Religion, Faith and Spirituality, Secularism, and Disciplinary Paradigms

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Beliefs, ethics, and politics rooted in faith, religion, and spirituality (FRS, hereafter) profoundly shape people's behaviors, social interactions, and lifestyles globally. This influence is particularly prominent in the Global South. However, HCI research and practices predominantly uphold secular ethics, leading to the marginalization of a substantial portion of the global population that prioritizes FRS in their daily lives. In this paper, we introduce "Postsecular Computing"—a work-in-progress framework to recognize and adapt FRS sensitivities into HCI research and practices. Our goal is to outline strategies for integrating FRS into HCI through four pathways: ethics, conflicts, public and politics, and the unique needs of FRS communities. The aim of Postsecular Computing is to promote the coexistence of FRS and modern ethics.

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1 INTRODUCTION

While HCI scholarship has long valued techno-centric, Western, "scientific," and "ubiquitous" approaches to design and practices, it is also showing a growing commitment to addressing various ethical, political, and social issues. This commitment is evidenced by important lines of scholarship on social justice [10, 43], culture [51, 90], context [35, 67],

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modernity [61, 77], and colonialism [52], among others. However, faith, religion, and spirituality (FRS)¹ have been relatively overlooked within this expanding focus on inclusivity. An extensive range of literature – from theology and sociology of religion to Eastern philosophy and religious studies – has documented the significant role that FRS play in forming and maintaining human societies across history [32, 41, 88]. Moreover, FRS are particularly relevant to HCI as they often influence, either directly or indirectly, the adoption, utilization, and appropriation of technologies for millions of people worldwide [24, 26]. Technologies are also reciprocally influencing religious rituals, habits, actions, and behaviors [25]. Given this mutual influence, it is important for HCI to further explore these under-examined areas for a more inclusive understanding of HCI research and practices.

Term	Definition ^a
Religion b c	Religion is a system of "beliefs" and "practices" focused on "sacred" elements [37], serving key
	functions in society [32]. This functional definition of religion emphasizes its role in providing
	meaning, uniting communities, and maintaining social order, highlighting its social and psycho-
	logical impacts.
Faith ^b	Faith is a belief system that may not rely solely on logical or empirical validation [48]. The term
	is also often described as a complete trust or confidence in a higher power or doctrines [60].
Spirituality ^{b c}	Spirituality relates to how people find and express meaning and purpose in life, along with their
	sense of connection to the present, themselves, others, nature, and what they consider sacred or
	significant [19, 71, 82].
Secularism	Secularism is a political condition that separates religion from public affairs and the state [22]. In
	the Western principals of secularism, public spheres is treated as "Godless," where public policies
	are free of religious principles and reasoning.
Modern Liberal-	Modern liberalism is an ideology supporting individual freedom and equality, complemented by
ism	government actions to ensure social justice and address societal disparities [72, 79].
The sacred	"The sacred" is a term often used in religious and philosophical contexts to refer to aspects of
	reality that are regarded as holy, divine, or spiritually significant [11, 69, 92]. It is contrasted
	with the "profane" or "secular," which refers to ordinary, everyday elements not associated with
	spiritual or religious qualities.
FRS ethics and	The ethical and political actions primarily influenced by "the sacred," as opposed to the secular,
politics	scientific, rationale, and modern ethics/politics.

Table 1. Definitions of various terms used in this paper.

A growing tension between FRS communities and technology has been extensively reported in HCI literature [38, 59, 76, 81, 82]. There is a common pattern in the findings across this literature: HCI research and practices predominantly celebrate a secular public sphere, one that is free from the influence of FRS and adheres to "modern"

^a We acknowledge that the definitions in this table are simplistic. Extensive literature exists on each of these concepts, within which definitions are often challenged, contested, and evolved over time. Exploring the depth of each body of literature is beyond the scope of this paper. Instead, we have adopted an approach that guides readers through our narrative and contextualizes our findings using these simplistic definitions.

^b Faith, religion, and spirituality, while distinct, share a key characteristic for the purposes of this paper: belief in "God", "spirits", and other metaphysical entities, commonly referred to as "the sacred." These beliefs lead to unique social practices. We use the term "FRS" to encapsulate these shared aspects, except where specified otherwise, as we keep reminding readers the differences in these concepts.

^c People can identify with either religious, spiritual, or both categories. In any case, they are aligning themselves with "the sacred".

¹Please refer to the Table 1 for definitions and notes on related terms.

principles that advocate for the privatization of FRS. These principles promote Euro-centric modernism, pragmatism, rationalism, empiricism, and universality, while often sidelining or dismissing FRS practices, categorizing them as mythical, supernatural, irrational, symbolic, or non-modern [61, 75, 76, 80, 85]. An emerging body of HCI literature has focused on techno-spiritual practices in FRS communities, centering on their ritualistic aspects, further reinforcing the secular ideals that "the sacred" is private and that the daily ethical and political decision-making should be free from FRS's influence. In contrast, seminal studies on religion, from Emile Durkheim to Max Weber, emphasize that religions are not merely repositories of metaphysical beliefs but also powerful influencers of social relations, ethics, and political actions [37, 88]. The consequence of overlooking the role of FRS in ethical and political discourses of HCI research and practice is a missed opportunity for HCI to engage and serve many people worldwide whose ethics, politics, and lifestyles are heavily influenced by FRS.

