Exploring the Potential of Microphenomenology for Understanding and Designing for Lived Experience of Mindful Eating

LALA GULUZADA, ADA University, Azerbaijan
CORINA SAS, Lancaster University, UK

The increasing interest in HCI around the body and embodied experiences has led to the development of novel technologies and methodologies to actively align with and leverage these aspects. The design of health technologies often relies on behavioral metrics, such as in the case of designing eating/food-related technologies. This reflection paper explores the potential of micro-phenomenology, which is a rigorous first-person methodology to examine lived experience, to understand, and inform the design of mindful eating technologies that engage everyday embodied experiences in the context of HCI.

CCS Concepts: • **Human-centered computing → Human computer interaction (HCI)**; **Interaction design**.

Additional Key Words and Phrases: Mindful Eating, Micro-phenomenology, Mindfulness, Subjectivity, Reflection, Food technologies

ACM Reference Format:
Lala Guluzada and Corina Sas. 2026. Exploring the Potential of Microphenomenology for Understanding and Designing for Lived Experience of Mindful Eating. In *Proceedings of ACM CHI Workshop (Body Transformation Experiences: A workshop on How to Elicit, Assess and Support them through Multisensory Technology).* ACM, New York, NY, USA, 6 pages. https://doi.org/10.1145/nnnnnnn.nnnnnnn

1 Introduction

The act of eating is hedonic, embodied, and often habitual. Within the pace of everyday modern life, our attention can be interrupted by some external events while eating, such as digital devices, workloads, or other habitual routines [1]. Such mindless eating behaviors may lead to unhealthy food choices, which are linked to health issues, including overeating, binge eating, eating disorders (EDs), and negative relationships with food and body [34]. The growing interest in health research on mindful eating indicates the role of mindful eating in addressing such challenges by reducing mindless eating behaviors and increased quality of health food intake [21, 37] and its overall impact on general wellbeing [26, 37]. Such research has explored mindfulness-based interventions and their impact on people living with EDs [56], binge eating disorders [12], or diabetes [39]. Among these, the Mindfulness-Based Eating Awareness Training (MB-EAT) intervention is the most tailored approach, with its particular focus on mindful eating to address the disordered eating habits of individuals with emotional eating [32, 33].

A growing strand of research in HCI and Human-Food Interaction (HFI) is interested in food technologies, which promote healthy eating, such as apps to track calories, nutrients, and activity [2], social media for photo-based tracking of food and eating [5]. With respect to the latter, scholars critique compulsive tracking for its link to EDs, and instead advocate food literacy [2]. While other apps support ED symptom monitoring [7, 14] or digestive disorders [25]. To

Authors' Contact Information: Lala Guluzada, lguluzada@ada.edu.az, ADA University, Baku, Azerbaijan; Corina Sas, c.sas@lancaster.ac.uk, Lancaster University, Lancaster, UK.

Manuscript submitted to ACM

support healthy or hedonic eating, gustatory interfaces [51], AR/VR for food appearance [42], auditory feedback [4, 31, 38], olfactory cues [41], and multisensory methods altering taste and texture perception [22, 30] are designed.

Mindful eating is a type of mindfulness applied to eating practices [9, 55], which promotes nonjudgmental awareness of eating, including present-moment awareness of bodily signals for hunger and fullness, as well as the sensory modalities of food such as its taste, smell, sight, texture, and sound; while slowly savoring each small bite, by chewing thoroughly with small portions and showing gratitude for its sources, and labor that sustained its journey [34]. Such research explored the support of slow eating via wearables [28], smart tableware [24, 29, 58], 3D printed food [35], or AR/VR for small bites, portions, or for chewing [40, 52], or smart tableware for not multitasking [27]. However, limited technologies particularly designed to support mindful eating.

