

Coffee timing – is online togetherness related to the timing of receiving a drink?

An explorative research on the temporal element of experiencing togetherness in an online context

LISANNE, L.J.J., DE JONGE

Industrial Design, Technical University Eindhoven, l.j.j.d.jonge@student.tue.nl

LUPE, L.A., VAN RATINGEN

Industrial Design, Technical University Eindhoven, l.a.v.ratingen@student.tue.nl

LARS, L., LAMMERS

Industrial Design, Technical University Eindhoven, l.lammers@student.tue.nl

MATIN, MASKITOU

Industrial Design, Technical University Eindhoven, m.maskitou@student.tue.nl

ABSTRACT

Nowadays due to Covid-19 office employees, colleagues can't have their regular coffee break together. They are sitting behind their desk all day meeting online, grabbing a cup of coffee whenever suits them, meaning that when you are grabbing your coffee, your colleague is still in front of his/her laptop with his/her coffee and finishes just at the time when you have yours. Not a very pleasant experience. You can't have a good conversation like you used to. Working from home leads to a decrease in the mood of office employees and overall, less feeling of togetherness.

The purpose of our study is to experience if the sense of togetherness between colleagues can be increased by Bakkey. Asking about the concept of Bakkey during user studies will show if the timing of the coffee being served can influence the experience and mood of the colleagues that are meeting. In this study, participants that are office employees, colleagues from every age will be studied. During the study, different insights about the coffee break and about how COVID-19 has changed the situation will be gained. The participants will be joining the study online and fill in a questionnaire about the experience of the coffee break before and after COVID-19 and about the concept.

The research did not find any direct link between the moment of hot beverage received and the level of togetherness experienced. However, the findings do suggest it is not the moment of receiving but the synchronization of the consumption that may have a correlation with the sense of togetherness experienced. More research is needed.

CCS • Human-centered computing • Interaction design • Interaction design process and methods • Scenario-based design

Additional Keywords and Phrases: telematic coffee break, coffee break colleagues, experience coffee break, coffee break

ACM Reference Format:

1 INTRODUCTION

A large part of social dynamics on the work floor happens during informal, short meetings in canteens, near water coolers and during coffee breaks. While some companies may have established informal meetings among employees prior to COVID-19 – as some tweets point to the online continuation of a regular physical “happy hour tradition” – such interactions are often by-products of formal meetings or they occur by chance, such as when people happen to meet at the coffee machine. Clearly, bumping into each other is not possible when people are physically distant, so planned and dedicated virtual social encounters with work contacts seem to have emerged as a new form of online meeting during the COVID-19 crisis [26]. Video calls with the daily contacts were used to establish a sense of togetherness, avoid social isolation, and continue the operations of organized groups while being physically distant [12, 26].

Therefore, what is missing is a conceptualization of togetherness that can account both for togetherness in contexts other than those mediated face- to-face and for the ways in which togetherness is potentially ‘created’ in social interaction. We argue that one large component within this dynamic is the temporal dynamic within the experience of togetherness; the moment at which a drink is served and the feeling of receiving one’s coffee at the same time. Our research aims to answer the following question: “How does the synchronization of a telematic coffee break ritual influence the sense of togetherness experienced by Office Employees?“.

To answer this question in full requires some underlying questions to be answered: what exactly is togetherness, and what factors influence it? How do people currently experience their telematic coffee break culture? And finally, to what extent do people already experience togetherness within an online setting when compared to an offline setting?

The goal of this research is to research this temporal element within telematic coffee breaks and to identify pointers for future research on this matter.

1.1 Related research

1.1.1 *What is “togetherness?” and what factors influence it?*

The feeling of togetherness is a feeling many people instinctively recognize - but is subject to cultural and situational differences. Osler [37] describes the sense of togetherness as “Feeling together as we”.

Within the scope of this research, this sociality is mixed in nature - as employees within the same company often will have at least met each other face to face. Eklund [36] mentions that within online groups the series of norms and rules, a sense of group membership and a sense of sociability are key to stable online groups. Filstad, Traavik and Gorli [9] state that the sense of belonging within a company context is a part of crucial human development. Their paper states that going through shared experiences is important for this sense of belongingness. However, most of the literature focuses on the quality of the work-related experiences but leaves out the break-related experiences entirely.