To this end, we aim to systematically incorporate FRS into HCI by introducing a framework: "Postsecular Computing." Postsecular Computing aims to recognize and adapt the ethical sensibilities of FRS communities into HCI in an effort to initiate research and practices with the goal of designing technologies and policies to promote the coexistence of diverse communities. We aim to do so through four pathways: ethics, conflicts, politics and pluralism, and the unique needs of FRS communities. Our overarching goal is a move from a "secular" approach in HCI – the one that sidelines and privatizes "the sacred" in research practices – to a postsecular one, where FRS ethics and politics are recognized and adapted to modern ethics. This shift requires a methodological approach that makes room for dialogues between conflicting ethics, and a transition to a "pluriversal" research approached to accommodate diverse communities within HCI

It is important to clarify that Postsecular Computing does not radically oppose, but rather extends and complements existing HCI design and practices, which are predominantly aligned with secular principles of privatizing FRS. Further, the broader aim of Postsecular Computing is to dismantle the conventional binary distinctions between secular and non-secular paradigms by acknowledging that FRS ethics and politics (or their absence) are a foundational part of the human experience. The adaptation of FRS ethics and politics in HCI research may benefit many users of technologies by capturing their holistic human experiences that are shaped both by modern and FRS ethics.

In this short paper, we begin by exploring the emerging literature in HCI that engages with FRS. We demonstrate that the relationship between FRS and HCI extends beyond merely ritualistic services, encompassing everyday ethical and political actions as well. Next, we examine the origins of secularism and discuss the rise of postsecular societies. We then introduce the concept of Postsecular Computing, illustrating the need for a shift in computing focus from a secular to a postsecular framework. We conclude by briefly outlining our plans of four areas of engagement that chart the path forward for Postsecular Computing.

2 THE SECULAR ETHOS IN HCI AND A TURN TOWARD POSTSECULAR COMPUTING

2.1 Faith, Religion, and Spirituality in HCI

In comparison to the significant role and social impact of FRS, their engagement with HCI remains limited [76]. Moreover, a considerable amount of this research emerges from non-Western settings. Within the existing HCI FRS literature, we identify two prevailing trends: (a) research that primarily concentrates on facilitating faith-based rituals and practices, and (b) a limited subset of research that engages with FRS communities to tackle social issues.

Research on techno-spirituality in HCI and related fields covers a variety of topics, including the design and adaptation of applications to support religious and spiritual rituals [13, 39, 42, 44, 94], facilitate spiritual experiences [21, 31, 82, 96],

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celebrate religious occasions [91], and engage in social practices rooted in faith [50, 74]. Additional research strands have explored supporting scripture reading, sharing, and religious knowledge practices [9, 15, 17, 53, 54, 63], as well as leveraging social media technologies to express religious viewpoints [70]. Moreover, some studies have investigated the appropriation of existing technologies to conform with specific religious cultures [23]. Despite the diversity of these research efforts, the body of work remains disproportionately limited in scope and scale when considering the pervasive social and cultural impact of FRS globally [20].

Recent studies in HCI are increasingly recognizing the social impact of FRS, examining how their institutional support can make positive contributions to specialized areas within HCI. Examples include the integration of FRS sensitivities and healing practices into mental and physical health domains [64, 82, 85], collaboration with faith-based organizations to deliver social services [36, 45, 68], and leveraging cultural insights of FRS to address ethical dilemmas in computing [40]. Additionally, cultural studies focused on HCI's role in online practices frequently draw upon FRS values, sensitivities, and practices [1, 2, 5, 6, 58]. These studies are increasingly expanding beyond a narrow concentration on techno-spiritual practices to assess the broader public significance of FRS values and practices within HCI.

Although some studies have utilized FRS as analytical frameworks to explore design and technology within HCI [93], the field has generally been limited in its ability to extend these discussions beyond private spheres. This limitation is largely attributed to the secularist dichotomy that separates FRS from public politics [95]. Critics within the HCI community argue that the field's ethical and political dialogues are restricted due to the pervasive influence of secularism that separate FRS from public spheres [61, 76]. This constraining effect, exacerbated by ethical imperialism, scientism, solutionism, and modernism—principally developed in the West—is often less receptive to ethical frameworks that originate from traditional, sacred, and other metaphysical sources [3, 34, 77, 80]. This limitation is particularly evident in postcolonial contexts, where there is ongoing struggle to reconcile modern conceptions of progress with local traditions and ethical frameworks. To counter these challenges, some HCI scholars advocate for a recalibration of design expectations based on lived experiences, empowering marginalized communities through a redistribution of design authority, and incorporating the principle of reciprocity as a vital resource for design within FRS communities [16, 18, 57].