The Food4Thought app, which uses daily "*crumbs*" to cultivate awareness [8], but lacks emphasis on savoring and emotion [9]. Guluzada and Sas reviewed the top-rated commercial mindful eating 13 apps [13], and only two apps provide support for mindful eating meditation, mindfulness meditation, and psychoeducation, while the rest offer only fragmented support. The authors urged that apps should also cultivate awareness and understanding of bodily cues linked with hunger and satiety, and mindful eating interventions. Their recent functionality review of 27 commercial apps for mindful eating and EDs [14] indicates that these apps provide a range of interventions, such as CBT, guided mindfulness meditation, and mindful eating meditations. Most of these apps appear to be informed by MB-EAT interventions, usually offering the guided mindful eating of a small piece of fruit (i.e., raisin, chocolate, etc.) to fully immerse in its sensory aspects [23], which cultivated through slow observation, such as seeing the fruit for the first time, paying attention to its sight, smell, taste, sound, and texture; slowly chewing and swallowing, and if thoughts or emotions arise, noticing them non-judgmentally and returning attention to the fruit. Although such apps indicate support for mindful eating, a limited number of apps provided features to reflect on bodily signals of hunger and satiety cues, such as through Likert scales; portion size through photos and text entries, or diaries for thoughts and emotions.

An interview with 21 mindful eating expert practitioners (i.e., nutritionists, dietitians, psychologists, or mindfulness coaches, etc.) shows they utilise mindful eating, mindfulness, and mental health interventions for their four main client types: those living with EDs, including mental health conditions, non-clinical conditions, and those interested in improving overall wellbeing [15]. Experts also emphasized challenges associated with MB-EAT interventions, including limited interoceptive awareness of bodily signals associated with eating, such as hunger, thirst, sensory-specific satiety, stomach fullness, muscle tension, or breathing; challenges related to clients' attitudes towards eating and limited food literacy; and challenges related to the eating environment, such as multitasking while eating. Most HCI research on eating technologies has focused on user experience, albeit less so on the lived experience of eating, despite its strong emotional and bodily qualities [11]. Lived experiences have been increasingly acknowledged in HCI and explored under the first-person methodology [6]. Drawing from the latter, we explore the potential of microphenomenology [49] for understanding the fine detailed lived experience [46] of mindful eating in order to better design for it.

2 Micro-phenomenology in HCI and Mindful Eating

In recent years, HCI research has explored theoretical work on the *phenomenology*, potential design of a first-person experience, such as somaesthetics, which focuses on the body as a site of sensory-aesthetic appreciation with the mind in interplay [20]. The idea of embodiment has supported the unity of the body and mind, resulting in the exploration of design solutions on the body's association with interactive technologies [53, 54, 57], where designers' own felt experiences play a crucial role.

Micro-phenomenology is a systematic interview and qualitative research method designed to explore the fine-grained details of subjective lived experiences through careful questioning and prompting that guides people to become aware of and describe the subtle and reflective aspects of their experiences [45]. This reflective approach is significant when designing for health and body technologies [19, 48, 50] to understand the needs of the real users. *Micro-phenomenology* has been used to study diverse phenomena [47]. In the field of HCI, Prpa et al. interviewed HCI and design experts who utilised micro-phenomenology, explaining their experiences with the method and illustrating how it has been applied through designing a practice, conditions under which descriptions of experience unfold, and the values the method provides to the HCI/design field [49], Heimann et.al. examined the experience of using *WeUsedTo*, a website for sharing COVID pandemic experiences [16], or for immersive VR systems for eliciting breath awareness [48], sense making of data visualisation and representation [17, 18].

Other strand of research has explored bodily experiences, such as Obrist et al., focused on articulation and verbalization of sensorial [44], and gustatory experiences [43], which becomes a knowledge source for taste-enhanced designs. Gayler and Sas, designed to sensitize participants toward their food experiences through sensory deprivation/ augmentation techniques, such as eating with blindfolds, nose clips, earplugs, and gloves, along with body mapping booklet of food experiences over time by reflecting on sensory aspects through both internal (mouth and tongue, stomach and gut, brain and nervous system, heart and circulatory system) and external senses (sight, smell, taste, touch, hearing) [10]. Although some research has chosen micro-phenomenology to develop and deepen an HCI understanding of human experience that goes beyond a focus on body and cognition, there is a potential for utilizing micro-phenomenology in designing mindful eating technologies.