1.1.2 *Review of existing commercial products*

Within the field of telematic coffee breaks and telematic dining experiences in general, there is a strong focus on interactive tabletop and surfaces. These could be considered as “hybrid” experiences, hybrid ‘describing an object or practice that fuses two social categories, such as the “real” and “virtual”’ [34]. Examples of these hybrid experiences are the commercially available products such as Microsoft surface [43] and Mitsubishi’s DiamondTouch [45] and the smart table [52]. These seem to share the same design limitations. For instance: they do not try to fit in any particular space, they look almost similar due to the focus on function, which makes them not aesthetically pleasing, they don’t focus on user-based requirements and don’t allow for much personalization [13]. From a design perspective that focusses more strongly on a positive user experience

[24, 38, 14] - it is necessary to fulfil these requirements. A part of this is the question on how to interact with the table in a way that keeps the attention of the audience to prevent them from getting bored of the experience [7]. The table should help with the primitive tasks of object selection, object manipulation and menu control. Using a table for interaction brings the following difficulties; table size, angle and height, nature of display and number of users [10]. This type of product seems to be a steep investment with no guarantee of creating a better telematic dining or break experience than the traditional methods.

With the rising amount of technology people face nowadays, there are studies trying to design human-human communication tools to improve these interactions without using technology [16] or studies trying to get unusual interactive ideas without interaction [17]. At the same time there are studies trying with a little bit of technology to get a feeling of togetherness with people. Like the Telematic Dinner Party [46]. As 'there has been a recent call in HCI (Human Computer Interaction) [13] for innovative approaches to the design of technology for and around food' [46], using technology around food to reach that feeling of togetherness during telematic events. Making use of telematics, as that is now from great importance in this online world, a growing system that will keep affecting people and societies [15]. 'Teleconferencing is the use of electronic telecommunications to enable people to meet despite physical separation' [34] existing over four decades already. Using telematic online conversations can be more interactive and expressive [50] compared to working from home without outside contact. The communication in telematic settings can be formal or informal [53] depending on the earth of the conversation. For conversations work related there have been studies describing prototype techniques to explore the speculative experiences during these telematic collaborations between partners [49, 55] and how the interaction is [32, 39] as well as studies about the emotions during this [3]. Not only about the experience during meetings also the experience by the work-related product have been studied [42]. Making it possible to compare if the interactions during telematic conversations can be improved by (work-related) products.

1.1.3 Food

Questioning our social future [28] and how design will be incorporated in this is something we could be looking to with a critical eye. Social happiness depends as well on culture. "Good organizational culture can be created with intentionality, and that using a framework of ritual design is a promising way to do so" [42]. With culture you have rituals [49] and traditions [28] shaping the culture [25]. Where playful experiences in culture as well as in diner moments can be eventually a part in future food technology [35, 19]. With Covid-19 people try to keep their social activity [54] or connection [38, 1] around food in life. Designing for future food technologies to stimulate the playful experience during that moment [20] of eating [43] or dining together [33]. Especially on the play [29, 5, 27, 44] part of the interaction with food [20]. Connecting this to how interaction with food can improve the telematic break during workdays.

Sitting and enjoying your food can bring a lot of different emotions and feelings. Food flavors can have different feelings to people [8] by the different sense's food triggers [40]. Food can be sent to people with a message [6] or be enjoyed now together. Research on technical systems with food have been studied [2]. Sitting together can bring feelings for the food because of the closer look they can have on their own mood [3, 24] as well as feelings for sharing [40] as well as for other side effects. When people sit together to have a meal, they often do not finish their meal together [21]. "Sharing a mealtime, but not truly eating together can cause social friction and discomfort." [51]. That is why there is a study that designed "keep-up-with-me" [51] to do not have that awkward feeling when you are the only one eating left. Designing with this study in mind to get the best feeling during the telematic coffee break.

Food can lead to 'new relationships and experiences in the physical world' [23], making it a worthwhile topic for this research.

2 METHOD

2.1 Description of design

A prototype was developed to test our hypothesis. The prototype is focused to purely convey the temporal element of receiving a drink. This prototype consists out of an interactive box with a mechanized door. The box holds a beverage of choice given by the participant. The box has a LED ring at the front and a button in the middle of said LED ring. The participant can press the button in order to invite their coffee break-partner to lunch with them. The LED ring will partially light up in a green color, indicating they are sending the lunch-invite signal. The LED ring will also partially light up in a different color when it is receiving a lunch-invite signal.



Figure 1: The beverage holder



Figure 2: The inside with a hot beverage inside



Figure 3:
The default state



Figure 4:
Someone has invited the user to
a coffee break



Figure 5:
The invitation has been accepted
and the door is open

When all participants in the hypothetical hot beverage room have pressed the button, indicated by a fully lit LED ring, the box will open and present the chosen beverage. For research purposes, the prototype does not make the beverage but simply aims to replace the concept of a waiter or waitress presenting the food to the participant, as shown in a café.

