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New Dimensions of Emotional Labour – a Case Study of the "Smile Counter"

The paper is a case study of the Quantum CX company's "Smile Counter" in terms of the techno-optimistic beliefs of the device's designers and the doubts expressed by the public about it. The system for measuring smiles and rewarding for their total time of duration, which is the product under study, is framed in the paper as an "affect detection system" in the sense of "agents in influencing behaviour and training people to perform in recognizable ways". Analysing nine sources available online, the author presents the development of the product itself, its marketing representations, and public perception. The results are finally related to the category of emotional labour and the discourse on approaches to the latest technologies, particularly the use of artificial intelligence in management.

Keywords: digital Taylorism, emotional labour, measuring emotions, Quantum CX, "Smile Counter", techno-optimism

Digital surveillance of employees

In the contemporary capitalist world-economy (Wallerstein 2007), the development of artificial intelligence has led to the transformation of the earlier scientific management, or Taylorism, into digital Taylorism (Park, Ryoo 2023). This time, it is artificial intelligence, not managers, that is supposed to combat employees' inefficient practices by observing, analysing and, consequently, amplifying their performance at work. However, the progressive datafication of the work environment, makes it possible to measure the increasingly private and minute behaviour of employees and, consequently, to fetishise it. The "Smile Counter", due to its

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function of supervising work by verifying and assessing the facial expressions of employees, will be presented as the result of digital Taylorism and datafication.

Adopting a broad perspective of working conditions in a capitalist system, I would also like to emphasise the significance of the subject I am discussing, not ending with the described product. Currently, from a technological point of view, measuring smiles based on facial recordings is something trivial. Both Microsoft (Microsoft Azure) and Amazon (Amazon Rekognition), as well as a number of smaller companies, have released their software enabling such assessments. The only obstacles against the widespread use of such a solution consist in the still high cost of implementation, potential legal regulations and internal company policies that sometimes deliberately limit the use of their solutions (Crampton 2022). Therefore, there is a growing need for ethical reflection in terms of the consequences of using software to supervise employees' emotions, as reflected in the growing opposition between techno-optimism and techno-scepticism in the technological discourse.

Researchers, simple workers, developers of new solutions, companies, and other entities with vested interests in the specific direction of the development of AI-based systems need to respond to the upcoming transformation of the working environment. I will analyse their positions along the axis of the aforementioned techno-optimism and techno-scepticism, which I will define, following Peter Königs (2022), as a position based on the belief that the likely impact of technology on the world is favourable in the initial variant and unfavourable in the second variant. In the context of this work, I take advantage of both categories exclusively in relation to the use of AI in management, abstracting from its other uses. The background to the problem consists also in the question of whether psychological states can be accurately described from facial photographs. In responding negatively, out of necessity, we also reject the effectiveness of current smart video surveillance systems to take such conditions into account. The rewarding of behaviours identified (but not necessarily correlating) with a certain internal state by the "Smile Counter" will be analysed by me in terms of the issue of personal dignity of employees.

Outlining the manner in which the Quantum CX product violates the wellbeing of working people requires an explanation of the connotations of smiles present in its marketing. They can be reduced to two levels:

1. Emotional expression, perhaps operating on the principle of feedback loop, i.e. enabling the forcing of feelings on someone, if we force a person to play out his or her culturally accepted manifestation.
2. A signal for others, carrying positive emotions, so valued in customer service.

Both understandings are closely linked and refer to each other; by forcing a smile on an employee in order to change their mood, we are also forcing it with the hope of evoking a positive perception in those around us, and vice versa. For

this reason, I emphasise this matter already in the introduction, as it does not have any sense to look for a motive with further specific statements, given the inseparability of the two effects in the producer's assumptions.

"Detecting affects" as an expression of techno-optimism

The aim of this article is to describe the "Smile Counter" as an expression of the techno-optimism and digital Taylorism characteristic of technology start-ups and to explore related themes in its marketing message.