The potential of *micro-phenomenology* consists of helping to uncover the hidden dimensions of the act of eating experience by drawing attention to subtle, moment-by-moment experience, which might reveal design opportunities that are often overlooked. Mindful eating promotes presence with food by slowing down, noticing the food sensations, and bodily sensations. Yet, if we look closely, we might recognize how such experiences often avoid awareness; the sequence of movements, which includes preparation of food, reaching out, and anticipating its taste, its first touch by hand or inside of the mouth by tongue, micro adjustments of chewing, where it is mixed with saliva, and breaks down in the stomach shifting attention between bodily sensation. This process often unfolds rapidly without pre-reflection, where self-reports are mainly used after eating, such as "*Why did you eat? - hungry, cravings, stress, social, etc.*" [13, 14], which simplifies the complexity of internal and external aspects of eating. Utilizing *Micro-phenomenology* into mindful eating can help with promoting different perspective, instead of asking thoughts, emotions, behaviors in general, the method guides one to tune in with focused attention on how the experience unfolded in time, by reconstructing each single bite, anticipating its taste before touches the tongue, noticing a slight tightening in the jaw, a pause between bites while evaluating its temperature, texture, taste, which might involve multiple sequenced sensory, cognitive, affective layer of eating. Such granularity can shift perceiving eating from a discrete action to a series of embodied micro events.

Body Transformation Experiences (BTE) refer to one's own perception of bodily signals, emotions, thoughts, or behaviors through interaction with technologies, practices, or environments. Mindful eating practices promote such transformations, i.e., shift from auto-pilot, or mindless eating, toward heightened interoceptive awareness of hunger, satiety, and sensory aspects of food. These shifts can reconfigure how the body is felt (e.g., noticing stomach fullness, jaw tension, or breathing rhythm), how agency is enacted (slowing down, choosing portions intentionally), and how emotions and identity around food are built sequentially. From an HCI perspective, this redirection is important. Such technologies are often designed around food to track meal [8, 14], calorie [29], eating speed [28, 35, 36], portion size [3, 35] by considering eating as a measurable behavior, by including quantities consumed, time stamps or nutritional

data (macro/micro nutrients). While such metrics are useful, they often ignore the experiential structure that shapes the act of eating. Such technologies often do not consider external factors such as distraction in the environment during eating as "multitasking", in a behavioral sense, but as lived experience, it appears as attention frequently sliding toward the screen while hindering connection with the sensory aspects of the food, i.e., its taste [27]. Designing only for measurable events might risk missing the subtle temporal thresholds where experience and change occur. A novel interface for mindful eating can benefit from micro-phenomenology reflection. Such as before eating, if anticipation shapes taste, the interfaces might encourage a brief pause and breath exercises before the first bite, which promotes sensory engagement; or to cultivate awareness of bodily signals of hunger and satiety cues, interfaces could provide ambient feedback to ambiguously intensify awareness rather than impose external feedback that fragments the experience. *Micro-phenomenology* provides a way to access tacit knowledge that users struggle to articulate, which might help to leverage the reveal concrete episodes of eating, thoughts, emotions, and behaviors around it by explaining step by step.

To conclude, this paper reflects on how *micro-phenomenology* can provide a valuable lens for designing mindful eating interfaces, by adapting the rigorous first-person lived experience of food experience. Rather than solely focusing on tracking metrics of eating behavior to promote behavior change towards healthy eating, *micro-phenomenology* informed designs support real awareness of lived experience, including sensory aspects of food and bodily sensations that include eating, by outlining stages of preparation, experience, and reflection.

Acknowledgments

The work of the first author was supported by ADA University. The corresponding author received full research support to attend the CHI 2026 conference.

References

[1] Sultan Almoallim and Corina Sas. 2022. Toward research-informed design implications for interventions limiting smartphone use: functionalities review of digital well-being apps. *JMIR formative research* 6, 4 (2022), e31730.