2.2 Experiment setup

As this research took place during the COVID-19 lockdown which limited the options for direct interaction with the artifact. Instead, a mixed survey was set-up (n=22) to retrieve insights on the views the participants had on coffee breaks and how they expected Bakkey to influence these views [appendix A]. The demographic for this survey was Dutch speaking participants aging 18 to 67. The sample was obtained through direct contacts of the researchers and their direct contacts. The participants were asked to consent before the questionnaire using a checkbox. The questionnaire (appendix A) consisted out of a two-part online questionnaire taking approximated 15 minutes to fill in. The first part was a series of questions on the attitudes towards their pre-COVID-19 coffee breaks and current post-COVID-19 coffee breaks. These questions serve as a baseline reference for the second half of the research. The second half of the research consisted out of a video of the prototype discussed earlier in this paper and a series of questions regarding how (and if) the participants expected this prototype to change their coffee break.

As privacy in today's day and age is an important topic no questions about ethnicity, education and occupation were asked as they could lead back to the participants identity due to the methods used for acquiring participants. The form was hosted on Microsoft Forms as to comply with the guidelines of the University that requested this paper.

2.3 Data analysis

The data from the questionnaire will be coded and categorized in primary answer categories, as well as analyzed for interesting outliers for the data. The numeric answers will be averaged and cross referenced with literature and the open question answers in order to create a better overview of what the temporal element within the coffee break means for its users.

3 PRELIMINARY RESEARCH FINDINGS

3.1.1 Results in a nutshell:

- 35% of the respondents is having a chat with colleague's during their coffee break
- 50% of the respondents is spending their coffee break alone and behind their desk or in between tasks.
- The average experience of the pre-corona coffee break is a 6.7, based on figure 1 below.
- 45% of the respondents thinks it is important to have a little distraction from their computer screen.

3.1.2 What are the "cultural" aspects of a classic coffee break and how they differ from a telematic coffee break?

From the results, several things stand out regarding the telematic coffee breaks: most of the respondents do not think the fact drinks are served at the same time influences their coffee break experience. However, there are hints towards the hot drink augments the coffee break in general. This strongly hints that it's not the temporal part of the hot drinks being served at the same, but instead the fact both parties are currently consuming something at the same time - or perhaps that the hot drink is an excuse for informal contact.

However, the coffee-break plays important roles within rest and downtime and as a break from screens, two to three times a workday according to the participants (figure 8). This hints at that a way of experiencing togetherness without a screen may be more effective than augmenting a screen-based telematic coffee break. Which followed out of some statements participants wrote: "*Even uit je werkhouding*", meaning 'To take a short break from your current work location' or "*Even de benen strekken en een gezellig praatje maken*", meaning 'Going for a stroll and chitchatting'. The survey showed that 45% of Employees found it of importance to get away from the physical work location.

An important part of the coffee ritual seems to be the informal timing of it - it seems to be less rigid than a lunch break and the design needs to reflect that in order to effectively enhance the sense of togetherness within the office. At its current state, the irregularity and low involvement of colleagues are likely a reason why the respondents do not think our concept would bring any benefits to their coffee break.



Figure 6: Pie chart of the answers to question 8; The amount of coffee breaks pre-corona.

3.1.3 To what extent do people experience togetherness in an online setting compared to an offline setting?"

The results show that the meaning of togetherness didn't change due to corona. However, the practice and execution of it did change: respondents experience less social cohesion and more functional contact.

The results show that the meaning of togetherness didn't change due to corona, before Corona the participants gave their break a 6.7 score on average (figure 7). However, the practice and execution of it did change: respondents experience *less social cohesion* and more *functional* contact. Keeping in mind that 55% of our respondents work from home because of COVID-19, 25% doesn't and 20% does partly, see figure 9.

While most respondents report a change within coffee break behavior, the difference in perceived quality of the coffee break has widened; not every post-corona coffee break seems to be the same which hints at a starting point for future research. Loneliness seems to be the primary reason reported for lower quality coffee breaks, they had those breaks with two to four colleagues according to figure 8, although only few respondents reported the importance of colleagues within their coffee breaks.

