

Speculative Probe Items to Capture Fluid Religious and Spiritual Belonging in HCI

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CCS Concepts

• **Human-centered computing** → HCI design and evaluation methods; *Field studies*; • **Social and professional topics** → *Religious orientation*.

Keywords

Techno-spirituality, Religion, Spirituality, Religious Belonging, Existential HCI, Fluidity

1 Introduction

With this submission, we respond to the workshop’s theme of fluidity and explore how religious and/or spiritual (R/S) belonging might be captured in Human-Computer Interaction (HCI) projects that take R/S fluidity seriously. We make a case for *probes* as a useful approach and present speculative examples of potential probe items to capture fluid R/S belonging. The examples are rooted in an ongoing interdisciplinary project between Protestant theology and HCI, SoulMate, that explores ways to support young adults in navigating existential questions.

1.1 Fluidity and Lived Religion

As suggested in the workshop’s proposal, R/S belonging is not only a matter of institutional alignment but a personal and ever-evolving practice while going through life. Religious belonging encompasses the ways individuals connect to one or more traditions by integrating the material and non-material artefacts like texts, beliefs or practices into their lives [1, p.21]. The phenomenon is often referred to as *multiple religious belonging*, *multiple religious identification* [5] or *religious multiplicity* [2], and more widespread than commonly assumed (see [4, 10] and evidence by [2, 11]). This can also include individuals who do not adhere strictly to any religious tradition or community at all but still engage in spiritual ways of relating to the world.

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To us, the suggested metaphorical consideration of R/S belonging as *fluidity* served as an inspiration to re-consider how we might capture people’s R/S belonging. The metaphor highlights that the fixed property of a R/S life is its constant change and adaptation. Markum proposed two potential time frames to explore the non-persistent shape of an individual’s R/S belongings, identities, practices and beliefs [10]. He describes how R/S fluidity could be considered on a moment-to-moment basis with changing circumstances and contexts (momentary fluidity) and second, how R/S fluidity could be considered in a retrospective narration of shifts and puzzle pieces that add up to a biographical perspective on spiritual fluidity over an individual’s lifespan (longitudinal fluidity).

Taking serious the above considerations, new approaches are needed to capture R/S belonging. This seems particularly relevant for HCI studies interested in subjective experiences, local cultures, and accounts of lived religion.

1.2 Probes as a Suitable Approach to Engage with R/S Fluidity

An approach that is particularly well-suited to contexts characterized by ambiguity, personal meaning-making, and complex identity work, such as that involved in R/S exploration, are *probes*. Since their introduction to HCI (Cultural Probes [6]), probes have been widely adapted and appropriated across diverse domains, ranging from health and self-tracking [8] to remembrance [12] to religious practices [15], with numerous derivatives such as “Technology Probes” [7], or “Data Probes” [13], and others reflecting specific applications and design intents [3]. Probes combine various characteristics, making them particularly suitable for engaging with R/S fluidity.

For example, probes are characterized by their openness. Boehner et al. emphasize that probes support uncertainty and open-endedness, allowing multiple interpretations to coexist and evolve [3]. In addition, probes can function as provocations, artifacts that inspire new perspectives, invite reflection, and reframe familiar concerns, thereby gently open access to complex notions of personal meaning [3, 6, 14]. Within the domain of R/S belonging, such gentle provocation (or “gentle challenge” [14, p.3444]) may serve to surface implicit beliefs, shifting affiliations, or moments of existential questioning.

Another important characteristic is their embeddedness in everyday life. Probes dwell with participants, inviting reflection through prolonged, slow engagement. As Gaver et al. describe, “the probes

were our personal communication to the elders, and prompted the elders to communicate personally in return” [6, p.29]. This quality of situated, personalized dialogue makes probes particularly suited to exploring the deeply personal and often ineffable terrain of R/S belonging and experience. Probes enter people’s intimate space and often include elements that address private, emotional topics, thereby allowing to “go in depth” [9, p.389].

To our knowledge, probes have not yet been applied to engage with R/S fluidity in HCI. In this position paper, we present speculative examples of potential probe items to capture R/S belonging in a way that respects R/S fluidity and multiple religious belonging. We note that this is work in progress. We aim to use the workshop to discuss these ideas in dialogue with workshop participants, inviting critique and learning from diverse perspectives.