[2] Marcela C. C. Bomfim, Sharon I. Kirkpatrick, Lennart E. Nacke, and James R. Wallace. 2020. Food Literacy While Shopping: Motivating Informed Food Purchasing Behaviour with a Situated Gameful App. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems* (Honolulu, HI, USA) *(CHI '20)*. Association for Computing Machinery, New York, NY, USA, 1–13. doi:10.1145/3313831.3376801

[3] Beenish M Chaudhry, Christopher Schaefbauer, Ben Jelen, Katie A Siek, and Kay Connelly. 2016. Evaluation of a food portion size estimation interface for a varying literacy population. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems*. 5645–5657.

[4] Weijen Chen, Yang Yang, Kao-Hua Liu, Yun Suen Pai, Junichi Yamaoka, and Kouta Minamizawa. 2024. Cymatics Cup: Shape-Changing Drinks by Leveraging Cymatics. In *Proceedings of the CHI Conference on Human Factors in Computing Systems*. 1–19.

[5] Chia-Fang Chung, Elena Agapie, Jessica Schroeder, Sonali Mishra, James Fogarty, and Sean A. Munson. 2017. When Personal Tracking Becomes Social: Examining the Use of Instagram for Healthy Eating. In *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems* (Denver, Colorado, USA) *(CHI '17)*. Association for Computing Machinery, New York, NY, USA, 1674–1687. doi:10.1145/3025453.3025747

[6] Audrey Desjardins, Oscar Tomico, Andrés Lucero, Marta E Cecchinato, and Carman Neustaedter. 2021. Introduction to the special issue on first-person methods in HCI. 12 pages.

[7] *Anjali Devakumar, Jay Modh, Bahador Saket, Eric P. S. Baumer, and Munmun De Choudhury. 2021. A Review on Strategies for Data Collection, Reflection, and Communication in Eating Disorder Apps. In *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems* (Yokohama, Japan) *(CHI '21)*. Association for Computing Machinery, New York, NY, USA, Article 547, 19 pages. doi:10.1145/3411764.3445670

[8] Daniel A Epstein, Felicia Cordeiro, James Fogarty, Gary Hsieh, and Sean A Munson. 2016. Crumbs: lightweight daily food challenges to promote engagement and mindfulness. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems*. 5632–5644.

[9] Celia Framson, Alan R Kristal, Jeannette M Schenk, Alyson J Littman, Steve Zeliadt, and Denise Benitez. 2009. Development and validation of the mindful eating questionnaire. *Journal of the American dietetic Association* 109, 8 (2009), 1439–1444.

[10] Tom Gayler, Corina Sas, and Vaiva Kalnikaitė. 2021. Sensory probes: An exploratory design research method for Human-Food Interaction. In *Proceedings of the 2021 ACM Designing Interactive Systems Conference*. 666–682.

[11] Tom Gayler, Corina Sas, and Vaiva Kalnikaitė. 2022. Exploring the design space for human-food-technology interaction: An approach from the lens of eating experiences. *ACM Transactions on Computer-Human Interaction* 29, 2 (2022), 1–52.

[12] Kathryn M Godfrey, Linda C Gallo, and Niloofar Afari. 2015. Mindfulness-based interventions for binge eating: a systematic review and meta-analysis. *Journal of behavioral medicine* 38 (2015), 348–362.

[13] Lala Guluzade and Corina Sas. 2023. Evaluation of Mindfulness Eating Apps. In *36th International BCS Human-Computer Interaction Conference*. BCS Learning & Development, 262–273.

[14] *Lala Guluzade and Corina Sas. 2024. Functionality and User Review Analysis of Mobile Apps for Mindfulness Eating and Eating Disorders. In *Proceedings of the 2024 ACM Designing Interactive Systems Conference*. 1350–1371.

[15] Lala Guluzade and Corina Sas. 2025. Mindful Eating Practice and its Challenges: Insights from Expert Practitioners. In *38th International BCS Human-Computer Interaction Conference*. BCS Learning & Development, 74–90.