20 Antwoorden					
Id ↑	Naam	Score			
1	anonymous	6	11	anonymous	5
2	anonymous	5	12	anonymous	7
3	anonymous	6	13	anonymous	1
4	anonymous	7	14	anonymous	9
5	anonymous	10	15	anonymous	7
6	anonymous	6	16	anonymous	6
7	anonymous	8	17	anonymous	8
8	anonymous	8	18	anonymous	6
9	anonymous	8	19	anonymous	6
10	anonymous	6	20	anonymous	8

Figure 7: Answers on question 4 of survey; The pre-corona coffee experience.



Figure 8: Pie chart of the answers to question 9; The daily amount of pre-corona coffee breaks.



Figure 9: Pie chart of the answers to question 10; 'Are you required to work at home because corona?'

3.1.4 "How does the synchronization of a telematic coffee break ritual influence the sense of togetherness experienced by Office Employees?"

In conclusion: the receiving of the drink seems to be of little influence on how the sense of togetherness is experienced, but it is the ritual of the low-commitment informal meeting that seems to be the direct cause of this feeling. However, this research does point into other directions for the improvement of telematic coffee breaks - finding a way to better support the spontaneous nature of coffee breaks in an online context and experimenting with ways of engaging in these breaks without the screen based nature.

The current iteration of Bakkey is proven not to be effective in the task of improving the sense of togetherness by office employees, but it has shown effectiveness in exploring other underlying dynamics for future research on the topic of togetherness within a digital context.

4 LIMITATIONS AND IMPLICATIONS FOR FUTURE RESEARCH

According to our research it came to light that the office workers didn't had the need during their telematic coffee breaks for a device we prototyped. Or did held a telematic coffee break exactly as intended, except without the artifact. For future research it would be recommended to first explore other components of digital coffee break rituals to perhaps find ways to impact the ritual more thoroughly.

4.1 Discussion

Screen fatigue may play a larger role in our study than earlier expected. The Bakkey heavily relies as a tool to improve the on-screen coffee break, but a screenless tool may achieve our primary goals much better. The primary goal of the artifact was to achieve a coffee break where the colleagues feel more together by giving the coffee at the same time as the waiter/waitress would do in a café or restaurant. An artifact without the use of a screen may allow for the coffee break to be researched independently from the technology of a webcam.

The sample size of this study was small for the type of study. At N=20, a survey study does not have a high validity. Studies with interviews and a higher number of responses may yield more reliable and more-in depth answers.

A more diverse population of respondents may increase the quality of the answers – the current population was all Dutch and the largest number of respondents was aged between 46 and 55. This may have introduced a selection bias. For a future research study it could be advised to have responses from more age

groups as the target group wasn't just people between the age of 46 and 55 years old and people with different backgrounds as they could have other work and work-break rituals.

The survey was not the best tool for a small sample size like ours. This was a choice made as functional user tests became impossible due to COVID-19 lockdown restrictions. However, setting up an online follow-up interview may have been a better choice to expand on the answers we have gotten - to get to know the ideas, motivations, and thoughts behind the answers.

Some of the questions may have been directionless for some of the respondents. This gave vague final answers, which made it harder to analyze the data in a correct way and eventually to make a good final graph or summary. In the future this could be solved by ensuring the questions are mentioned the way we wanted by asking the questions first to people in our direct network. As those people are of less importance for filling in the survey as they can be biased.

4.2 Future study

For future studies, more thorough research on this topic is needed. This research did not yield any immediate hints towards a connection between receiving a drink at the same time between two participants, but as this study had heavy limitations it is advisable to proceed on researching this aspect of the telematic coffee break, amongst other aspects.