The issue of counting smiles has been widely discussed in the press but has not yet received a solid description. The Quantum CX company, significantly tarnished in terms of image by the media backlash against controlling the smiles of employees, eventually suspended its operations due to the pandemic and the imposed obligation to wear masks in public places. This turn of events has not led to a broader reflection concerning such solutions (Rychlicki 2021a). The business community (including the creators of the device) reduced public criticism to demonisation fuelled by cheap sensationalism (Rychlicki 2021a), and the media lost interest in the topic after the Ombudsman's inspection of banking facilities where Quantum CX found its customers (Starzewski 2019).

A separate discourse concerning the response of technology to social problems, in which the marketing of the "Smile Counter" is embedded, emerged in the 1960s (Johnston 2020: 5). Of the ideas conceptualised at that time, the category of technological rationality proposed by Herbert Marcuse (1941) is of particular value for this analysis. Determining the most efficient (i.e. producing the most desirable good) activity as an end in itself is also symptomatic of the discussed product, which is supposed to "produce" as many smiles as possible.

Actually, it would be a mistake to view the "Smile Counter" through the prism of the now classic category of the panopticon proposed by Michel Foucault (2020). It already seems exhausted as a result of excessive exploitation and the consequent progressive unreflective use of this metaphor (Haggerty 2006) and, more importantly, it does not reflect the social change that Gilles Deleuze (1972) describes as the transition to a society of control. It is not so much that we are now in the cells of a prison where we **can** be watched, but that we wear an electronic band on our leg that certainly monitors our location and behaviour. What is significantly lacking in the concept of the control society due to the timing of its emergence is a reflection on the new possibilities of processing big data, as was already written about by, for example, Zygmunt Bauman and David Lyon (2013). Today's means of surveillance constantly record each monitored object, and the data collected in this way is continuously stored and can be processed almost freely in the future.

The datafication of employee experiences, understood as their reduction from the broad context of life to the dimension of data, poses risks, the most important of which, in the context of the "Smile Counter", seems to be the fetishisation of data (Iwasiński 2016) concerning the smiles of employees.

In its conception, the device counts the smiles which, according to the developers, constitute an observable sign of good customer service and stimulates an increase in their number. In relation to products depicting the percentile probability of implied feelings (Przygody Przedsiębiorców 2020), the "Smile Counter" nominally tries to count something easier to detect, i.e. a specific facial expression. However, it in fact acts as a device for "affect detection", i.e. it is "agent in influencing behavior and training people to perform in recognizable ways" (Crawford 2021: 153–154). The findings suggest scepticism concerning the relationship between our expression of emotions and actually experiencing them (Barrett et al. 2019). The "Smile Counter", while not directly addressing the issue of emotions, nevertheless constitutes a part of the "emotion meter" sector due to its origins, assumptions, advertising message, and assumed effects.

Describing the use of such approaches to employees requires an additional theoretical framework encapsulating the role of emotions (or rather, their enforcing) at work. For this purpose, I will use the category of **emotional labour** understood, following Arlie R. Hochschild, as labour, "requiring one to induce or suppress feeling in order to sustain the outward countenance that produces the proper state of mind in others" (2009: 7). In this light, even if we have already denied the correlation of smiling and happiness, inducing a smile that does not result from internal feelings will count as a form of emotional effort. I will consider the "Smile Counter", as a digital device for supervising the performance of emotional labour, as a tool of digital Taylorism in the sense of Sangcheol Park and Sungyul Ryoo (2023). However unusual they may be, the collected smile data becomes part of broader mechanisms focusing on maximising efficiency through digital analysis and optimisation of work.

The main original value of this article consists in the systematic description of the marketing and assumptions of the device itself combining a number of trends specific to the selected theoretical framework. They did not exhaust the specific nature of the product, which automatically, based on AI, forces an intensification of emotional work. This combination highlighted the ethical problems of both phenomena and raised the question of which aspect of the device was more strongly emphasised in the promotional message. By juxtaposing the trajectory of Quantum CX's own activities with its marketing, it is possible to propose an explanation for reaching for specific narratives as a response to the needs arising from the market positioning of the device and the controversy growing around it.

