Diving Into the Ocean of Religious and Spiritual Design Research

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ABSTRACT

Religion and spirituality (R/S) are deeply ingrained in everyday life and are an essential aspect of many individuals' existence. Human-Computer Interaction (HCI) is progressively engaging in research and design within specific R/S contexts. Building on previous workshops organized by the SPIRITED Collective, this workshop will focus on the under-explored intersections of R/S and HCI design research, drawing from oceanic notions of fluidity, mystery and depth of the unknown, transcendence, and sustainability and resilience. Participants will reflect on their experiences, uncover common research priorities, and develop joint approaches to investigate the intersection of R/S and design. Through the workshop, participants will gain insights into R/S to inform their research and design work. Collectively, we hope to strengthen our network and disseminate our work.

CCS CONCEPTS

• **Social and professional topics → Religious orientation**; • **Human-centered computing → Human computer interaction (HCI)**.

KEYWORDS

religion, spirituality, techno-spirituality, sustainability, resilience, transcendence

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1 GOALS, BACKGROUND, AND MOTIVATION

Diving into the ocean, we are met with a fluid world of shifting currents, hidden depths, and astonishing resilience. In this way, the ocean offers a lens into the complex interplay of religion and spirituality (R/S) and HCI design. Just as the ocean holds both creative and destructive power, R/S and HCI design research explores the complex realities of human experience, from the transcendent to the traumatic, and is woven into the fabric of everyday life [2].

Recent work at the intersection of HCI design and R/S shows that spiritual support becomes vital during health crises and relevant for the design of online community platforms [49]. Ibtasam et al. found that the adoption of digital financial services by women in Pakistan was heavily influenced by Islamic law and the role of women in Islam [26]. Moreover, research in cultural heritage work may require cultural sensitivity to R/S perspectives [20] and may include interaction with R/S practices [56]. Other research has engaged with R/S in digital health and social computing contexts [28, 44, 49, 51]. However, the intersection of R/S and HCI design offers an opportunity to create technologies that reflect the profound human-ocean connection in a way that fosters a sense of awe and responsibility and ultimately contributes to a more sustainable relationship with both the natural world and our inner lives.

Our goal is to address the growing interest in R/S and HCI design and to provide researchers and designers with practical tools and guidance for exploring these topics in their work. By explicitly drawing from the DIS 2025 conference theme "Designing for a Sustainable Ocean", we want to *dive deeper* and broaden discussions on the intersection of R/S and HCI design around under-explored notions of fluidity, mystery and the depth of the unknown, transcendence, and R/S perspectives on sustainability and resilience. To hold space for reflecting on these notions, we will provide different opportunities to share experiences, uncover common research

priorities, and develop joint ways to investigate the intersection of R/S and HCI design.

Our workshop builds upon and extends a series of recent workshops organized by the Spirituality, Religion, and Interactive Technology Design (SPIRITED) Collective. The SPIRITED Collective brings together researchers, scholars, and practitioners interested in exploring the intersections of R/S and HCI design. Since 2022, the Collective has created a community around research and design methods, topics, and issues related to R/S and interactive technology. Together, we have organized four workshops: "Integrating Religion, Faith, and Spirituality in HCI" [45], ("Co-imagining Participatory Design in R/S Contexts" [40]), ("Designing Tangible Interactive Artifacts for Religious and Spiritual Purposes" [39]), and ("Navigating Intersections of Religion/Spirituality and Human-Computer Interaction" [37]).

While our workshop shares some commonalities with previous ones in bringing together researchers to discuss R/S in their work, this workshop differs in focusing on under-explored intersections of R/S and HCI design—ones that might not always be planned, come with uncertainty, or require lots of openness and courage. In a time when there is a lot of uncertainty and people are questioning their beliefs, we offer a welcoming space for workshop attendees to critically reflect on fluid, mysterious, uncertain, or transcendent interactions of their work and ways to draw from such intersections with R/S to foster sustainability and resilience.