Our paper extends this body of research by advocating for a more comprehensive recognition and adaptation of FRS into the ethical, cultural, and socio-institutional dimensions of HCI. The majority of the world's population derives central purpose and meaning through FRS beliefs; in the US, religious participation is in serious decline, whereas spirituality is rising [12]. In non-Western contexts, FRS affiliations are more than 84% and projected to increase further [27, 28]. This shows that regardless of *how* users' beliefs materialize as religious or spiritual in nature, they are central to peoples' experiences. Not only should FRS-related beliefs be "included," but a postsecular analytical and design lens aims to empower us to more explicitly serve users' deepest human needs for meaning, purpose, and connection.

2.2 The Historical Root of Secularism: From Marginalizing Religion to Contextual Secularism

In this section, we briefly explore the origins and critiques of secularism to frame our call for the integration of postsecular consciousness into HCI. The historical development of political secularism has evolved over time [7, 47, 55]. Originating in a Christian-dominated Europe, the movement sought to lessen the coercive authority of religious elites [29]. With globalization, it expanded, transcending European borders. The scope of the movement eventually extended beyond institutional politics, advocating a new lifestyle in alliance with modern nationalism [55, 84]. However, as the secular movement has matured over the last century, it has recently begun to grapple with its ethical and political tensions, primarily in two ways: (1) the privatization of religions has manifested inconsistently across different regions, Manuscript submitted to ACM

and (2) there exists a paucity of intellectual frameworks to address conflicts between states and religions, especially in areas where religious public expression is stronger than in the West.

Promising religious pluralism, most Europeans and their allied secular states adopted a "neutral" stance toward religion, promoting a "Godless" public sphere [22]. However, these promises of neutrality were not consistently reflected in constitutional languages or international relations, even within Europe [22, 78]. Outside the West, societies like those in the Indian subcontinent adopted a more accommodating form of secularism, one that promotes acceptance, tolerance, and diversity of religion in the public sphere [65]. In other words, these societies aim for secularism not by excluding religion from the public sphere, but by fostering religious pluralism within it. The Dalai Lama also noted a significant difference between Indian and Western secularism: the former is based on tolerance for all religious and non-religious traditions, rather than antagonism toward religion [56, ch. 1]. Further, one of the central projects of secularism was to re-organize the cultural and moral sphere through a reform in religions themselves [89]. The moral reforms focused on Christian practices for getting rid of many "pre-modern" practices by painting them as myth, magic, and superstition [7, 49, 83]. Science, economy, the states, and all such secular and modern systems of values started to design the world in secular terms [87]. This new vision of world-making was valorized as a sign of personal progress. The cultures or nations that did not conform to these secularist ideals were often seen as backward [65]. In summary, the drive for a "Godless" public sphere led to inconsistent relationships between religions and the public sphere worldwide. As secularism, which originated in Western contexts and arguably inherited many of its ethics from Christianity, communities practicing various religions, particularly those in the global south, have often found it challenging to adapt to secular ethical frameworks [14, 65].

Thus, scholars of secularism have suggested reforms to improve the Western model, advocating for greater engagement with religious values. Rajeev Bhargava, for example, introduces "contextual secularism," a multi-faceted approach of building relationship between religion and state [14]. He highlights value-based secular states that emphasize peace, tolerance, and religious freedom over models that ignore religious ethics altogether in the public sphere. According to Bhargava, the aim is not to remove religion from the public sphere but to end religious domination. The goal of Postsecular Computing aligns with this, seeking to both preserve religious ethics in the public sphere and address religion's probable negative roles in shaping techno-culture – both of which need conscious attention to religion in HCI.

2.2.1 A Turn Towards Postsecularism. In response to critiques of secularism, German scholar Jürgen Habermas has played a pivotal role in popularizing the academic discourse of postsecularism, scrutinizing the intersection of religion, reason, and ethics [46, 73]. Observations from Habermas and others have gradually led Western societies to question the feasibility of a secular society that entirely dismisses religious influence [87, p. 679]. Western secular theories promoted a rigid division between the "private" and "public" spheres, relegating FRS to the margins of public life. However, this perspective has been challenged by the fact that even many Western societies have made notable advances in social, economic, and intellectual domains while maintaining a strong and overt connection with religion [87, p. 679]. The public use of religious symbols and language in various cultural forms like games, films, and advertisements has been evident [73]. Furthermore, religious voices have been prominently heard in public debates, and several political parties have incorporated religious ethics into their ideologies [46].

Acknowledging this situation, Habermas shifted his position from advocating radical secularism to suggesting a dialogue between religious reasoning and modern rational thought [47]. This led to the emergence of the concept of postsecularism, defined as "the continued existence of religious communities in an increasingly secular environment" [62]. In a postsecular society, scientific rationality doesn't negate non-metaphysical reasoning, and vice versa [47].

Instead, religious ethics and scientific reasoning engage in constructive dialogue through translation and communicative actions [47].