BIBLIOGRAPHY

1. Andrea Grimes, and Richard Harper. Celebratory technology: new directions for food research in HCI. In Proc. CHI 2008, ACM Press (2008), 467-476 [1]
2. Bastian Leibe, Thad Starner, William Ribarsky, Zachery Wartell, David Krum, J. Weeks, B.A. Singletary, L. Hodges. 2000. *Toward Spontaneous Interaction with the Perceptive Workbench*. Retrieved from [2]
https://ieeexplore.ieee.org/abstract/document/888008?casa_token=uRoMPcfGWbQAAAAA:8FwySP0LpqveQrJRBhFKQcwsZ986ueVDGQXK1lXSUFiQWWgcC5PWVomOD4JT42uNjGiGGtxdCw
3. Battarbee Katja, and Ilpo Koskinen. 2005. Co-experience: user experience as interaction. *CoDesign*, 1–15.
<https://doi.org/10.1080/15710880412331289917> [3]
4. Battarbee Katja. 2003. Defining co-experience. In Proc. of DPPI'03, ACM, pp. 109–113 [4]
5. Bertran, Ferran A., Elena M. Segura., Jared Duval , and Katherine Isbister. 2019. *Chasing Play Potentials: Towards an Increasingly Situated and Emergent Approach to Everyday Play Design*. Retrieved from
https://dl.acm.org/doi/abs/10.1145/3322276.3322325?casa_token=rWdxmKVACTgAAAAA:4lYisZI96mhal44EbkBeP9YLGgnfvIITKhlpID-sbvLkg3sJKa6OttxJX1VGOvrHtvX5bcxvTVITpA [5]
6. Brian Sutton-Smith. 2009. The ambiguity of play. Harvard University Press. [6]
7. Brigid Costello , and Ernest Edmonds. 2007. *A study in play, pleasure and interaction design*. Retrieved from
https://dl.acm.org/doi/abs/10.1145/1314161.1314168?casa_token=NRIzJHLQFugAAAAA:aHBqrGoO958uUr1sE6ByESVqCNWUdnDWKEX19eLlgZk3Xi_jQAA1fOHrwM42lMNQIkM16KTu_UbYkg [7]
8. Carmen Egido. 1988. *Video conferencing as a technology to support group work: a review of its failures*. Retrieved from https://dl.acm.org/doi/abs/10.1145/62266.62268?casa_token=bWxqvbkvcYAAAAA:izk7JU2s1G_VMSms_zR5wfXXA8uPyO1aeTeWouTvGVyU1hE38_IkVfvjt1J2VT0Iuo9t2Go7opIBw [8]
9. Cathrine Filstad, Laura Traavik , and Mara Gorli. 2019. Belonging at work: the experiences, representations and meanings of belonging. *Journal of Workplace Learning*. 31. 10.1108/JWL-06-2018-0081. [9]
10. Cho Bohyun, Kim Namgu , and Gerard Kim J. 2005. *Interaction for Tabletop Computing Environment: An Analysis and Implementation*. Retrieved from
https://dl.acm.org/doi/abs/10.1145/1149488.1149491?casa_token=PzVfVBwwFqcAAAAA:HTwrhISSToEGH_aZW9X3sc9nKgQ5ws-3AIj2mJJb0OgxMXCiKss3iqif_1jkyChrw-5IdGvvON9N0A [10]
11. Dan Maynes-Aminzade. 2005. *Edible Bits: Seamless Interfaces between People, Data and Food*. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.113.8352, andrep=rep1, andtype=pdf> [11]
12. Deidre. A. Conroy, Nicole L. Hadler, Echelle Cho, Aliya Moreira, Chamisa MacKenzie, Leslie M. Swanson, Helen, J. Burgess. Todd Ardnett, Cathy A. Goldstein. 2020. The effects of COVID-19 stay-at-home order on sleep, health, and working patterns: a survey study of United States health care workers. *Journal of Clinical Sleep Medicine*, 1. <https://doi.org/10.5664/jcsm.8808> [[12]]