The most important research question concerned the relationship between techno-optimistic or techno-sceptical beliefs in the discourse concerning the "Smile Counter". The significance of this dichotomy in the technology media is pointed out, for example, by Marta Kołodziejska and Michał Paliński (2023). This implies both specific research hypotheses, i.e. (1) the environment associated with Quantum CX or other tech start-ups will be techno-optimistic, while (2) voices not associated with them will be techno-sceptical.

The obtained responses address a gap in Polish research concerning the media reaction to AI-based scientific management tools interfering in the emotional sphere of employees.

What was the "Smile Counter"?

Bartosz Rychlicki, CEO of Quantum CX[2] , the company responsible for the "Smile Counter", has repeatedly mentioned in interviews that he considers his mission to consist in giving back to the world, solving large-scale problems, etc. (Przygody Przedsiębiorców 2020). Also consistent with this is what he himself later wrote about the media criticism he was subjected to: "I was close to breaking down, I wanted to give the world something good, to bring a little smile into everyday life, and now I was rather likened to Satan's spawn" (Rychlicki 2021a). Therefore, let us reflect on the history and technological solutions of Quantum CX, which formed the basis for the continued infamy of the "Smile Counter".

Initially, the entire product was based on a sensor that counts smiles (a connected small camera and an algorithm that assesses whether the person in the footage is smiling) and an interface that processes these results and rewards them with contributions to charities, vouchers for the monitored employees, etc. At the final stage of the project, the sensor (pictured on Photo 1.) was dubbed, "Miłek", dressed in a teddy-bear-shaped package and equipped with an e-ink screen on which, in response to at least a 10-second smile from an employee, a smile was also displayed (Jurczak 2020).

Photo 1. Final version of "Miłek"

Source: (Jurczak 2020).

[2] In individual places, the company itself is also named as Quantum Lab (Ellen Technology n.d.) rather than Quantum CX (LinkedIn. Bartosz Rychlicki n.d.; Przygody Przedsiębiorców 2020). For the sake of clarity, I will describe the device itself either directly as the "Smile Counter" or, to avoid excessive repetition, as the product of Quantum CX.

An important element in favour of the logic for counting smiles also consists in the assumptions about the human psyche made by the developers of the device. In an interview for the Bizblog website, the CEO of Quantum CX said that "You won't become a runner if you don't force yourself to run. The same is true here. If you want to be a friendly and kind person, there is no other way than to start smiling. Even by force. Only then will it get into our bloodstream. Hormones will jump into the body, change behaviour, and behaviour will change attitude" (Kopańko 2019), which refers to the psychological feedback theory between showing feelings and experiencing them. "Miłek" in this light takes on the proper context of a supervisory tool for performing emotional work to enhance customer service.

The history of products earlier than the "Smile Counter", which consequently led to its development, can also tell us just as much about Quantum CX. These were, respectively:

- The "30 Days" app (Przygody Przedsiębiorców 2020), which was intended to teach the user habits in a non-declarative way, i.e. by monitoring their fulfilment. For example, in order to learn punctuality, it read the GPS location of the phone to confirm that we were at the location we had previously set for ourselves.
- The "How Are You?" app, used to measure mood based on users' declarative responses (questionnaires). Showing the links between the user's responses and other declared events it intended to lead to a greater awareness of what their mood depends on.
- "Ellen"[3] or facial emotion recognition technology. It was originally used to provide opinions concerning advertising, but after a while it was used to supervise employees at a restaurant chain in the United States. We do not have information concerning the details of its technological background, but according to the device's website, it is based on the proprietary micro-expression reading technology "XpressEngine" (Ellen Technology n.d.). As we can guess in practice, this meant machine learning algorithms like those in other competing solutions.

The most important common feature of all these projects was aptly put by the Quantum CX CEO himself in the statement:

> How can I make people feel better? Dude, you have knowledge of technology, you're a programmer, you know how it works? Suddenly it appears how psychology more or less works. Combine it somehow and give it to others. Perhaps you can help them a little. Because generally when we think of psychology, we immediately think of research, volumes, a professor at an academy, or a couch. And when we

[3] I have borrowed the description of the operation and its use following the interview (Przygody Przedsiębiorców 2020), where its name does not appear, which I took from Ellen Technology website, which is referred to by Bartosz Rychlicki's LinkedIn profile (n.d.).