[16] Katrin Heimann, Minke Nouwens, Suneetha Saggurthi, and Peter Dalsgaard. 2025. Micro-Phenomenology as a Method for Studying User Experience in Human-Computer Interaction. In *Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems*. 1–17.

[17] Trevor Hogan, Uta Hinrichs, and Eva Hornecker. 2015. The elicitation interview technique: Capturing people's experiences of data representations. *IEEE transactions on visualization and computer graphics* 22, 12 (2015), 2579–2593.

[18] Trevor Hogan, Uta Hinrichs, and Eva Hornecker. 2017. The visual and beyond: Characterizing experiences with auditory, haptic and visual data representations. In *Proceedings of the 2017 Conference on designing interactive systems*. 797–809.

[19] Sarah Homewood. 2023. Self-tracking to do less: An autoethnography of long COVID that informs the design of pacing technologies. In *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems*. 1–14.

[20] Kristina Hook. 2018. *Designing with the body: Somaesthetic interaction design*. MIt Press.

[21] Misba Hussain, Madalina Unchiasu, Jeffrey Wood, Neale Samways, Rebecca Keyte, Helen Egan, and Michail Mantzios. 2022. Exploring Mindfulness and Mindful Eating and Visual Attention Towards Food Cues: Preliminary Findings. *Journal of Cognitive Enhancement* 6, 3 (2022), 402–416.

[22] *Meetha Nesam James, Nimesha Ranasinghe, Anthony Tang, and Lora Oehlberg. 2022. Flavor-videos: enhancing the flavor perception of food while eating with videos. In *Proceedings of the 2022 ACM International Conference on Interactive Media Experiences*. 33–46.

[23] Jon Kabat-Zinn and Thich Nhat Hanh. 2009. *Full catastrophe living: Using the wisdom of your body and mind to face stress, pain, and illness*. Delta.

[24] Azusa Kadomura, Cheng-Yuan Li, Yen-Chang Chen, Koji Tsukada, Itiro Siio, and Hao-hua Chu. 2013. Sensing fork: Eating behavior detection utensil and mobile persuasive game. In *CHI'13 Extended Abstracts on Human Factors in Computing Systems*. Association for Computing Machinery, 1551–1556.

[25] Ravi Karkar, Jessica Schroeder, Daniel A. Epstein, Laura R. Pina, Jeffrey Scofield, James Fogarty, Julie A. Kientz, Sean A. Munson, Roger Vilardaga, and Jasmine Zia. 2017. TummyTrials: A Feasibility Study of Using Self-Experimentation to Detect Individualized Food Triggers. In *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems* (Denver, Colorado, USA) *(CHI '17)*. Association for Computing Machinery, New York, NY, USA, 6850–6863. doi:10.1145/3025453.3025480

[26] Zaynah Khan and Zainab F Zadeh. 2014. Mindful eating and it's relationship with mental well-being. *Procedia-Social and behavioral sciences* 159 (2014), 69–73.

[27] *Rohit Ashok Khot, Jung-Ying Yi, and Deepti Aggarwal. 2020. SWAN: Designing a companion spoon for mindful eating. In *Proceedings of the fourteenth international conference on tangible, embedded, and embodied interaction*. 743–756.

[28] *Joohee Kim, Kwang-Jae Lee, Mankyung Lee, Nahyeon Lee, Byung-Chull Bae, Genehee Lee, Juhee Cho, Young Mog Shim, and Jun-Dong Cho. 2016. Slowee: A smart eating-speed guide system with light and vibration feedback. In *Proceedings of the 2016 CHI Conference Extended Abstracts on Human Factors in Computing Systems*. 2563–2569.

[29] Jaejeung Kim, Joonyoung Park, and Uichin Lee. 2016. EcoMeal: a smart tray for promoting healthy dietary habits. In *Proceedings of the 2016 CHI Conference Extended Abstracts on Human Factors in Computing Systems*. 2165–2170.

[30] Rebecca Kleinberger, Akito Oshiro Van Troyer, and Qian Janice Wang. 2023. Auditory seasoning filters: Altering food perception via augmented sonic feedback of chewing sounds. In *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems*. 1–15.