13. Dimitris Grammenos, Yannis Georgalis, Nikolaos Kazepis, Giannis Drossis, and Nikolaos Ftylitakis. (2010, August). *The booTable Experience: Iterative Design and Prototyping of an Alternative Interactive Tabletop*. Retrieved from <https://dl.acm.org/doi/10.1145/1858171.1858221> [13]
14. Don Norman. 2005. Emotional Design: Why We Love (or Hate) Everyday Things. Basic Books, New York [14]
15. Eric J. H. Andriesson , and Robert A. Roe. 1994. *Telematics and Work*. Wales, UK: Psychology Press. [15]
16. Eric Laurier, and Sally Wiggins. 2011. Finishing the family meal. *The interactional organisation of satiety. Appetite*, 56(1), 53–64. [16]
17. Esko Kurvinen, Ilpo Koskinen , and Katja Battarbee, K. (2008). *Prototyping Social Interaction*. Retrieved from https://www.mitpressjournals.org/doi/pdf/10.1162/desi.2008.24.3.46?casa_token=ImgxjGsZkzcAAAAA%3AWcbq39yR5p6EvJN_x6z4frojt0nBGQHui-zqb6PN9EuYXxbbX06IfllOM7u1hAGf9w_kvZPNQNXCQA_and [17]
18. Fatih Kursat Ozenc, and Margaret Hagan. 2017. *Ritual Design: Crafting Team Rituals for Meaningful Organizational Change*. Retrieved from https://link.springer.com/chapter/10.1007/978-3-319-60495-4_16 [18]
19. Ferran A. Bertran, Danielle Wilde, Ernő Berezvay and Katherine Isbister. 2019. Playful Human-Food Interaction Research: State of the Art and Future Directions. In Proceedings of the 2019 Annual Symposium on Computer-Human Interaction in Play (CHI Play '19). ACM, New York, NY, USA, 1001-1015. DOI: <https://doi.org/10.1145/3322276.3322325> [19]
20. Ferran A. Bertran, Jared Duval, Elena, M. Segura, Laia T. Vidal, Yoram Chisik, Marina J. Casulleras, Oscar Pañella, Katherine Isbister , and Danielle Wilde. 2020. *Chasing Play Potentials in Food Culture: Learning from Traditions to Inspire Future Human-Food Interaction Design*. Retrieved from <https://dl.acm.org/doi/10.1145/3357236.3395575> [20]
21. Ferran A. Bertran, Jared Duval, Katherine Isbister, Danielle Wilde, Elena Márquez Segura, Oscar G. Pañella, and Laia B. León. 2019. *Chasing Play Potentials in Food Culture to Inspire Technology Design*. Retrieved from https://dl.acm.org/doi/abs/10.1145/3341215.3349586?casa_token=wsZeiZH3hHgAAAAA:aw3HWd9oXy10bhSqwqO77XPkxfITtDpOHnq1qkTX7yyQ8-HUzKz2_9uzb_9Fb42VYUHH5NjCkK1KKQ [21]
22. Fleming Seay, David Krum, Bill Ribarsky , and Larry Hodges. 1999. Multimodal Interaction Techniques for the Virtual Workbench, Proc. CHI 99 Extended Abstracts, *ACM Press, New York*, pp. 282-283. [22]
23. Gillian Feeley-Harnik. 1995. Religion and Food: An Anthropological Perspective. *Journal of the American Academy of Religion* 63, 3: 565–582 [23]
24. Hannu Korhonen, Makrus Montola, and Juha Arrasvuori. 2009. Understanding Playful User Experience Through Digital Games. International Conference On Designing Pleasurable Products And Interfaces, DPPI09, 274-285. [24]
25. Helen M. Hendy. (2012, April). *Which comes first in food–mood relationships, foods or moods?* Retrieved from <https://www.sciencedirect.com/science/article/pii/S019566631100643X> [25]

26. Janine Hacker, Jan vom Brocke, Joshuua Handali, Markus Otto, and Johannes Schneider. 2020. Virtually in this together – how web-conferencing systems enabled a new virtual togetherness during the COVID-19 crisis. *European Journal of Information Systems*, 1–22. <https://doi.org/10.1080/0960085x.2020.1814680> [26]
27. John Brotchie, Peter Newton, Peter Hall, and Peter Nijkamp. 2017. *The Future of Urban Form: The Impact of New Technology*. Routledge, London. [27]
28. John Sharp and David Thomas. 2019. *Fun, Taste, and Games: An Aesthetics of the Idle, Unproductive, and Otherwise Playful*. MIT Press. [28]
29. Juha Arrasvuori, Marion Boberg, and Hannu Korhonen. 2010. Understanding playfulness an overview of the revised playful experience (PLEX) framework. In Proc. of Design , and Emotion 2010 Conference, Design and Emotion Society [29]
30. Jun Wei, Xiaojuan Ma, and Shengdong Zhao. (2014). *Food messaging: using edible medium for social messaging*. Retrieved from https://dl.acm.org/doi/abs/10.1145/2556288.2557026?casa_token=DNmub6KEvQcAAAAA:WiJCWinbOd5zsW_U_szxj1j8hsP8NHykQAUrEvQcRMlnf8dkAFgfj0wcQV_2OosXDGL3R5o4eIsQxw [30]
31. Kaisa Väänänen-Vainio-Mattila, and Jarmo Palviainen. 2010, September. *Playful Experiences at Work*. Retrieved from https://www.researchgate.net/publication/265916669_Playful_Experiences_at_Work [31]
32. Katherine Isbister. 2016. How games move us: Emotion by design. *MIT Press*. [32]
33. Kenton O'Hara, John Helmes, Abigail Sellen, Richard Harper, Martijn ten Bhömer, and Elise van den Hoven. 2012. *Food for Talk: Phototalk in the Context of Sharing a Meal*. Retrieved from https://www.tandfonline.com/doi/full/10.1080/07370024.2012.656069?casa_token=AN1zZrhVVSEAAAAA%3Agr1CWQEQenxpP0eff9sPFxYdrasrdUel1ntBH-eGya-BaRXIDg6_XSY0Zm2M5Xtg0SJOG6HlfTBpug [33]
34. Laura Devendorf , and Daniela. K. Rosner. 2017. *Beyond Hybrids: Metaphors and Margins in Design*. Retrieved from <https://dl.acm.org/doi/10.1145/3064663.3064705> [34]
35. Lee, C. H., Lockton, D., and Kim, J. E. (2018, June). *Exploring Cognitive Playfulness Through Zero Interactions*. Retrieved from <https://dl.acm.org/doi/10.1145/3197391.3205413> [35]
36. Lina Eklund, 2015. Bridging the online/offline divide: The example of digital gaming. *Computers in Human Behavior*, 53, 527–535. [36]
37. Lucy Osler. 2020. Feeling togetherness online: a phenomenological sketch of online communal experiences. *Phenom Cogn Sci* 19, 569–588 <https://doi.org/10.1007/s11097-019-09627-4>
38. Marc Hassenzahl, Axel Platz, Michael Burmester, Katrin Lehner. 2000. Hedonic and Ergonomic Quality Aspects Determine a Software's Appeal. Proc. of CHI 2000, ACM, pp. 201-208. [38]
39. Marianna Obrist, 2017. *Mastering the Senses in HCI: Towards Multisensory Interfaces*. Retrieved from https://dl.acm.org/doi/abs/10.1145/3125571.3125603?casa_token=qAhrbCRdD04AAAAA:YfKUWjGJOOIHUFBPL31NEKcjULOdD-uh81kL2vwjj4phI4HKR5V5P9iF58Wa5XPq36xmh5HG8-VZA