> think technology, we think, you know, systems, processes and so on. A simple John Doe, to benefit from psychology, will either buy a book or go to therapy. Most often, he does neither. And I think that technology is a great applicator of certain knowledge to life, and that is because suddenly something very complicated becomes simple, I have it on my phone and I can do it sitting on a toilet, right? (Przygody Przedsiębiorców 2020)

All of these solutions seek to introduce psychological knowledge into management processes, initially of the self and then also of others, in a techno-optimistic, maximally simple way. However, psychological solutions do not seem to be so easily scalable to broad applications.

Techno-optimism of the creators of the "Smile Counter"

Presenting the technical background and history of the device does not give us a complete answer as to the ideological assumptions behind it[4]. The motivations of the creators and business users of the "Smile Counter" emerged as a result of an abductive thematic analysis of the Quantum CX material that remains available on the Internet. These statements were largely created as marketing content and I will discuss them as such. However, noting the small scale of the start-up, which does not allow external specialised marketing companies to construct the narrative, I assume its link to the beliefs of the creators themselves. I am reassured in this decision by the strong positioning of Quantum CX CEO Bartosz Rychlicki as a spokesperson for his project, which he talks about in the context of his personal mission to bring smiles to the world (and by implication, through it, good) (Dzierżyński 2019). Further confirmation of the kind of authenticity behind Quantum CX's marketing is its inconsistency and flexibility towards the narrative suggested by the interviewers. Depending on the interview, the presented vision of the purpose of using the "Smile Counter" differs significantly in the distribution of emphasis between its functions, which partly correspond to the accumulation regimes presented in Table 1:

- Business – where the "Smile Counter" is presented as a tool to measure and improve customer service. It is geared towards improving the performance of the company using the solution. The device seems tailor-made for scientific management under industrial capitalism, by its measurability and ability to screw up employee performance.

[4] The famous definition of ideology by Louis Althusser (1983: 18) stating that, "Ideology represents the imaginary relationship of individuals to their real conditions of existence" seems to be extremely accurate in this context.

- Educational – where the "Smile Counter" is presented as a tool to nurture employees using feedback mechanisms and gamification. It responds to the needs of the discourse of paternalistic capitalism, depicting the employer as a "parent" who extends a kind of care to an infantilised employee who wants to achieve success in life in the future just like his current employer (Niedziółka 2022).
- Wellbeing[5] – where the "Smile Counter" is presented as a tool for making the world a place that is smiling more, happier and, consequently, a better place. It provides happiness to both employees and customers. In doing so, it responds to the therapeutic capitalism that has been flourishing since the beginning of the 21st century, working on the emotions of workers in order to bring them as close as possible to market conditions.

Table 1. Intensifications of power/knowledge in 20th and 21st century corporate culture

Years	**1900–1930**	**1930–1970**	**1970–2000**	**2000–**
Accumulation regime	Industrial capitalism	Bureaucratic capitalism	Postindustrial capitalism	Therapeutic capitalism
Form of power	Sovereign/ disciplinary	Juridical/ governmentality	Governmentality/ biopower	Performance
Main target	Body of a labourer	Body of a manager	Societal body of a corporation	Nosologic body
Main practice	Production	Consumption and construction of gender	Reproduction	Therapy
Basis	Actions	Image	Culture	Emotions
Discourse of management	Taylorism/ Fordism	Management by objectives / human resources (HR)	Corporate culture / organizational development (OD)	Wellness / personal development (PD)

Source: (Szarecki 2017: 300).

The tension between these fundamentally different goals will constitute one of the leading axes of the narrative in this work. The function of jacking up results based on controlling the worker's body fits with the assumptions of classical scientific management, while educating workers and subjecting them to "training in positive emotions" for their (and not only their) benefit, fits with the more contemporary trends of therapeutic capitalism. In this context, Quantum CX combines the simple idea of close supervision to eliminate "unproductive" habits of employees with pushing them to solve the problems that limit their efficiency themselves.

