers' appropriation practices in a digitally supported corporate wellness programme.

As our research shows, this process of appropriation is in a way even stimulated by the presence of wearable/digital technologies, in that their practical use interpellates ([Law, 2000](#)) workers, while offering occasions to shift from the designers' script ([Suchman et al., 1999](#)). This consideration allows us to further reflect on how technology continues to often be framed and implemented in organizations as a "remedy", a solution, assuming that it will be "naturally" absorbed by its users and the broader organizational context, without enacting any side effects. It is worth noting that, in our case, due to the limits of technological feedback and interaction, one of these side effects resides (maybe paradoxically) in stimulating workers' sensemaking processes and their search for alternative ways to relate to their bodies. If workers wearing "the bracelet" were finally satisfied by the programme it was because of the presence of the kinesiologist and the coaching work he performed towards all the participants involved in the pilot study. The human support was fundamental in enriching the interactions between participants and the technological device.

As shown throughout our interpretation, although the new wearable device was at the core of the corporate programme, from the participants' point of view the kinesiologist represented the real added value of the entire experience. This explains why workers assisted by the bracelet "appropriated" the kinesiologist (and the corporate programme in turn); it could have been the other way around, in that workers assisted by the kinesiologist could have displayed much more curiosity for the wearable device their colleagues were using, which they had no access to.

In conclusion, our research allows a twofold contribution, at the empirical and theoretical levels.

On the empirical level, our results highlight that when wearable technologies are designed and employed in wellness programmes mainly for gathering standardised data, workers' well-being only partly improves. We showed how the wearable bracelet enacts standardised and routine processes, so that instead of enabling workers' understanding of their bodies and movements, it disables sensemaking processes. As we argued, the bracelet enables a distal configuration of the body in which the latter takes shape only when it is measured. By contrast, the relationship with the kinesiologist enables a proximal configuration in which the body takes shape and acquires meaning in relation to activities more than to data. Interacting in real-time with the kinesiologist helps participants to achieve proprioception and, overall, to make sense of the entire experience.

On the theoretical level, rather than providing guidelines for the design of "better" corporate well-being programmes, our study draws attention to the creative and innovative role workers can play in the process of implementation of a new technological device or corporate artefact. The concept of technological appropriation ([Eglash, 2004](#)) invites us to consider workers' practices of acceptance and resistance in relation to corporate well-being programmes not as a dichotomy but rather as the extremes of a continuum, in which many more possibilities of action may take place. In our case, workers appropriated a digital corporate wellness programme, mixing its elements and adapting it to their preferences. Further research could enrich and deepen our findings by focusing on the types of relationships that arise between corporate actions, digital technologies and workers' bodies in other well-being programmes.

Note

1. To alleviate privacy concerns, all names are fictionalised. The word “device” placed after the job role means that the interviewee did the exercises supported by the technological device, while the word “kinesiologist” means that the interviewee did the exercises supported by the kinesiologist.

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