40. Martin Murer, Ilhan Aslan, and Manfred Tscheligi. 2013. LOLlio: Exploring Taste As Playful Modality. In *Proceedings of the 7th International Conference on Tangible, Embedded and Embodied Interaction (TEI '13)*, 299–302. <https://doi.org/10.1145/2460625.2460675> [40]
41. McVeigh-Schultz, J., Kreminski, M., Prasad, K., Hoberman, P., and Fisher, S. S. (2018, June). *Immersive Design Fiction: Using VR to Prototype Speculative Interfaces and Interaction Rituals within a Virtual Storyworld*. Retrieved from <https://dl.acm.org/doi/10.1145/3196709.3196793> [41]
42. Michael Smyth, and Ingi Helgason. 2013. *Tangible possibilities—envisioning interactions in public space*. <https://doi.org/10.1080/14626268.2013.769454> [42]
43. Microsoft Surface. *Microsoft Surface*. Retrieved on 21st of January 2021 from <http://www.surface.com> [43]
44. Paco Roncero. *Sublimotion*. Accessed on April 15, 2019 at <https://www.sublimotionibiza.com/> [44]
45. Paul Dietz , and Darren Leigh. 2001. DiamondTouch: a Multi-user Touch Technology, In Proc. of UIST'01, Orlando, Florida, Nov. 11-14 [45]
46. Pollie Barden, Rob Comber, David Green, Daniel Jackson, Cassim Ladha, Tom Bartindale, Nick Bryan-Kinns, Tony Stockman , and Patrick Olivier. 2012. *Telematic dinner party: designing for togetherness through play and performance*. Retrieved from <https://dl.acm.org/doi/10.1145/2317956.2317964> [46]
47. Robb Mitchell, Alexandra Papadimitriou, Youran You, and Laurens Boer. (2015, March). *Really eating together: a kinetic table to synchronise social dining experiences*. Retrieved from https://dl.acm.org/doi/abs/10.1145/2735711.2735822?casa_token=TnXBZDqSGAcAAAAA:PAD78plsTbnkzaAD45uTE3-55kovrFC--eEQWl4Q8yhpyaNCJyhKWF0nJEQq_BBj9x0NiuxsJ83Aeg [47]
48. Robert S. Fish, Robert E. Kraut, Robert W. Root , and Ronald E. Rice. 1992. *Evaluating video as a technology for informal communication*. Retrieved from https://dl.acm.org/doi/abs/10.1145/142750.142755?casa_token=YS_nYdZ26_sAAAAA:LEfZjnsuSKywd2_ni4LGea17Pf14t49E7hzul79zGMA-FJU3LVFJCHImAzukJ0jCNnV4fMpuyRnEog [48]
49. Roger Caillois. 2001. Man, play, and games. *University of Illinois Press* [49]
50. Shad Gross, Austin Toombs, Jeff Wain, and Kevin Walorski. 2011. *Foodmunity: designing community interactions over food*. Retrieved from https://dl.acm.org/doi/abs/10.1145/1979742.1979504?casa_token=cYktfXoDmNwAAAAAA:u0DTgm2Fgfp89ZNwj12xxq71Hcc2yAloE3BopcxME03ucqolo1FFSpUiUMARwRpJXbm9vLXKO2HFig [50]
51. Sherif Mekky and Andrés Lucero. 2016. An Exploration of Designing for Playfulness in a Business Context. In *Proceedings of the 2016 CHI Conference Extended Abstracts on Human Factors in Computing Systems*. ACM, 3136–3143. [51]
52. SMART Inc. *SMART Table*. Retrieved on 21st of January 2021 from <http://www2.smarttech.com/st/enUS/Products/SMART+Table/> [52]
53. Steven Altman, Enzo Valenzi, and Richard Hodgetts. 1985. *Organizational behavior: Theory and practice*. Orlando, *FloricM Academic Press*. [53]