[5] I take advantage of the term "wellbeing" to refer to the growing sector of wellbeing solutions aimed at corporate employees in relation to the mentally exhausting nature of their work.

By monitoring and rewarding those working for something they themselves should want[6], we are both exerting external pressure and reinforcing the internal mechanisms that induce employees to behave in the way we want them to.

A fundamental manifestation of the techno-optimism behind Quantum CX's activities consists in the assumption that the function of nurturing a customer service atmosphere is possible to be partially automated by a smile recognition system. In the "The more smiles the better?" chapter I will try to prove that the "Smile Counter" advertises itself as supporting the personal development of employees, which in a business perspective is supposed to translate into better staff providing better services, while in reality in terms of an employee it represents callousness and insensitivity towards the other person characteristic of scientific management. A separate issue, which I will also address, consists in the ethical implications of the assumptions behind the very way in which the marketing of the "Smile Counter" responds. For the purpose of analysing the ethical issues contained in this matter, I will refer to the category of human rights. I motivate this both by adopting them by all UN countries[7] as well as by my own beliefs on the matter.

The more smiles the better?

Smiling doesn't cost a thing (provided no one is forcing anyone to smile by force).
Bartosz Rychlicki (Dzierżyński 2019)

The final commodity [*of emotional labour – MS*] *is not a certain number of smiles to be counted like rolls of wallpaper.*
Arlie Russell Hochschild (2009: 8)

Smiling, according to the device's authors, both does not have to be sincere ("I encourage people to fake a smile because it comes naturally later" (Kopańko 2019)) and cannot be forced ("We prefer to spread smiles where there is no loser in the business equation and everyone smiles because they want to, not because they have to"). The "Smile Counter" has a uniquely coherent role as a motivator for gestures that neither flow from the internal state of the employee nor are the result of direct pressure from superiors. However, introducing a system that measures **something** introduces pressure to optimise the performance of **that something**.

[6] The obligatory nature of taking care of oneself, described so far many times since Foucault, is particularly deserving of emphasis here.

[7] Without going into the legal nuances of the embodiment of the Declaration of Human Rights in life in all UN states, I am referring to the more general sense of the word, "adoption".

Only that which is recorded then becomes relevant. Things that do not fit into the table of recorded data, the camera lens, etc., are not taken into account throughout the system because they never appear in it. The fact of collecting precisely such data always isolates it from the meaningful[8] totality of human experience and places it in the position of a fetish (Iwasiński 2016). The fact that penalties for low scores are not introduced, nor that there is no mandate to participate in the measurement programme, does not remove the oppressive situation of introducing the entire system. The employee is well aware of the fact of being observed as well as of the existence of data concerning his or her behaviour. Therefore, that person is put in a situation of either already being assessed for this on an ongoing basis by the superiors, or it could be introduced at any time, with or without that person's consent.

The CEO of Quantum CX referred to allegations concerning the oppressiveness of the "Smile Counter" as follows: "The employee **decided individually. That person had to turn it on consciously every day for it to work, and decided to turn it on**" (Przygody Przedsiębiorców 2020 – emphasis MS). This constitutes a transfer of responsibility to the employee who is otherwise already placed in a situation of evaluation by superiors. Refusing to turn on the device (where this practice has taken hold) or turning it on every day (if the majority of employees are sceptical about it) will always attract additional attention. It is up to the working person whether he or she prefers to submit to the monitoring of smiling and communicate individual motivation to develop for the benefit of the company, or whether he or she prefers to refuse and, as a person suspected of not meeting smile standards, accept increased observation from superiors. Another interesting aspect of this dilemma is that it was also never stated that, if the system proves its effectiveness after optional trials, it will not become mandatory over time. In such a situation, it is clear that refusal would be, non-strategic at best and, in a situation where one fears for one's position at work, almost impossible. An additional significant factor regarding the voluntariness of the employee's agreement to implement the "Smile Counter" consists also in the fundamental power disparity between the employee and the employer. The superior, even without issuing an official order, by his or her suggestion or proposal exerts a "soft coercion" on the subordinate. An additional advantage of this mode of management consists in that responsibility can later