[31] Naoya Koizumi, Hidekazu Tanaka, Yuji Uema, and Masahiko Inami. 2011. Chewing jockey: augmented food texture by using sound based on the cross-modal effect. In *Proceedings of the 8th international conference on advances in computer entertainment technology*. 1–4.

[32] Jean L Kristeller, Ruth A Baer, and Ruth Quillian-Wolever. 2006. Mindfulness-based approaches to eating disorders. *Mindfulness-based treatment approaches: Clinician's guide to evidence base and applications* 75 (2006).

[33] Jean L Kristeller and Andrea E Lieberstein. 2016. Teaching individuals mindful eating. *Resources for teaching mindfulness: An international handbook* (2016), 359–378.

[34] Jean L Kristeller and Ruth Q Wolever. 2014. Mindfulness-based eating awareness training for treating binge eating disorder: the conceptual foundation. *Eating Disorders and Mindfulness* (2014), 93–105.

[35] Ying-Ju Lin, Parinya Punpongsanon, Xin Wen, Daisuke Iwai, Kosuke Sato, Marianna Obrist, and Stefanie Mueller. 2020. FoodFab: creating food perception illusions using food 3D printing. In *Proceedings of the 2020 CHI conference on human factors in computing systems*. 1–13.

[36] *Jin-Ling Lo, Tung-yun Lin, Hao-hua Chu, Hsi-Chin Chou, Jen-hao Chen, Jane Yung-jen Hsu, and Polly Huang. 2007. Playful tray: adopting ubicomp and persuasive techniques into play-based occupational therapy for reducing poor eating behavior in young children. In *UbiComp 2007: Ubiquitous Computing: 9th International Conference, UbiComp 2007, Innsbruck, Austria, September 16-19, 2007. Proceedings 9*. Springer, 38–55.

[37] Michail Mantzios, Helen Egan, Henna Bahia, Misba Hussain, and Rebecca Keyte. 2018. How does grazing relate to body mass index, self-compassion, mindfulness and mindful eating in a student population? *Health psychology open* 5, 1 (2018), 2055102918762701.

[38] Signe Lund Mathiesen, Derek Victor Byrne, and Qian Janice Wang. 2019. Sonic mug: A sonic seasoning system. In *Proceedings of the 14th International Audio Mostly Conference: A Journey in Sound*. 264–267.

[39] Carla K Miller, Jean L Kristeller, Amy Headings, and Haikady Nagaraja. 2014. Comparison of a mindful eating intervention to a diabetes self-management intervention among adults with type 2 diabetes: a randomized controlled trial. *Health Education & Behavior* 41, 2 (2014), 145–154.

[40] Takuji Narumi, Yuki Ban, Takashi Kajinami, Tomohiro Tanikawa, and Michitaka Hirose. 2012. Augmented perception of satiety: controlling food consumption by changing apparent size of food with augmented reality. In *Proceedings of the SIGCHI conference on human factors in computing systems*. ACM, 109–118.

[41] Takuji Narumi, Shinya Nishizaka, Takashi Kajinami, Tomohiro Tanikawa, and Michitaka Hirose. 2011. Meta cookie+: an illusion-based gustatory display. In *Virtual and Mixed Reality-New Trends: International Conference, Virtual and Mixed Reality 2011, Held as Part of HCI International 2011, Orlando, FL, USA, July 9-14, 2011, Proceedings, Part I 4*. Springer, ACM, 260–269.

[42] Masahiro Nishizawa, Wanting Jiang, and Katsunori Okajima. 2016. Projective-AR system for customizing the appearance and taste of food. In *Proceedings of the 2016 workshop on Multimodal Virtual and Augmented Reality*. 1–6.

[43] Marianna Obrist, Rob Comber, Sriram Subramanian, Betina Piqueras-Fiszman, Carlos Velasco, and Charles Spence. 2014. Temporal, affective, and embodied characteristics of taste experiences: A framework for design. In *Proceedings of the SIGCHI conference on human factors in computing systems*. 2853–2862.