3 POSTSECULAR COMPUTING

The two bodies of literature we have discussed above – one about HCI's engagement with FRS and another about Postsecularism challenging the secularist view of a public sphere less influenced by "the sacred" – leave us with some key takeaways and highlight gaps in how we recognize and practice ethics and politics in HCI research and practices. First, across this body of literature, whether focusing on FRS communities or their cultural and contextual elements, there is a tendency to filter everything through "scientific" arguments passively supporting the secular ethics of a public sphere free of FRS reasoning. This approach often overlooks the fact that a large portion of the global population believes in concepts such as "God," "spirit," and other metaphysical entities. These beliefs significantly influence their everyday ethical and political practices, which generally fall outside scientific and rational practices in secular public spheres [77, 82, 85]. For instance, HCI literature highlights how neglecting "the sacred" in domains like environmental sustainability [33, 77], urban computing [61], rural healthcare [85], online participation [81], and privacy [2, 75] does not holistically capture the individual and communal ethics and politics of the studied FRS communities. Consequently, the technologies become less usable, ethically problematic, and often harmful for FRS communities. Postsecular Computing, therefore, offers a methodological approach that acknowledges "the sacred" in HCI research and practices. It aims to start a conversation on how to inclusively incorporate FRS as distinct categories in the ethics and politics of technology design and practice.

Second, the dominant trend in HCI literature that engages with FRS is to treat these communities as a specialized subgroup requiring special attention. Moreover, instead of treating FRS as distinct categories, most inquiries tend to merge FRS with concepts such as culture and context. We continue to emphasize that this mode of engagement with FRS communities is both important and necessary, similar to the focus given to other subgroups in HCI4D and postcolonial computing literature [30, 52]. A small body of HCI literature acknowledges the importance of religion in the HCI discourse of ethics and politics.

In Postsecular Computing, we propose a more expansive approach to engaging with FRS, including and going beyond assisting the FRS communities and adapting "the sacred" into HCI research. The overarching question of Postsecular Computing is: How can recognizing and adapting "the sacred", even without direct FRS community involvement, help us reimagine HCI research and practices for the coexistence of FRS and modern ethics? We reiterate that Postsecularism is not merely about recognizing FRS as a distinct category; it encompasses a broader project that involves fostering coexistence between FRS and non-FRS communities in shared public spaces, adapting potentially conflicting ethics, reflecting on both religious and secular thoughts; and building a "relationship" between religious and non-religious perspectives. These considerations lead us to a series of questions concerning HCI research and practices. How can we establish a "relationship" between FRS and secular ethics and politics? How can religious and secular thinking be adaptive and reflective of their own values to accommodate others? Where might conflict arise and what are the conceptual resources that can address such conflicts that involve FRS? These questions, while broad in scope, are applicable in various HCI contexts, not just limited to FRS communities. Through Postsecular Computing, we introduce these scopes of inquiry with regards to ethics, politics, and FRS in HCI.

In a recent article, Ahmed challenges the dominant Western secular discourse of ethics in HCI and advocates for "Postsecular HCI" as a lens to critique, analyze, and design ethical practices [4]. Ahmed's proposition to situate ethics calls for methodological approaches that integrate FRS into HCI research discourses on ethics. We join this call and Manuscript submitted to ACM

propose four pathways in Postsecular Computing: ethics, conflicts, politics and pluralism, and addressing the unique needs of FRS communities. In doing so, we build upon the extensive contributions of renowned postsecular scholars like Jürgen Habermas [46, 47], Talal Asad [7, 8], Charles Taylor [86], and Ashis Nandy [65, 66], among others. The inquiries into ethics in Postsecular Computing will investigate whether and how FRS ethics are recognized (or marginalized) in HCI design and interventions. In addressing conflicts, we aim to explore methods to reconcile ethical tensions between FRS and secular worldviews, thereby facilitating coexistence. This necessitates moving beyond merely "prescribing" ethics devoid of "the sacred" and involves creating spaces for dialogue among various ethical perspectives. In inquiries about politics, our goal is to recognize the influence of FRS in the public sphere and explore the transition to a more pluriversal political landscape. Lastly, Postsecular Computing aims to identify and address the unique needs of FRS communities. Through these four domains, Postsecular Computing aims to critically examine the existing values and ethics that underlie various aspects of computing technologies, including design, development, interaction, (non-)use, maintenance, repair, recycling, regulation, policy, and analysis. The goal is to make these stages more inclusive and envisioning an ethical landscape where modern, FRS, and non-FRS ethics can coexist.

4 ONGOING AND FUTURE WORK

Guided by our vision of Postsecular Computing, we are analyzing case studies from our decade-long engagement with religious, para-religious, and spiritual communities. Our goal is to explore how secular principles have dominated much of the ethics discourse in HCI research and practice, often leading to a lack of recognition for FRS within sociotechnical systems. Drawing from insights gained from these case studies, we are devising design and policy recommendations that address the four pathways for integrating FRS ethics and politics into HCI practices. Postsecular Computing will contribute in two significant ways: first, by integrating FRS into HCI through a nuanced understanding of ethics that acknowledges "the sacred"; and second, by providing actionable recommendations for incorporating FRS.