[8] By the "meaningful totality of human experience", I mean the reality that can be understood through the hermeneutic process described by, for example, Wilhelm Dilthey, of which he himself wrote, "The process by which, on the basis of external signs supplied by the senses, we come to understand the inner sphere is called understanding" (Markowska 2007: 64). A smile subjected to technical quantification, i.e. recorded as a number, ceases to enable us to reconstruct the inner sphere (experiences, emotions, experiences) of the smiling person, and therefore becomes detached from the overall, contextually comprehensible experience and becomes meaningless.

be removed from the referrer and placed on the subordinate, as we see expressed in the Quantum CX narrative. An analogous soft coercion is also to some extent present behind many other formally non-mandatory practices, such as working overtime before a product launch (crunch)[9] or responding to work messages while on holiday (Kryczka 2021). The lack of a hard coercion allows in these situations to wash their hands of responsibility for the quality of management, rather than realistically addressing the problems of the "Smile Counter". That partially provides us with an answer to the question from the Photo 2 taken from Quantum CX Facebook account.

Photo 2. Profile photograph of the Quantum CX profile

Source: (Rychlicki 2021b).

However, the oppressive nature of introducing the sole system in the workplace is hardly specific to the Quantum CX product and is only the beginning of the device's problems. I consider the phenomenon of the objectification and fetishisation of smiling in itself and therefore the inevitable (1) loss of meaning behind the sole required activity and (2) psychological strain resulting from the forcing of emotional labour (Hochschild 2009) carried out on the working person to be the more relevant area for criticism.

I perceive the inability to convey the complexity of the world through digital solutions as the main cause of the first problem. Of course, there is a growing and successful sector of increasingly sophisticated commercial tools that allow the automatic analysis of video, audio, and text. It is on the basis of such systems that autonomous cars, cashless stores, and citizen social credit system are being developed (Bartoszewicz 2020). So why should not the same kind of solutions allow for the automation of managerial work? If we do not properly recognise

[9] The phenomenon, or actually the entire culture of crunch (overtime before a product release) in the games industry is so common that studio heads admit to practising it even in media releases (Małysa 2019).

the differences between driving a motor vehicle and leading a team of people, we are in danger of taking an instrumental and shallow approach to employees that overlooks the entire realm of making sense of their actions.

Quantum CX attempted to apply hard criteria to the evaluation of people's work that were multilevel not in keeping with the nature of the contact on which customer service is based. Continuous observation can indeed provide a great deal of valuable information, the best illustration of which consists in the widespread use of continuous measurement in mechanical matters. When baking bread, indeed, the baker wishes the oven to maintain a constant temperature and for it to be displayed in a form that is readable to the baker, so that it is possible to maintain full control over creating the product. However, the relationships that are created between people (whether between vendor and customer or employee and employer) are more complicated and attempts to control them are of a different nature to controlling the physical phenomenon of baking. Contact is established between two conscious subjects who respond to each other in the context of both their interests, experiences, and only partially conscious perceptions (Iwasiński 2016). Measuring smiles does not provide us enough insight into the entire situation to be able and say anything on this basis about the quality of customer service or the general friendliness of the employees. In fact, instead of a smile, we could substitute here any other pleasantly or unpleasantly perceived behaviour. Only the imagination of managers limits the possibilities of evaluating the work of those employed by quantifying their human reflexes.

The fundamental difference between live supervisors and digital systems designed to facilitate their work consists in understanding what they see. A smile as a message is always set in context and a person standing on the sidelines can guess it in a large proportion of cases. Artificial intelligence that distinguishes between smiles based on a set of photos does not anticipate understanding when a smile is out of place, when it is ironic, and when it is actually kind and professional. The CEO of Quantum CX said on the subject: "If your smile is consistent with the social perception that it is a smile, the system will count it" (Dzierżyński 2019). "Sticking" such an artificial, averaged smile to an employee's face causes stress, burnout, and a sense of derealisation (Lisdero 2019). It seems that a "living boss" can lead to coercion at the digital system level, or even higher, but this is behaviour that illustrates that person's lack of soft skills and, in extreme cases, verges on mobbing.