2 Two Speculative Probe Items

Our interest in understanding and capturing R/S belonging stems from our recent project, SoulMate, in which we explore how companion technologies can support young adults as they navigate existential questions. First, we will familiarize ourselves with the lived experiences of young adults in dealing with existential questions while considering diverse kinds of R/S belonging. While R/S belonging is not the sole focus of this project, it is undoubtedly a core aspect that we aim to capture and better understand.

In what follows, we present two speculative probe items that aim to prompt reflection on R/S belonging and to capture both momentary and longitudinal fluidity. We hope that these probe items inspire researchers, designers, and practitioners to capture R/S belonging in their projects. In the spirit of cultural probes, we will not deeply explicate the two speculative examples, but rather present them as our “personal communication” with the workshop participants and readers, in the hope that they will inspire those interested “to communicate personally in return” [6, p.29]. At this point, we reference to Figure 1 for the pen and paper-based probe item, and to Figure 2 for the materials of the tangible probe item with an exemplary application in Figure 3.

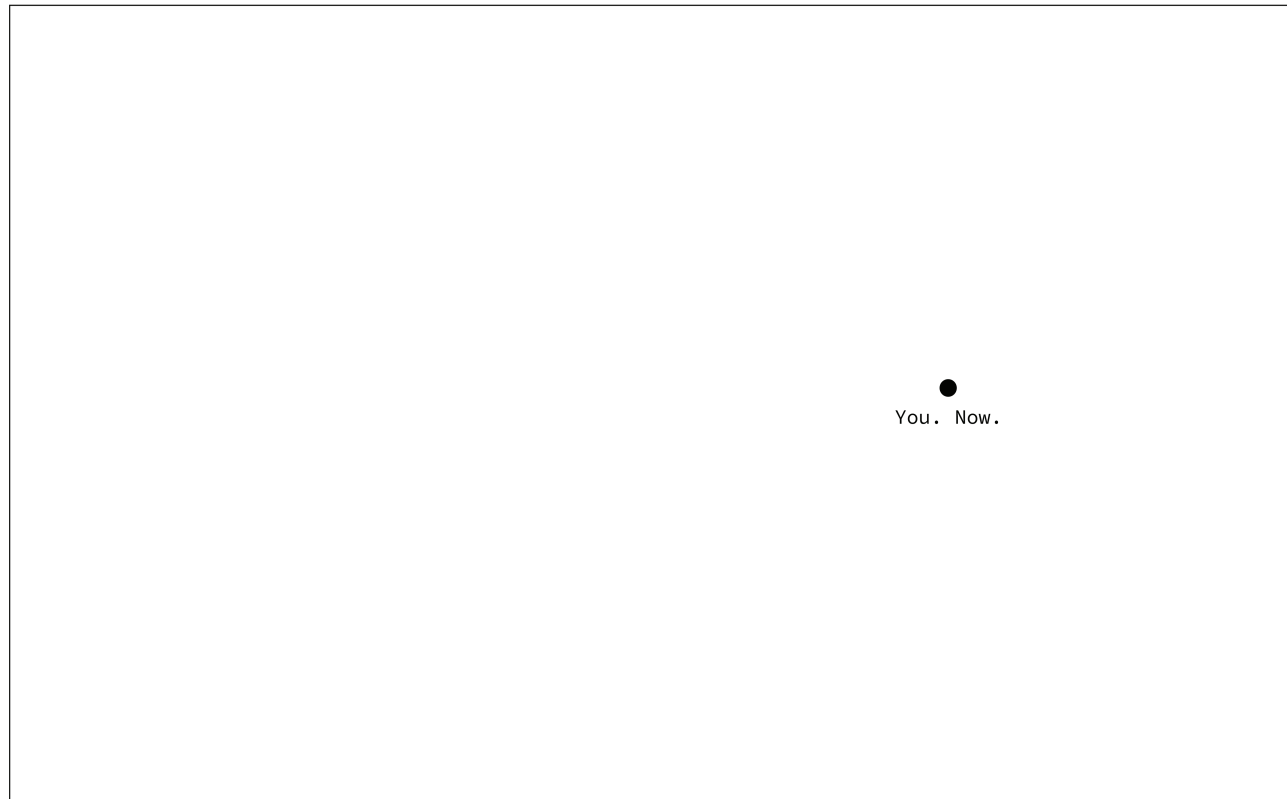
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References