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REFERENCES

- [1] Norah Abokhodair, AbdelRahim Elmadany, and Walid Magdy. 2020. Holy tweets: Exploring the sharing of the Quran on Twitter. Proceedings of the ACM on Human-Computer Interaction 4, CSCW2 (2020), 1–32.
- [2] Norah Abokhodair and Sarah Vieweg. 2016. Privacy & social media in the context of the Arab Gulf. In Proceedings of the 2016 ACM conference on designing interactive systems. 672–683.
- [3] Muhammad Sadi Adamu. 2023. No more "solutionism" or "saviourism" in futuring African HCI: A manyfesto. ACM Transactions on Computer-Human Interaction 30, 2 (2023), 1–42.
- [4] Syed Ishtiaque Ahmed. 2022. Situating ethics: A postsecular perspective for HCI. Interactions 29, 4 (2022), 84-86.
- [5] Youssef Al Hariri, Walid Magdy, and Maria K Wolters. 2021. Atheists versus theists: religious polarisation in arab online communities. *Proceedings of the ACM on human-computer interaction* 5, CSCW2 (2021), 1–28.
- [6] Nuha Albadi, Maram Kurdi, and Shivakant Mishra. 2022. Deradicalizing YouTube: Characterization, Detection, and Personalization of Religiously Intolerant Arabic Videos. arXiv preprint arXiv:2207.00111 (2022).
- [7] Talal Asad. 2003. Formations of the Secular. In Formations of the Secular. Stanford University Press.
- [8] Talal Asad. 2012. Thinking about religion, belief, and politics. The Cambridge companion to religious studies (2012), 36–57.
- [9] Kagonya Awori, Frank Vetere, and Wally Smith. 2015. Transnationalism, indigenous knowledge and technology: Insights from the Kenyan diaspora. In Proceedings of the 33rd annual ACM conference on human factors in computing systems. 3759–3768.
- [10] Oliver Bates, Vanessa Thomas, Christian Remy, Lisa P Nathan, Samuel Mann, and Adrian Friday. 2018. The Future of HCI and Sustainability: Championing Environmental and Social Justice.. In Extended Abstracts of the 2018 CHI Conference on Human Factors in Computing Systems. 1–4.
- [11] Peggy V Beck, Anna Lee Walters, Nina Francisco, and David Martinez. 1977. The sacred: Ways of knowledge, sources of life. (1977).

[12] PATRICIA TEVINGTON JUSTIN NORTEY BECKA A. ALPER, MICHAEL ROTOLO and ASTA KALLO. 2023. Spirituality among Americans. https://www.pewresearch.org/religion/2023/12/07/spirituality-among-americans/

- [13] Wendi R Bellar. 2017. iPray: understanding the relationship between design and use in Catholic and Islamic mobile prayer applications. Ph. D. Dissertation.
- [14] Rajeev Bhargava and TN Srinivasan. 2007. The distinctiveness of Indian secularism. The future of secularism (2007).
- [15] Neelma Bhatti, Lindah Kotut, Derek Haqq, Timothy L Stelter, Morva Saaty, Aisling Kelliher, and D Scott McCrickard. 2021. Parenting, Studying and Working at Home in a Foreign Country: How International Student Mothers in the US Use Screen Media For and With Their Young Children: Parenting, Studying and Working at Home in a Foreign Country. Proceedings of the ACM on Human-Computer Interaction 5, CSCW2 (2021), 1–25.
- [16] Nicola J Bidwell and Peter Radoll. 2007. Redisplacement by design. Interactions 14, 2 (2007), 12-14.
- [17] Mark Blythe and Elizabeth Buie. 2014. Chatbots of the gods: imaginary abstracts for techno-spirituality research. In Proceedings of the 8th Nordic Conference on Human-Computer Interaction: Fun, Fast, Foundational. 227–236.
- [18] Margot Brereton, Paul Roe, Ronald Schroeter, and Anita Lee Hong. 2014. Beyond ethnography: engagement and reciprocity as foundations for design research out here. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems. 1183–1186.
- [19] Elizabeth Buie. 2019. Let Us Say What We Mean: Towards Operational Definitions for Techno-Spirituality Research. In Extended Abstracts of the 2019 CHI Conference on Human Factors in Computing Systems. 1–10.
- [20] Elizabeth Buie and Mark Blythe. 2013. Spirituality: there's an app for that!(but not a lot of research). In CHI'13 extended abstracts on human factors in computing systems. 2315–2324.
- [21] Elizabeth Anne Buie. 2018. Exploring techno-spirituality: Design strategies for transcendent user experiences. University of Northumbria at Newcastle (United Kingdom).
- [22] Craig Calhoun, Mark Juergensmeyer, and Jonathan VanAntwerpen. 2011. Rethinking secularism. OUP USA.
- [23] Heidi Campbell. 2007. 'What hath God wrought?' Considering how religious communities culture (or Kosher) the cell phone. Continuum 21, 2 (2007), 191–203.
- [24] Heidi Campbell. 2010. When religion meets new media. Routledge.
- [25] Heidi Campbell. 2013. Digital religion. Understanding Religious Practice in New Media (2013).
- [26] Heidi A Campbell and Ruth Tsuria. 2021. Digital religion: Understanding religious practice in digital media. Routledge.
- [27] Pew Research Center. 2012. The global religious landscape. https://www.pewresearch.org/religion/2012/12/18/global-religious-landscape-exec/
- [28] Pew Research Center. 2017. The Changing Global Religious Landscape. https://www.pewresearch.org/religion/2017/04/05/the-changing-global-religious-landscape/
- [29] Mark Chaves. 1994. Secularization as declining religious authority. Social forces 72, 3 (1994), 749-774.
- [30] Marshini Chetty and Rebecca E Grinter. 2007. HCI4D: HCI challenges in the global south. In CHI'07 extended abstracts on Human factors in computing systems. 2327–2332.
- [31] Kyong James Cho and Heidi A Campbell. 2015. Religious use of mobile phones. In Encyclopedia of mobile phone behavior. IGI Global, 308-321.
- [32] Kevin J Christiano, William H Swatos Jr, and Peter Kivisto. 2015. Sociology of religion: Contemporary developments. Rowman & Littlefield.
- [33] Sarah Cooney, Vishal Sharma, Joshua Palmer, Neha Kumar, and Barath Raghavan. 2022. Alternative Pathways to Caring for Limits: The Case of Ecospirituality. In Eighth Workshop on Computing within Limits 2022. LIMITS.
- [34] Jay Cunningham, Gabrielle Benabdallah, Daniela Rosner, and Alex Taylor. 2023. On the grounds of solutionism: Ontologies of blackness and HCI.