2 WORKSHOP THEMES

2.1 Fluidity

Drawing from conceptual metaphor theory [32] and the overarching theme of the conference, our first workshop theme examines how water—particularly its fluidity—serves as a useful metaphor for understanding R/S identity and belonging. Like water, R/S belief and belonging can be multifaceted, dynamic, fluid, and intangible. Markum [36] has recently argued that HCI research and design should engage with existing concepts such as R/S fluidity and multiple religious belonging, emphasizing their relevance in contemporary discourse.

The concept of R/S fluidity refers to "variability in religious belonging, behavior, and belief at the individual level" [15, p.75], underscoring the notion that R/S identity is dynamic rather than static. Similarly, the concept of multiple religious belonging highlights how individuals integrate elements from multiple traditions into their lives [3]. Despite increasing recognition of these fluid and pluralistic religious identities, HCI research and design in R/S contexts have primarily focused on how technologies influence, support, or transform R/S experiences and practices within the framework of specific religious traditions, such as Buddhism [12, 52], Islam [1, 25], Judaism [19, 22], and Christianity [47, 55]. Notably, some HCI researchers and designers (e.g., [9, 54]) have explored accounts of lived religion or religion-as-lived, where "religion—rather than being a single entity—[becomes visible as] made up of diverse, complex, and ever-changing mixtures of beliefs and practices, as well as relationships, experiences, and commitments" [42, p.185]. However, even in these works, the concept of fluidity itself has not yet been a central focus.

The notion of fluidity has also been acknowledged within a zine documenting emerging design principles for R/S contexts, which states: "Recognizing Fluidity...as a core feature in the beliefs and practices of individuals and in today's inter-cultural and inter-religious societies" [35, p.24]. However, the ways this principle could be operationalized in design processes or translated into concrete design outcomes remain under-explored. We, therefore, invite potential workshop participants to critically engage with the implications of the fluidity metaphor for R/S research and design (potentially also reflecting their own R/S fluidity). What novel questions, design methodologies, or design outcomes might emerge if we take R/S fluidity seriously as a foundational principle?

2.2 Mystery and Depth of the Unknown

The ocean has long been a metaphor for the mystery and depth of the unknown as a vast and uncharted expanse. In R/S design research, this metaphor offers a lens for exploring technological experiences and the limits of human control and knowledge. Just as the ocean conceals hidden depths beyond surface-level activities, interactive systems can challenge designers and users alike to confront the ineffable [34] and access deeper ways of knowing [19].

Designing for mystery and depth of the unknown draws on multiple interrelated themes in design research. Spooky or ethereal technologies, as explored by Byrne and colleagues [8], frame the supernatural as a resource that invites designers to create interfaces that seem eerie, enchanted, or beyond rational explanation. Similarly, Halperin and Rosner's "miracle machine" study explores how speculative design can evoke spiritual wonder by engaging with experiences of ineffable knowledge [22]. As Gaver and colleagues illuminate, ambiguity [17] and uncertainty [18] are central to experiences that can not only enable designers, but also users to interpret, question, and co-construct meaning. This resistance to fixed interpretation aligns with designing for uncontrollability, as Wolf and colleagues do in the context of religious rituals and companion technologies, finding that blessing experiences are not "plannable, predictable, controllable, or enforceable" [54, p.1]—much like the intractability and unpredictability of the ocean's tides. Finally, the ocean's dreamlike vastness resonates with studies of dreams [53], including artificial ones as explored through creative AI 'hallucinations' with mysterious elements [21]. In this workshop, we endeavor to explore how such themes—otherworlds, miracles, ambiguity, uncertainty, uncontrollability, 'hallucinations,' dreams, and more—can deepen design knowledge of mystery and the unknown.

