Making Alternatives through Design for Mediated Spiritual Practice

"Chanting online and

muted

Unmuted

ł

muting is challenging

Read more about the

practice via the

UK-based website:

www.sgi-uk.org

"Connecting on Zoom

is better than nothing

Check for updates

Caroline Claisse **David Chatting** Sara Wolf **Ben Morris** Abigail C. Durrant Open Lab, Open Lab. Open Lab, Chair of Psychological Open Lab, Newcastle University Newcastle University Newcastle University Newcastle University Ergonomics, University of Würzburg Newcastle upon Tyne, UK Newcastle upon Tyne, UK Newcastle upon Tyne, UK Newcastle upon Tyne, UK Würzburg, German caroline.claisse@newcastle.ac.uk ben.morris@newcastle.ac.uk abigail.durrant@newcastle.ac.uk david.chatting@newcastle.ac.uk sara.wolf@uni-wuerzburg.de

ABSTRACT

The COVID-19 pandemic has intensified our dependence on screen-based devices, re-shaping how we connect with one another. Motivated by a yearning for alternative and post-pandemic religious and spiritual (R/S) practice, we pursue a Research-through-Design (RtD) project, *Resound*, exploring mediated technospiritual connections with a UK-based Buddhist community. This pictorial depicts the complexity of (i) designing with spiritual-corporeal selves engaged in community-centred and ritualistic practices; (ii) and tangible artefacts and sonic environments being made, configured and practiced with. We reflect on this ongoing material engagement as making tangible alternatives through techno-spiritual practice.

Authors Keywords

Tangible Interaction; Soma Design; Embodied Interaction; Techno-spirituality; RtD

CSS Concepts

• Human-centered computing~Interaction design

Permission to make digital or hard copies of part or all of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. Copyrights for third-party components of this work must be honored. For all other uses, contact the Owner/Author.

HTTF '24 October 21-23, 2024, Santa Cruz, CA, USA © 2024 Copyright is held by the owner/author(s). ACM ISBN 979-8-4007-1042-1/24/10 https://doi.org/10.1145/3686169.3686190



Screen-based and online interactions are disruptive to spiritual practice [6].

How can we design tangible interfaces for meaningful techno-spiritual connections? We present the *Resound Sphere* – an interactive community-oriented technology designed as a research product [17]. Its size, shape and materials are evocative of ritual paraphernalia (bells, beads, candles etc.). It is intended to exhibit functionality that is similar to familiar connected domestic technologies (e.g. voice assistants), but with material choices and behavioural choices that render it appropriate for use by Buddhist practitioners whilst inviting speculation.

We intend to design for a longitudinal empirical intervention exploring new ways of being and knowing in the daily practice of chanting. We use this research product as a design-oriented strategy to explore alternatives for meaningful techno-spiritual connections whilst critically investigating what it might mean for the community to live with the sphere and develop a relationship with it over time.

PACE LAYER APPROACH

resolution

SHELL

We intentionally adopted a Pace Layer design approach [2, 3] to support our iterative and collaborative process in which the prototype is designed to adapt and facilitate emergent opportunities [11]. We present this approach where we distinguish four different layers: the shell, hardware, software and the display surfaces and sensory volumes they create. Each layer is prototyped with different material/immaterial affordances to change. The shell and hardware were defined early on and are relatively resistant to change reflecting the necessary qualities of independent research products for longitudinal domestic studies. Our Pace Layer approach means that the PCB was designed with a level of flexibility to accommodate different design directions / desired features. Our intention is to create an abundance of hardware resources that can then be orchestrated by software in different flexible ways.

> The touch pads are designed to be used either as buttons or to detect gestures (like

rotations)





Our continuing RtD process has been informed by the first author's autoethnographic insight and dialogues with a local Buddhist community based in the North East of England*. This has allowed us as a team of interaction designers and researchers to develop a situated understanding of the chanting practice performed facing an altar in the domestic space of one's home, and structured by the use of prayer beads, the striking of a bell and also, the flow of one's breath, shaping the sound of the voice. Given the centrality of sound, we have found it productive to focus on the sonic qualities of this practice and to consider Sound as a design material for our unfolding and co-creative practice. Building on a previous exploration [4], we have used visual media like spectrograms to make sense of this material and to identify sonic qualities to design with. This process has led us to consider the role of bodies, spaces, the interrelation of others, and the sound-making paraphernalia of the practice. We also use bodily means to engage with the design space for spiritual-corporeal and material engagement, to gain knowledge and communicate empirical insight. For instance, we draw from first-person experiences of spending time chanting with different sounds produced by the Resound Sphere with the first author using visual methods such as drawing and watercolour media to communicate insights back to the team.

part in a series of design critiques (crits). Insights from this aspect of our participatory process will be reported separately.