- [1] Joantine Berghuijs, Hans Schilderman, André van der Braak, and Manuela Kalsky. 2018. Exploring Single and Multiple Religious Belonging. *Journal of Empirical Theology* 31, 1 (2018), 18 – 48. doi:10.1163/15709256-12341365
- [2] Duane R Bidwell. 2018. *When one religion isn't enough: The lives of spiritually fluid people*. Beacon Press, Boston, MA.
- [3] Kirsten Boehner, Janet Vertesi, Phoebe Sengers, and Paul Dourish. 2007. How HCI interprets the probes. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (San Jose, California, USA) (CHI '07). Association for Computing Machinery, New York, NY, USA, 1077–1086. doi:10.1145/1240624.1240789
- [4] Pew Research Center. 2009. *Many Americans Mix Multiple Faiths*. Pew Research Center. <https://www.pewresearch.org/religion/2009/12/09/many-americans-mix-multiple-faiths/>
- [5] Catherine Cornille. 2013. *Understanding interreligious relations*. Oxford University Press Oxford, Oxford, UK, Chapter Multiple religious belonging, 324–340.
- [6] Bill Gaver, Tony Dunne, and Elena Pacenti. 1999. Design: Cultural probes. *interactions* 6, 1 (1999), 21–29.
- [7] Hilary Hutchinson, Wendy Mackay, Bo Westerlund, Benjamin B. Bederson, Allison Druin, Catherine Plaisant, Michel Beaudouin-Lafon, Stéphane Conversy, Helen Evans, Heiko Hansen, Nicolas Roussel, and Björn Eiderbäck. 2003. Technology probes: inspiring design for and with families. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (Ft. Lauderdale, Florida, USA) (CHI '03). Association for Computing Machinery, New York, NY, USA, 17–24. doi:10.1145/642611.642616
- [8] Susanna Krämer, Greta Ruth Kottwitz, Mikolaj P. Woźniak, Jochen Meyer, and Marion Koelle. 2024. Stepping on the scale? Only in the morning, of course! - Exploring the Lived Experience of Consumer Self-Tracking Technology in the Context of Citizen Science. In *Proceedings of the 13th Nordic Conference on Human-Computer Interaction* (Uppsala, Sweden) (NordiCHI '24). Association for Computing Machinery, New York, NY, USA, Article 37, 17 pages. doi:10.1145/3679318.3685372
- [9] Andrés Lucero, Tatiana Lashina, Elmo Diederiks, and Tuuli Mattelmäki. 2007. How probes inform and influence the design process. In *Proceedings of the 2007 Conference on Designing Pleasurable Products and Interfaces* (Helsinki, Finland) (DPPi '07). Association for Computing Machinery, New York, NY, USA, 377–391. doi:10.1145/1314161.1314195
- [10] Robert B. Markum. 2024. Multiple Religious Belonging, Spiritual Fluidity, and Associated Concepts: Implications for Research and Design in HCI. Workshop submission for NordiCHI 2024 workshop “Navigating Intersections of Religion/Spirituality and Human-Computer Interaction”. <https://sites.google.com/view/nordichi2024-rs>
- [11] Meredith McGuire. 2008. *Lived Religion: Faith and Practice in Everyday Life*. Oxford University Press, Inc., New York, NY.
- [12] Ine Mols, Elise van den Hoven, and Berry Eggen. 2014. Making memories: a cultural probe study into the remembering of everyday life. In *Proceedings of the 8th Nordic Conference on Human-Computer Interaction: Fun, Fast, Foundational* (Helsinki, Finland) (NordiCHI '14). Association for Computing Machinery, New York, NY, USA, 256–265. doi:10.1145/2639189.2639209
- [13] Nick Taylor, David Chatting, and Jon Rogers. 2024. Data Probes: Reflecting on Connected Devices with Technology-Mediated Probes. In *Proceedings of the Eighteenth International Conference on Tangible, Embedded, and Embodied Interaction* (Cork, Ireland) (TEI '24). Association for Computing Machinery, New York, NY, USA, Article 32, 13 pages. doi:10.1145/3623509.3633380
- [14] Jayne Wallace, John McCarthy, Peter C. Wright, and Patrick Olivier. 2013. Making Design Probes Work. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (Paris, France) (CHI '13). Association for Computing Machinery, New York, NY, USA, 3441–3450. doi:10.1145/2470654.2466473
- [15] Sara Wolf, Simon Luthe, Lennart Baumeister, Frauke Moerike, Vyjayanthi Janakiraman, and Jörn Hurtienne. 2023. Designing for Uncontrollability: Drawing Inspiration from the Blessing Companion. In *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems* (Hamburg, Germany) (CHI '23). Association for Computing Machinery, New York, NY, USA, Article 845, 14 pages. doi:10.1145/3544548.3581421

A Probe Items to Capture R/S Belonging



The dot is you. The dot is the now. When you reflect on your life, which – in the broadest sense religious or spiritual – mindsets, beliefs, experiences, traditions, routines, practices, habits, and life events shaped you? What accompanied you as you navigated through life until this moment? What has helped you find your bearings, grow, and deal with challenges? Use this page to illustrate when these things have appeared and were present. Be as creative as you like, and make this page yours, depicting your own story.