54. Tom Gayler, Corina Sas, and Vaiva Kalnikaitė. 2020. *Material Food Probe: Personalized 3D Printed Flavors for Emotional Communication in Intimate Relationships*. Retrieved from <https://dl.acm.org/doi/10.1145/3357236.3395533> [54]
55. Xiaojuan Ma, Ke Fang, and Fengyuan Zhu. 2016. *From Breakage to Icebreaker: Inspiration for Designing Technological Support for Human-Human Interaction*. Retrieved from <https://dl.acm.org/doi/10.1145/2901790.2901800> [55]

APPENDIX A – QUESTIONNAIRE

Survey Koffiepauze en Corona

Beste Lezer, wij zijn vier Industrial Design studenten aan de TU/e en hebben uw hulp nodig. Momenteel zijn wij bezig met een onderzoek over het effect dat thuiswerken heeft op collegialiteit onder kantoor medewerkers. Onze onderzoeksraag luidt: "Hoe beïnvloedt de synchronisatie van een telematisch koffiepauze ritueel de mate van samenzijn dat door kantoor werknemers ervaren wordt?" Met deze vragenlijst willen wij meer inzichten krijgen om verder te komen in ons onderzoek, en uiteindelijk een (mogelijk) effect vast te stellen. Wij willen u in ieder geval alvast bedanken voor het invullen van de vragenlijst!

...

* Required

1

Wat is uw leeftijdscategorie? *

- Jonger dan 25 jaar
- 25 - 35 jaar
- 36 - 45 jaar
- 46 - 55 jaar
- 56 - 65 jaar
- Ouder dan 65 jaar

2

Bent u werkzaam (geweest) op kantoor? *

Select your answer



Next

3

Hoe zag uw gebruikelijke koffiepauze er uit? *

4

Hoe ervoer u de standaard koffiepauze vóór de Corona-uitbraak? *

0	1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	---	----

Als zeer slecht

Als zeer goed

5

Kunt u dit toelichten? *

6

Hoe belangrijk is de koffiepauze voor u? *

0	1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	---	----

Als zeer onbelangrijk

Als zeer belangrijk

7

Kunt u dit toelichten? *

8

Hoeveel koffiepauzes had u dagelijks vóór de Corona-uitbraak? *

- 1
- 2
- 3
- 4
- Meer dan 4

9

Met hoeveel collega's hield u gewoonlijk koffiepauze? *

- 1 tot 3
- 4 tot 6
- 7 tot 9
- 10 of meer

10

Bent u door de Corona-uitbraak genoodzaakt om thuis te werken? *

- Ja
- Nee
-

11

Heeft thuiswerken effect op uw huidige koffiepauze? *

- Ja, zeer negatief
- Ja, negatief
- Nee, geen verschil
- Ja, positief
- Ja, zeer positief

12

Kunt u uw antwoord onderbouwen? *

13

Wat betekend samenzijn voor u? *

14

Is dat door de Coronacrisis veranderd? *

Next

Product description

Kijk de volgende video en beantwoord astublieft de volgende vragen:



15

Vindt u de functie van dit product duidelijk?

Enter your answer

16

Hoe belangrijk is het tegelijk koffie/thee/water drinken voor u tijdens een koffiepauze?

Enter your answer

17

Denkt u dat dit product invloed heeft op uw koffiepauze? Zo ja; hoe? Zo nee; waarom niet? *

Enter your answer

18

Heeft u eventueel nog aanvullingen voor het product? Zo ja, wat? *

Enter your answer