 ACM Transactions on Computer-Human Interaction 30, 2 (2023), 1–17.
- [35] Paul Dourish. 2004. What we talk about when we talk about context. Personal and ubiquitous computing 8, 1 (2004), 19-30.
- [36] Sarah Dsane, Melissa Densmore, and Yaseen Joolay. 2022. A Descriptive Analysis of Cohesion within Virtual and Physical Small Groups of Mothers in Bandwidth-Constrained Communities in Cape Town.. In ACM SIGCAS/SIGCHI Conference on Computing and Sustainable Societies (COMPASS). 152–164.
- [37] Emile Durkheim. 2016. The elementary forms of religious life. In Social theory re-wired. Routledge, 52-67.
- [38] Elaine Howard Ecklund and Christopher P Scheitle. 2017. Religion vs. science: What religious people really think. Oxford University Press.
- [39] Abdul Rahman Ali M Fauzan and Akram M Zeki. 2014. My e-mosque system: an islamic android companion. *International Journal of Islamic Applications in Computer Science and Technology* 2, 2 (2014), 30–73.
- [40] Karen E Fisher, Salah Falioun, Eiad Yafi, and Khadijah S Khan. 2020. Co-Designing with the Iman in a Haram Digital World: Drawing on the Quran and Sunnah to Support People's Privacy and Information Practices. In IslamicHCI, CHI 2020, Arab Islamic HCI Workshop. 25–30.
- [41] Kieran Flanagan and Peter C Jupp. 2007. A sociology of spirituality. Ashgate Publishing, Ltd.
- [42] Brooke Foucault and Jay Melican. 2007. The digital and the divine: Taking a ritual view of communication and ICT interaction. In Usability and Internationalization. HCI and Culture: Second International Conference on Usability and Internationalization, UI-HCII 2007, Held as Part of HCI International 2007, Beijing, China, July 22-27, 2007, Proceedings, Part I 2. Springer, 74-82.
- [43] Sarah Fox, Mariam Asad, Katherine Lo, Jill P Dimond, Lynn S Dombrowski, and Shaowen Bardzell. 2016. Exploring social justice, design, and HCI. In Proceedings of the 2016 CHI Conference Extended Abstracts on Human Factors in Computing Systems. 3293–3300.
- [44] William Gaver, Mark Blythe, Andy Boucher, Nadine Jarvis, John Bowers, and Peter Wright. 2010. The prayer companion: openness and specificity, materiality and spirituality. In Proceedings of the SIGCHI conference on Human factors in computing systems. 2055–2064.