Buddhists from one network practicing their faith at the same time experience a shared connection through practice.

HTTF'24, October 21-23, 2024, Santa Cruz, CA, USA

How does it feel to chant with the Resound sphere?

Chanting is detected and filtered, transmitted to the network of devices as a frequency.

30

Engaging our spiritual-corporeal selves through design and experiencing an alternative (remote) techno-spiritual connection.



"As interactive technologies proliferate in everyday life, they start to shape our cultural expressions and, furthermore, they start to shape us. Technologies transform our experience through amplifying or reducing reality, and by translating our behavior through inviting and inhibiting actions"

Verbeek et al. in [15]

"Practices develop around technologies, and technologies are adapted and incorporated into practices"

[10]

REFLECTING ON NEW WAYS OF KNOWING

Designing for meaningful techno-spiritual connections Höök et al. [15] use the smartphone as an example to illustrate how technologies shape us and alter ways that we move and make sense of the world. They also highlight the limitation of commercial designs and call for designers to expand beyond what existing technologies have provided so far, to consider alternative and richer ways of being in the world [18]. In Resound, too, we experience and learn how appropriating tele-conferencing tools such as Zoom for Buddhist chanting practices alters and limits how connections are perceived in spiritual practice (see page 1). During the COVID-19 pandemic, communities have re-purposed off-the-shelf technologies to support aspects of their practice when unable to congregate together [6, 22]. These forms of techno-spiritual practices [1] have persisted post- pandemic, shaping new ways of connecting within R/S communities.

The RtD project *Resound* explores design for mediated techno-spiritual connections. Motivated by a yearning for alternative and post-pandemic ways of practicing Buddhism, we respond to recent calls for considering the tangible and embodied aspects of R/S practices [16], and focus on community as an emerging line of inquiry in R/S contexts [21]. In *Resound*, we explore **complex material**

engagement that embraces alternatives: an appreciation of **spiritual-corporeal selves** engaged in community-centred and ritualistic practices; and tangible, sonic artefacts and environments being made, configured, and practiced with. Next, we unpack and contextualise these perspectives, connecting theory and our own work in the *Resound* project, and future-facing opportunities for tangible and designerly ways of knowing.

Engaging in complex and emergent material engagement Page 2 illustrates how we consider alternative complex and emergent forms of material engagement. Alternative making proposals are of longstanding interest amongst RtD practitioners in HCI (e.g. [7, 8, 9, 12]). This is partly because RtD offers alternative material ways of knowing through the discipline of designing and making. Through Resound, we reflect on alternative conceptualisations of tangible interaction, building upon the foundations of Embodied Interaction established by Dourish [10] and the appreciation of the felt body through Soma Design [14]. We show how **Pace Layer design** [5] (see page 2) can be promising for working with research products [15] that are intended to be deployed and practiced with for advancing sense making whilst creating new opportunities for design. Working with design layers is one way to deal with complexity and emergence in our RtD process [11]. Our intention here is to co-create an abundance of possibilities that can be configured with relative ease through software design. This approach allows the product of our design research to be suggestive and generative of further alternatives, rather than prescriptive. The Resound device is not intended as a market proposition, but rather as an ultimate particular [13, 19]. Through our making practice and in dialogue with the Buddhist community, we intend to generate and experience new alternatives as they emerge.