An example of this form of violence, and at the same time an elaboration of point (2), would be a situation described here by Pedro Lisdero (2019). He depicts how the wellbeing of working people is affected by a position that includes very specific norms and protocols for disposing of one's emotions. In his analysis, Lisdero took an extreme environment, i.e. a call centre, where employees carried out the entire conversation with the customer according to detailed scripts that included

an uninterrupted digital smile. Thus, their fundamental human autonomy in conversation, the course of which has been top-down imposed, has been restricted in the workplace. Preventing "saying or feeling something different (about-myself or by-myself)" (Lisdero 2019: 123) constitutes an oppressive and psychologically exhausting situation. This fact is best illustrated by the image constructed by former employees of these companies as "meat grinders" (Lisdero 2019: 124). Quantum CX's plans to apply its product specifically to telemarketing companies seemed extremely worrying in this context (Przygody Przedsiębiorców 2020). Of course, one should not equate the situation of measuring the smiles of employees with a fully scripted service activity. It would be inadequate to describe the product itself as a more modern version of the "meat grinder". However, given what systems involving an extreme form of emphasis on emotional labour lead to, for ethical reasons we should strive away from them rather than automate their mechanisms.

Apart from ethical concerns, did the "Smile Counter" at least materially improve the quality of customer service? In an interview, Bartosz Rychlicki spoke about the effectiveness of his proposed solution:

> In this case, I can talk about the numbers first at four sites. It turned out that we've improved the results. Mystery Shopper results, these were very good sites. In terms of quality, some of the best have been selected and, if I'm not mistaken, out of 85 points on a scale of zero to one hundred, all four had a complete set. So, out of such super sites, we've made perfect ones and I think they've broken the chains' record. So that was great. Out of 50,000 customer interactions – not a single problem with measuring smiling. There was nothing like that and then we've installed ourselves at probably 16 sites. Then around 20 including franchises and there we singled out such, let's say, average outlets in terms of the quality of the results and the Mystery Shopper survey from 57 to 80 (Przygody Przedsiębiorców 2020).

Therefore, the solution appears to be effective and, by no means, do I intend to argue with this. On the other hand, in this leap in effectiveness I would see the very well-described impact of the very conduct of measurement concerning employee behaviour (Foucault 2020). A camera placed on the desk disciplines the employee, which in turn forces that person to work harder. We would only be able to examine the role of smiling itself by comparing the recorded increase in scores with a control sample, where monitoring is introduced in an analogous form, but measuring, for example, blinks or cheek redness.

Summary

Hypotheses (1) concerning the techno-optimism of the Quantum CX community and tech start-ups in general and (2) about the techno-scepticism of commentators unrelated to new technologies were found to be consistent with the results. Such conclusions emerged from an abductive thematic analysis (Thompson 2022) of the collected source material. In accordance with the established methodology, the original content was interpreted critically against the adopted theoretical framework.

The obtained results are nonconflicting with the conclusions of the studies described in the literature review. The single significant properties of the "Smile Counter" (e.g. forcing emotional labour, "measuring emotions", and continuously disciplining the subjects under observation) are explainable on the assumed theoretical ground. The conducted case study has made it possible to fill the research gap in terms of describing the combination and interplay of the aspects described earlier.

The confirmed techno-optimism of the tech start-up community and the techno-scepticism of those outside the industry suggest an increase in the risks indicated by the accepted theoretical framework. Digital supervision extended to employee facial expressions (and, as an assumption, their emotions) is business efficient, i.e. profitable, and possible to implement with the official aim of caring for the atmosphere in the workplace, or even the generalised social good. Therefore, the intensification of emotional labour through the mechanisms of digital Taylorism (Park, Ryoo 2023) may occur as a result of the pro-social efforts of those involved in the start-up industry. A significant limitation of this mechanism consists in the highly sceptical response of non-affiliated persons alerting them to potential abuse. The research did not observe an in-depth discussion between representatives of the two communities. These conclusions are not surprising in the light of the studies cited in the literature review.