2.3 Transcendence

The ocean also appears in the literature of transcendent experience — experiences of deep connection with something greater than oneself, be that a deity, nature, the universe, all of humanity, or something else altogether. Not only does the ocean serve as an ancient metaphor for these experiences — especially for mystical experiences, the deepest form [33] — but it also turns up as a common theme in contemporary R/S research on transcendent experiences. Studies find "oceanic boundlessness" to be a central component of altered states of consciousness (ASCs) [14]. Researchers develop

measures of "oceanic feelings" that characterize transcendent experiences [48]. Research participants talk about feeling a sense of oneness with the ocean while swimming in the sea [7]:

> *I just felt a complete oneness with the whole ocean, covering the whole planet, not just the North Sea but — as if the ocean was one thing, that it was conscious. There was something alive about it. And... it wasn't separate from me.* (p. 99)

We have noted the relevance of the ocean's vastness to our work, and Dittrich's research [14] suggests that oceanic boundlessness may be related to the vastness that Keltner and Haidt [29] describe in their model of the transcendent emotion of awe. But transcendent experiences involve numerous other aspects besides awe — not only ineffability but qualities such as oneness / unity, nothingness, timelessness / spacelessness, transience, powerfulness, paradoxicality, numinosity, ecstasy, chills, joy, peace, and a sense of knowing ("noetic quality"). Designing technology to foster transcendent experiences both is and is not straightforward. In the last decade, considerable HCI research has focused on using virtual reality to evoke awe in particular, and has found that technology to be effective [10, 11, 23, 27, 30, 43, 50]. Other aspects of the experiences, including oceanic feelings and oneness, are perhaps not so easy — yet may conceivably be equally important for their meaning to the individual. Research has also used design gaming and design fiction [4, 6, 7] to elicit and explore ideas related to other aspects, and we hope to use this workshop to enhance these ideas by drawing on the metaphor of the ocean.

2.4 Sustainability and Resilience

Religious / spiritual traditions provide a lens into sustainability that complements and extends existing approaches in HCI design. Sustainable HCI (SHCI) offers two orientations for researchers: sustainability *in* design and sustainability *through* design [13]. Prior work has revealed the importance of considering *values* in SHCI, as traditional persuasive approaches may counterintuitively reinforce self-enhancement values that hinder sustainability, as opposed to self-transcendence values that support it [31]. SHCI also tends to focus on designs that target an individual, as opposed to communities or groups [13].

Sustainability in an R/S perspective motivates a shift away from the self, and a corresponding shift away from persuading the "user" to live a sustainable life in individual contexts [5]. R/S may focus less on developing technological solutions and more on supporting ethical interactions between people and the environment [16], and viewing the environment as a sacred gift to steward for the common good. Living in alignment with an R/S tradition may support environmentally friendly habits, such as avoiding food waste in Islam [46], or living in relationship with God, others, and nature in harmony in Christianity [24]. R/S traditions offer different approaches that support resilience in the face of suffering (such as from environmental degradation and disaster). For example, a Christian perspective may view suffering as deeply meaningful and even redemptive. A Buddhist perspective may seek a path out of suffering by changing oneself (via meditation, for example) rather than seeking to change one's environment or situation.

This workshop theme of sustainability and resilience invites designers to consider how values, concepts, rituals, and experiences from R/S traditions can inform designs that support sustainability and resilience at different scales of social organization. Drawing from either their own traditions or from those they have encountered, we ask, how can designers draw from religious and spiritual traditions to design for resilience in the face of environmentally-related suffering? How can design help to support R/S environmental values in daily life? How does an R/S approach inform design for sustainability?

3 ANTICIPATED OUTCOMES

We will build on prior successful workshops. Our NordiCHI '22 workshop [40] led to the publication of a zine [41] that compiled R/S design principles and to the creation of a transnational, transdisciplinary research and design collective (the Spirituality, Religion, and Interactive Technology Design (SPIRITED) Collective (spiritedhci.org)), while our DIS '23 workshop [39] led to the publication of a TEI '24 paper [38] through the elicitation and analysis of R/S tangible interactive artifacts. In this one-day workshop, we seek to continue this trend by bringing together a network of researchers, designers, and artists to express and explore the above topics as we dive deeper into religious / spiritual design research. We seek to form new collaborations inspired by the *oceanic* workshop themes, disseminate our work, and reveal under-explored opportunities for future research.

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