Spiritual-corporeal embodied interaction as a way of knowing

For *Resound* we draw upon first-person experiences as a resource for design [6]. As part of the RtD process, the first author has used bodily means to engage with the design space, which was documented and communicated back to the team for informing further design development (see

page 3). In this sense making process, tensions have also surfaced for consideration. For instance, she has found it challenging to find vocabulary for translating back her felt experience to the team. She has also experienced a loss of spiritual connection during the RtD project when her practice became more focused on documenting her felt experience instead of connecting with her spiritual self through her chanting. In this instance, we find that R/S practices offer an interesting context for Soma Design [14] and Embodied Interaction [10]; and we identify rich opportunities for developing tools and resources when engaging our spiritual-corporeal selves in design. Working towards deploying the Resound device with the community, we continue to address these tensions in practice, informing further alternatives of being in the world that align with R/S communities' practices and values.

Future-facing ways of knowing in HCI: Concluding thoughts

The Resound device is a tangible embodiment of our research understanding, an ultimate particular [13, 19]. a research product [17] built purposefully for longterm encounters in this world with mediated others. In this pictorial, it is presented as a design exemplar, representing a means to navigate the complexity of our post-pandemic world that is increasingly mediated by internet-enabled technologies. We contextualise discourses on Embodied Interaction [10, 14] in R/S contexts and explore alternatives beyond commercial designs and off-the-shelves solutions introduced with unprecedent measures during the pandemic as illustrated in [6, 22]. Through our ways of knowing and ongoing material engagement, we navigate R/S contexts with care and generate future-oriented scenarios to critically investigate socio-technical and post-capitalist implications or challenges introduced by ultimate particular like the Resound Sphere; considering how this alternative design might be sustained in the world whilst challenging existing systems or business models.

ACKNOWLEDGEMENTS

This project was funded by EPSRC (EP/T022582/1). We thank the research participants for their time and input.

REFERENCES

- Genevieve Bell. 2006. No More SMS from Jesus: Ubicomp, Religion and Techno-Spiritual Practices. In Proceedings of the 8th International Conference on Ubiquitous Computing (Orange County, CA) (UbiComp'06). Springer-Verlag, Berlin, Heidelberg, 141–158. https://doi. org/10.1007/11853565_9
- [2] Stewart Brand. 2018. Pace Layering: How Complex Systems Learn and Keep Learning. Journal of Design and Science. https://doi. org/10.21428/7f2e5f08
- [3] David Chatting. 2023. Pace Layer Prototyping: How Prototypes Learn. Interactions 30, 2 (feb 2023), 14–15. https://doi.org/10.1145/3583127
- [4] David Chatting, Ben Morris, Caroline Claisse, and Abigail C Durrant. 2023. Seeking Resonances for Remote Communal Chanting Practices. In: Designing Interactive Systems (DIS' 2023). Association for Computing Machinery, New York, NY, USA. https://doi.org/10.57711/467e-rr16
- [5] David Chatting. 2024. The Router of All Evil: Designerly Hacking a Network of One's Own. In Proceedings of the Eighteenth International Conference on Tangible, Embedded, and Embodied Interaction (TEI '24). Association for Computing Machinery, New York, NY, USA, Article 9, 1–10. https://doi.org/10.1145/3623509.3633357
- [6] Caroline Claisse and Abigail C Durrant. 2023. 'Keeping our Faith Alive': Investigating Buddhism Practice during COVID-19 to Inform Design for the Online Community Practice of Faith. In Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI '23). Association for Computing Machinery, New York, NY, USA, Article 554, 1–19. https://doi. org/10.1145/3544548.3581177

- [7] Kristina Andersen, Andy Boucher, David Chatting, Audrey Desjardins, Laura Devendorf, William Gaver, Tom Jenkins, William Odom, James Pierce, and Anna Vallgårda. 2019. Doing Things with Research through Design: With What, with Whom, and Towards What Ends? In Extended Abstracts of the 2019 CHI Conference on Human Factors in Computing Systems (CHI EA '19). Association for Computing Machinery, New York, NY, USA, Paper W13, 1–8. https://doi.org/10.1145/3290607.3299011
- [8] Desjardins et al 2023 Audrey Desjardins, Jena McWhirter, Justin Petelka, Chandler Simon, Yuna Shin, Ruby K Peven, and Philbert Widjaja. 2023. On the Making of Alternative Data Encounters: The Odd Interpreters. In Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI '23). Association for Computing Machinery, New York, NY, USA, Article 155, 1–20. https://doi.org/10.1145/3544548.3581323
- [9] Abigail C. Durrant, John Vines, Jayne Wallace, Joyce S. R. Yee. 2017. Research Through Design: Twenty-First Century Makers and Materialities. Design Issues 2017, 33 (3): 3–10. https://doi. org/10.1162/DESI_a_00447
- [10] Paul Dourish. 2001. Where the action is: the foundations of embodied interaction. MIT Press.
- [11] Bill Gaver, Peter Gall Krogh, Andy Boucher, and David Chatting. 2022. Emergence as a feature of practice-based design research. In Proceedings of the 2022 ACM designing interactive systems conference, pp. 517-526. https://doi. org/10.1145/3532106.3533524
- [12] Bill Gaver and Heather Martin. 2000. Alternatives: exploring information appliances through conceptual design proposals. In Proceedings of the SIGCHI conference on Human Factors in Computing Systems (CHI '00). Association for