- [45] Shikoh Gitau, Kathleen Diga, Nicola J Bidwell, and Gary Marsden. 2010. Beyond being a proxy user: a look at NGOs 'potential role in ICT4D deployment. (2010).
- [46] Jürgen Habermas. 2008. Notes on post-secular society. New perspectives quarterly 25, 4 (2008), 17-29.
- [47] Jürgen Habermas. 2010. An awareness of what is missing: Faith and reason in a post-secular age. Polity.
- [48] Paul Helm. 1997. Faith and understanding. Wm. B. Eerdmans Publishing.
- [49] Tom Holland. 2019. Dominion: The making of the Western mind. Hachette UK.
- [50] Samia Ibtasam. 2021. For God's sake! Considering Religious Beliefs in HCI Research: A Case of Islamic HCI. In Extended Abstracts of the 2021 CHI Conference on Human Factors in Computing Systems. 1–8.
- [51] Lilly Irani. 2010. HCI on the move: methods, culture, values. In CHI'10 Extended Abstracts on Human Factors in Computing Systems. 2939-2942.
- [52] Lilly Irani, Janet Vertesi, Paul Dourish, Kavita Philip, and Rebecca E Grinter. 2010. Postcolonial computing: a lens on design and development. In Proceedings of the SIGCHI conference on human factors in computing systems. 1311–1320.
- [53] Inyeop Kim, Minsam Ko, Joonyoung Park, Sung Wook Moon, Gyuwon Jung, Youn-kyung Lim, and Uichin Lee. 2022. Social-Spiritual Face: Designing Social Reading Support for Spiritual Well-being. Proceedings of the ACM on Human-Computer Interaction 6, CSCW2 (2022), 1–22.
- [54] Lindah Kotut and D Scott McCrickard. 2022. Winds of Change: Seeking, Preserving, and Retelling Indigenous Knowledge Through Self-Organized Online Communities. In CHI Conference on Human Factors in Computing Systems. 1–15.
- [55] Ahmet T Kuru. 2007. Passive and assertive secularism: Historical conditions, ideological struggles, and state policies toward religion. World Politics 59, 4 (2007), 568–594.
- [56] Dalai Lama. 2012. Beyond religion: Ethics for a whole world. Random House.
- [57] Tuck Wah Leong, Christopher Lawrence, and Greg Wadley. 2019. Designing for diversity in Aboriginal Australia: Insights from a national technology project. In Proceedings of the 31st Australian Conference on Human-Computer-Interaction. 418–422.
- [58] Walid Magdy, Kareem Darwish, Norah Abokhodair, Afshin Rahimi, and Timothy Baldwin. 2016. # isisisnotislam or# deportallmuslims? Predicting unspoken views. In Proceedings of the 8th ACM Conference on Web Science. 95–106.
- [59] Robert B Markum and Kentaro Toyama. 2020. Digital Technology, Meditative and Contemplative Practices, and Transcendent Experiences. In Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems. 1–14.
- [60] Alister E McGrath. 2018. Theology: The basic readings. John Wiley & Sons.
- [61] Nusrat Jahan Mim. 2021. Gospels of Modernity: Digital Cattle Markets, Urban Religiosity, and Secular Computing in the Global South. In Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems. 1–17.
- [62] Mohammad Golam Nabi Mozumder. 2011. Interrogating Post-Secularism: Jürgen Habermas, Charles Taylor, and Talal Asad. Ph. D. Dissertation. University of Pittsburgh.
- [63] Omar Mubin, Bayan M Alsharbi, and Mauricio Novoa. 2020. Reviewing mobile apps for learning Quran. In HCI International 2020–Late Breaking Posters: 22nd International Conference, HCII 2020, Copenhagen, Denmark, July 19–24, 2020, Proceedings, Part II 22. Springer, 289–296.
- [64] Maryam Mustafa, Kimia Tuz Zaman, Tallal Ahmad, Amna Batool, Masitah Ghazali, and Nova Ahmed. 2021. Religion and Women's Intimate Health: Towards an Inclusive Approach to Healthcare. In Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems. 1–13.
- [65] Ashis Nandy. 1988. The politics of secularism and the recovery of religious tolerance. Alternatives 13, 2 (1988), 177-194.
- [66] Ashis Nandy. 1995. An anti-secularist manifesto. India International Centre Quarterly 22, 1 (1995), 35–64.
- [67] Helen Nissenbaum. 2004. Privacy as contextual integrity. Wash. L. Rev. 79 (2004), 119.
- [68] Teresa K O'Leary, Dhaval Parmar, Stefan Olafsson, Michael Paasche-Orlow, Timothy Bickmore, and Andrea G Parker. 2022. Community dynamics in technospiritual interventions: lessons learned from a church-based mHealth pilot. In Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems. 1–23.
- [69] Kenneth I Pargament. 2011. Spiritually integrated psychotherapy: Understanding and addressing the sacred. Guilford press.
- [70] Anicia Peters, Michael Oren, and Nicola Bidwell. 2012. Namibian and American cultural orientations toward Facebook. In CHI'12 Extended Abstracts on Human Factors in Computing Systems. 2603–2608.
- [71] Christina Puchalski, Betty Ferrell, Rose Virani, Shirley Otis-Green, Pamela Baird, Janet Bull, Harvey Chochinov, George Handzo, Holly Nelson-Becker, Maryjo Prince-Paul, et al. 2009. Improving the quality of spiritual care as a dimension of palliative care: the report of the Consensus Conference. Journal of palliative medicine 12, 10 (2009), 885–904.
- [72] John Rawls. 2020. Political liberalism. In The New Social Theory Reader. Routledge, 123-128.
- [73] Michael Reder and Josef Schmidt. 2011. Habermas and religion. Polity.
- [74] Md Rashidujjaman Rifat, Jay Chen, and Kentaro Toyama. 2017. Money, God, and SMS: Explorations in Supporting Social Action Through a Bangladeshi Mosque. In Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems. 5941–5953.
- [75] Mohammad Rashidujjaman Rifat, Mahiratul Jannat, Mahdi Nasrullah Al-Ameen, SM Taiabul Haque, Muhammad Ashad Kabir, and Syed Ishtiaque Ahmed. 2021. Purdah, Amanah, and Gheebat: Understanding Privacy in Bangladeshi "pious" Muslim Communities. In ACM SIGCAS Conference on Computing and Sustainable Societies. 199–214.
- [76] Mohammad Rashidujjaman Rifat, Firaz Ahmed Peer, Hawra Rabaan, Nusrat Jahan Mim, Maryam Mustafa, Kentaro Toyama, Robert B Markum, Elizabeth Buie, Jessica Hammer, Sharifa Sultana, et al. 2022. Integrating Religion, Faith, and Spirituality in HCI. In CHI Conference on Human Factors in Computing Systems Extended Abstracts. 1–6.