Figure 1: A simple pen and paper material to capture facets of R/S belonging.

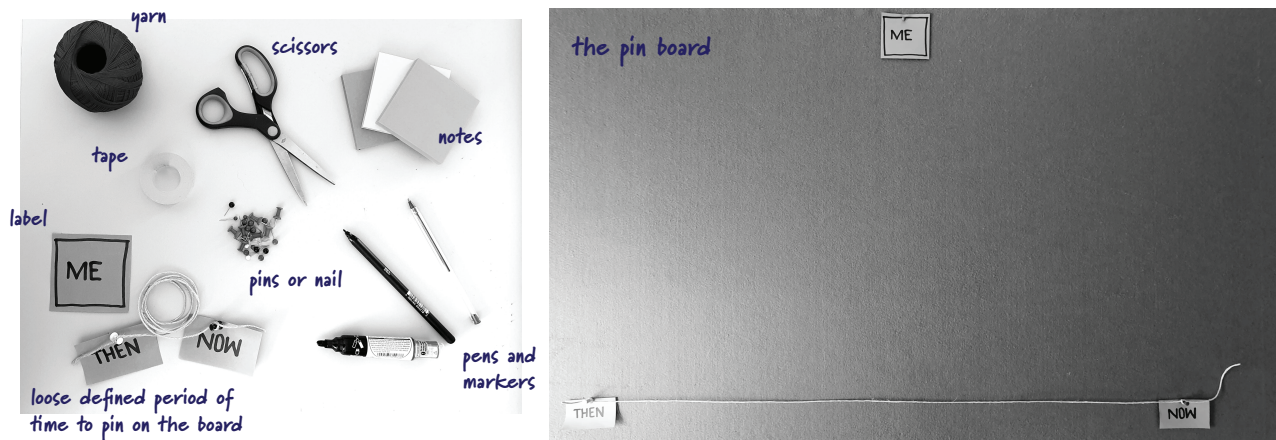


Figure 2: The tangible material with an initial set of different materials and the pin board with an exemplary placement of the material items to process the task as it follows: When you reflect on your life, which - in the broadest sense religious or spiritual - mindsets, beliefs, experiences, traditions, routines, practices, habits, and life events that have shaped you? What has accompanied you as you navigated life until this moment? What has helped you find your bearings, overcome challenges and grow? Place the note “ME” and the yarn with the labels “Now” and “Then” on the pinboard in your preferred spot. Use the questions, given materials and any item or object you like to integrate, to illustrate when these personal orientations and lived patterns appeared and were present. Be a detective of your journey and make this board your own, depicting your story.

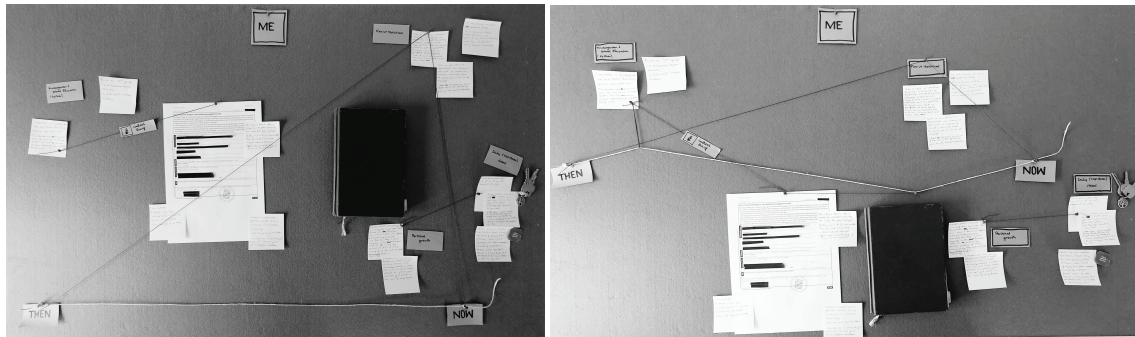


Figure 3: Photos of piloting the tangible probe item in two variations.