Computing Machinery, New York, NY, USA, 209–216. https://doi.org/10.1145/332040.332433

- Kristina Höök and Jonas Löwgren. 2012. Strong concepts: Intermediate-level knowledge in interaction design research. ACM Trans. Comput.-Hum. Interact. 19, 3, Article 23 (October 2012), 18 pages. https://doi. org/10.1145/2362364.2362371
- [14] Kristina Höök. 2018. Designing with the body: Somaesthetic interaction design. MIT Press.
- [15] Kristina Höök, Baptiste Caramiaux, Cumhur Erkut, Jodi Forlizzi, Nassrin Hajinejad, Michael Haller, Caroline C. M. Hummels, Katherine Isbister, Martin Jonsson, George Khut, and et al. 2018. Embracing First-Person Perspectives in Soma-Based Design. Informatics 5, no. 1: 8. https://doi. org/10.3390/informatics5010008
- [16] Robert B. Markum, Sara Wolf, Caroline Claisse, and Michael Hoefer. 2024. Mediating the Sacred: Configuring a Design Space for Religious and Spiritual Tangible Interactive Artifacts. In Proceedings of the Eighteenth International Conference on Tangible, Embedded, and Embodied Interaction (TEI '24). Association for Computing Machinery, New York, NY, USA, Article 5, 1–22. https://doi.org/10.1145/3623509.3633353
- [17] William Odom, Ron Wakkary, Youn-kyung Lim, Audrey Desjardins, Bart Hengeveld, and Richard Banks. 2016. From Research Prototype to Research Product. In Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems (CHI '16). Association for Computing Machinery, New York, NY, USA, 2549–2561. https://doi.org/10.1145/2858036.2858447
- [18] Anna Ståhl, Madeline Balaam, Rob Comber, Pedro Sanches, and Kristina Höök. 2022. Making New Worlds – Transformative Becomings

with Soma Design. In Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems (CHI '22). Association for Computing Machinery, New York, NY, USA, Article 176, 1–17. https://doi.org/10.1145/3491102.3502018

- [19] Erik Stolterman. 2008. The Nature of Design Practice and Implications for Interaction Design Research. International Journal of Design, 2(1), pp. 55-65. https://ijdesign.org/index.php/IJDesign/article/view/240
- [20] Peter-Paul Verbeek. 2006. Materializing Morality: Design Ethics and Technological Mediation. Science, Technology, & Human Values, 31(3), 361-380. https://doi. org/10.1177/0162243905285847
- [21] Sara Wolf, Paula Friedrich, and Jörn Hurtienne. 2024. Still Not a Lot of Research? Re-Examining HCI Research on Religion and Spirituality. In Extended Abstracts of the 2024 CHI Conference on Human Factors in Computing Systems (CHI EA '24). Association for Computing Machinery, New

York, NY, USA, Article 302, 1–15. https://doi. org/10.1145/3613905.3651058

[22] Sara Wolf, Frauke Moerike, Simon Luthe, Ilona Nord, and Jörn Hurtienne. 2022. Spirituality at the breakfast table: Experiences of Christian online worship services. In Extended Abstracts of the 2022 CHI Conference on Human Factors in Computing Systems (CHI EA '22). Association for Computing Machinery, New York, NY, USA, Article 302, 1–15. https://doi. org/10.1145/3491101.3519856