[77] Mohammad Rashidujjaman Rifat, Toha Toriq, and Syed Ishtiaque Ahmed. 2020. Religion and sustainability: lessons of sustainable computing from Islamic religious communities. Proceedings of the ACM on Human-Computer Interaction 4, CSCW2 (2020), 1–32.

- [78] Julie Ringelheim. 2017. State Religious Neutrality as a Common European Standard? Reappraising the European Court of Human Rights Approach. Oxford Journal of Law and Religion 6. 1 (2017), 24–47.
- [79] Alan Ryan. 2017. Liberalism. A companion to contemporary political philosophy (2017), 360-382.
- [80] Muhammad Sadi Adamu. 2021. Problematising Identity, Positionality, and Adequacy in HCI4D Fieldwork: A Reflection. In 3rd African Human-Computer Interaction Conference: Inclusiveness and Empowerment. 65–74.
- [81] Niloufar Salehi, Roya Pakzad, Nazita Lajevardi, and Mariam Asad. 2023. Sustained Harm Over Time and Space Limits the External Function of Online Counterpublics for American Muslims. Proceedings of the ACM on Human-Computer Interaction 7, CSCW1 (2023), 1–24.
- [82] C Estelle Smith, Avleen Kaur, Katie Z Gach, Loren Terveen, Mary Jo Kreitzer, and Susan O'Conner-Von. 2021. What is Spiritual Support and How Might It Impact the Design of Online Communities? Proceedings of the ACM on Human-Computer Interaction 5, CSCW1 (2021), 1–42.
- [83] Graeme Smith. 2007. A short history of secularism. Bloomsbury Publishing.
- [84] Willfried Spohn. 2003. Multiple modernity, nationalism and religion: a global perspective. Current sociology 51, 3-4 (2003), 265-286.
- [85] Sharifa Sultana and Syed Ishtiaque Ahmed. 2019. Witchcraft and hci: Morality, modernity, and postcolonial computing in rural bangladesh. In Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems. 1–15.
- [86] Charles Taylor. 2009. A secular age. Harvard university press.
- [87] Bryan S Turner. 2010. Religion in a Post-secular Society. The new Blackwell companion to the sociology of religion (2010), 649-667.
- [88] Max Weber. 1993. The sociology of religion. Beacon Press.
- [89] Monika Wohlrab-Sahr and Marian Burchardt. 2012. Multiple secularities: Toward a cultural sociology of secular modernities. Comparative Sociology 11, 6 (2012), 875–909.
- [90] Marisol Wong-Villacres, Carl DiSalvo, Neha Kumar, and Betsy DiSalvo. 2020. Culture in Action: Unpacking Capacities to Inform Assets-Based Design. In Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems. 1–14.
- [91] Allison Woodruff, Sally Augustin, and Brooke Foucault. 2007. Sabbath day home automation: "it's like mixing technology and religion". In *Proceedings of the SIGCHI conference on Human factors in computing systems*. 527–536.
- [92] Robert Wuthnow. 1985. Science and the Sacred. The sacred in a secular age: Toward revision in the scientific study of religion (1985), 187-203.
- [93] Susan P Wyche, Paul M Aoki, and Rebecca E Grinter. 2008. Re-placing faith: reconsidering the secular-religious use divide in the United States and Kenya. In Proceedings of the SIGCHI conference on human factors in computing systems. 11–20.
- [94] Susan P Wyche, Kelly E Caine, Benjamin K Davison, Shwetak N Patel, Michael Arteaga, and Rebecca E Grinter. 2009. Sacred imagery in technospiritual design. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems. 55–58.
- [95] Susan P Wyche and Rebecca E Grinter. 2009. Extraordinary computing: religion as a lens for reconsidering the home. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems. 749–758.
- [96] Susan P Wyche, Yevgeniy Medynskiy, and Rebecca E Grinter. 2007. Exploring the use of large displays in American megachurches. In CHI'07 extended abstracts on Human factors in computing systems. 2771–2776.