[44] Marianna Obrist, Sue Ann Seah, and Sriram Subramanian. 2013. Talking about tactile experiences. In *Proceedings of the SIGCHI conference on human factors in computing systems*. 1659–1668.

[45] Claire Petitmengin. 2006. Describing one's subjective experience in the second person: An interview method for the science of consciousness. *Phenomenology and the Cognitive sciences* 5, 3 (2006), 229–269.

[46] Claire Petitmengin, Anne Remillieux, and Camila Valenzuela-Moguillansky. 2019. Discovering the structures of lived experience: Towards a micro-phenomenological analysis method. *Phenomenology and the Cognitive Sciences* 18, 4 (2019), 691–730.

[47] Claire Petitmengin, Martijn Van Beek, Michel Bitbol, Jean-Michel Nissou, and Andreas Roepstorff. 2019. Studying the experience of meditation through micro-phenomenology. *Current opinion in psychology* 28 (2019), 54–59.

[48] Mirjana Prpa. 2020. Attending to inner self: Designing and unfolding breath-based VR experiences through micro-phenomenology. (2020).

[49] Mirjana Prpa, Sarah Fdili-Alaoui, Thecla Schiphorst, and Philippe Pasquier. 2020. Articulating experience: Reflections from experts applying micro-phenomenology to design research in HCI. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems*. 1–14.

[50] Mirjana Prpa, Kıvanç Tatar, Jules Françoise, Bernhard Riecke, Thecla Schiphorst, and Philippe Pasquier. 2018. Attending to breath: exploring how the cues in a virtual environment guide the attention to breath and shape the quality of experience to support mindfulness. In *Proceedings of the 2018 designing interactive systems conference*. 71–84.

[51] Nimesha Ranasinghe and Ellen Yi-Luen Do. 2016. Digital lollipop: Studying electrical stimulation on the human tongue to simulate taste sensations. *ACM Transactions on Multimedia Computing, Communications, and Applications (TOMM)* 13, 1 (2016), 1–22.

[52] *Sho Sakurai, Takuji Narumi, Yuki Ban, Tomohiro Tanikawa, and Michitaka Hirose. 2015. CalibraTable: Tabletop system for influencing eating behavior. In *SIGGRAPH Asia 2015 Emerging Technologies*. ACM New York, NY, 1–3.

[53] Anna Ståhl, Martin Jonsson, Johanna Mercurio, Anna Karlsson, Kristina Höök, and Eva-Carin Banka Johnson. 2016. The soma mat and breathing light. In *Proceedings of the 2016 CHI Conference Extended Abstracts on Human Factors in Computing Systems*. 305–308.

[54] Ana Tajadura-Jiménez, Merle T Fairhurst, and Ophelia Deroy. 2022. Sensing the body through sound. In *The Routledge Handbook of Bodily Awareness*. Routledge, 230–246.

[55] Katy Tapper. 2022. Mindful eating: what we know so far. *Nutrition bulletin* 47, 2 (2022), 168–185.

[56] Maija B Taylor, Suzanne Daiss, and Kendra Krietsch. 2015. Associations among self-compassion, mindful eating, eating disorder symptomatology, and body mass index in college students. *Translational Issues in Psychological Science* 1, 3 (2015), 229.

[57] Laia Turmo Vidal, José Manuel Vega-Cebrián, María Concepción Valdez Gastelum, Elena Márquez Segura, Judith Ley-Flores, Joaquin R Diaz Duran, and Ana Tajadura-Jiménez. 2024. Body Sensations as Design Material: An Approach to Design Sensory Technology for Altering Body Perception. In *Proceedings of the 2024 ACM Designing Interactive Systems Conference*. 2545–2561.

[58] *Zuoyi Zhang, Huizhe Zheng, Sawyer Rempel, Kenny Hong, Teng Han, Yumiko Sakamoto, and Pourang Irani. 2020. A smart utensil for detecting food pick-up gesture and amount while eating. In *Proceedings of the 11th Augmented Human International Conference*. 1–8.