It is possible to generalise the responses obtained concerning the "Smile Counter" itself to other devices in the category of "affect detection system" used for supervising working people. However, it is important to bear in mind the potential problems of extrapolating the results to companies much larger than Quantum CX, which included up to 10 people according to the Crunchbase (2023) service, which may translate into a completely different way of building marketing. In the case of a media message created by an external advertising agency, it will be more difficult to infer from it the beliefs of the people behind a particular product. Moreover, in companies with many more male and female employees, there are more chances for a diversity of views concerning technology to occur. The question remains to what extent does this translate into criticality towards the consequences of implementing solutions that a particular larger company is developing.

Conclusion

Such a bit of smile inception.
Bartosz Rychlicki (Dzierżyński 2019)

Given the capabilities of contemporary technological solutions, their falling prices and increasing simplicity of application, the analysis I have carried out does not only apply to the "Smile Counter". Smile recognition software from camera images can nowadays be made very easily individually with the help of one of the dozens of tutorials available for free on the Internet. The problem, which I would like to emphasise once again at this point, does not consist in the development of sole management technologies, but the lack of analysis of the consequences of making them available and promoting them. The World Benchmarking Alliance's 2021 study showed that out of 150 digital leadership companies, only 20 were committed to publicly available ethical AI principles. Five less have conducted due diligence analysis concerning their impact on implementing human rights (World Benchmarking Alliance 2022).

The clash between the techno-optimism of companies based on building innovative solutions (especially start-ups) and the mundane lives of users, potentially forced to use their solutions, seems to provoke outrage and a sense of misunderstanding on both sides. The analysed interviews show that those speaking on behalf of Quantum CX, through the assumptions they make about the beneficial impact of technology on people, do not understand the implications and assumptions of their proposed solutions. However, the fear of potential recipients is compounded by the fact that projects like the "Smile Counter", wanting to provide smiles, are setting a precedent for the return of scientific management techniques. After all, they origin from the same conviction of jacking up the financial results through the pressure of constantly closer control of the employee. In turn, this often becomes a reason for violating workers' rights (e.g. depriving employees of their due breaks) (Mazurkiewicz 2022). This fact, which is very well known to many ordinary employees, is easy to overlook when looking in a techno-optimistic manner. The scale of abuse, of which both the hiring parties and the hired are aware of, is enormous[10]. Therefore, it would be hard to be surprised today at the sceptics criticising the implementation of systems that deepen the supervision over working people.

[10] Lists like Slate (2020) seem to constitute interesting evidence in the context of awareness of widespread human rights violations.

Methodology

In order to gather material to research the relationship between techno-optimistic or techno-sceptical beliefs in the discourse surrounding Quantum CX, I used the desk research analysis (Bednarowska 2015). The content search was done manually, via Google, between October and December 2022. All publicly available found sources in which the main theme consisted in the "Smile Counter", were included in the study. This pool ultimately included seven web articles, one video interview and the website of another Quantum CX product. The only source requiring transcription was the Przygody Przedsiębiorców (2020) interview; this was carried out in Trint and then manually corrected. The sources were processed to text only (excluding photos, recordings, etc.) and uploaded to MAXQDA 2023, where the encoding took place.

The materials extracted were examined using abductive thematic analysis (Thompson 2022). The codes relating to techno-optimism, techno-scepticism, and emotion, as flowing directly from the adopted theoretical framework, were included in the codebook from the beginning of the analysis, while the others (especially those relating to the narrative on using the "Smile Counter") were added *ad hoc*, in subsequent rounds of coding. The selected topics are presented in the form of described functions of the "Smile Counter" and the objectives of the developers of this device. Every citation from online sources was translated to English after an acceptance of the final article, originally written in Polish.

A significant limitation of the study consisted in the removal by Quantum CX of its website and Facebook profile, where its own marketing material was published. The collected texts, excluding Ellen's website (n.d.), are therefore only from sources external to the company, which may translate into the sample being unrepresentative in terms of the total product information it makes available.

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