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Participatory Explorations in the Techno-Spiritual

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Abstract. This exploratory paper presents a pilot study conducted with 64 undergraduate students at Edinburgh Napier University in November 2023. The aim of this study was to understand how people who do not necessarily identify as religious engaged in what they saw as spiritual and or faith-based practices and how those participants saw technology playing a role now, and in the future of these experiences. The pilot study is part of a series of initial investigations to understand two key areas: What do modern practices around religion, faith and spirituality look like? How could technology support modern engagement and new interactive experiences with contemporary faith and spiritual practices?

Introduction

As of 2021, 85% of the world's population subscribe to an organised religion (Rifat et al., 2022). In England and Wales, for the first time ever, less than half the

population identified as Christian, a 13.1% drop since the 2011 census (ons.gov, 2021). By contrast "No Religion" was the second most popular response with an increase of 12% since 2011 (ons.gov, 2021). While these respondents have stated no religion, it could still mean that these individuals may have some spiritual beliefs or other broader attitudes toward faith away from a traditional religious concept. In Scotland, The Church of Scotland has been told it needs 'radical' reform or it will not survive in the country, with over 700 churches predicated to close by the end of the decade (Church of Scotland, 2021). There have been growing calls for more research in HCI around religion, faith and spirituality, particularly participatory approaches to support imagining how these futures may look with technology (Markum, Wolf and Luthe, 2022; Jung, Buruk and Hamari, 2022). Furthermore, digital interactions with the spiritual can support overall mental and physical health and well-being (O'leary et al., 2022), with Rifat et al. (2022) calling for a research network at CHI 2022 to investigate how HCI can better support communities, and the integration of HCI practices with religion, faith, and spirituality. One of the first to call for a need for more exploration around this topic was Bell in 2006 where the phrase "techno-spiritual practices" was coined. Another prominent contributor to the field is the work of Buie (2019). Buie argues that while research is continuing, there are a lack of definitions around what it means when researchers discuss different types of experiences that are being studied. A framework is provided consisting of eight terms:

- Spirituality
- Religion
- (Self) transcendent experience
- Spiritual experience
- Religious experience
- Transcendence
- Transformative experience
- Transcendent user experience

As these studies progress, this framework could provide a useful guide for categorising both the types of experiences and interactions described by participants, and at the later stages the types of responses created. Part of the wider goals of this research is to explore the following questions: What do modern practices around religion, faith and spirituality look like? How could technology support modern engagement and new interactive experiences with contemporary faith and spiritual practices? It is then the outcome of this wider research to design new digitally enhanced interactions with religion, faith and spirituality that take into the account more current and non-traditional notions of spirituality and faith.

An exploratory techno-spiritual workshop

Building on the calls for more participatory approaches, this pilot study took the form of a participatory workshop. Workshops create a space where individuals can

come together, create community and collaboration and in the process engage in problem solving and gain new knowledge (Ørngreen and Levinsen, 2017).

Furthermore, this playful participation can critically engage with identity and social relations (Markussen and Knutz, 2017). Ahmed and Asraf (2018) argue workshops can be a rich data gathering tool and argue that the use of them can help to foster trust with participants. This is done through the facilitator's enthusiasm and recognising and valuing participants' contributions. This then leads to participants sharing "rich information". Sixty-four participants aged between 18 to 35 took part in the pilot study. All the participants were third year undergraduate students at Edinburgh Napier University. Students were already allocated into groups for the Trimester, so these groups were maintained for the study (groups of four and five).

It is acknowledged that this type of setting may limit the findings of the pilot study. Beyond age, participants were not asked about their specific religious or faith or spiritual background and there was no other demographic data gathered about the participants. The reason for limited demographic data being gathered was that in another pilot study all ten participants were of diverse religious backgrounds (Anglican, Catholic, Jewish, Muslim and Hindu) but only one artefact which specifically supported a religious practice was created. Of interest in the findings of the other study was the discussion in the group where more holistic notions of faith and spirituality were shared.

There is a difference between religion and spirituality. Religion is more organised, there are doctrines, beliefs and systems. Spirituality is how each individual connects with their idea of God, a greater power or whatever it is that the person believes in. It may be informed by their religion, but even when two people are of the same religion, their practice of spirituality may be quite different.

As this is an exploratory study to identify initial understandings of people's concepts of religion, faith and spirituality and their thoughts on the role of technology within them, as well as patterns and themes for potential future study, demographic data was not collected at this stage but as the research becomes more defined this demographic data would be collected. Another limitation to consider is that facilitating the workshops as a group may limit the individual practices that participants would be willing to share in the group. The group may influence the overall responses.

The workshop was two hours long and consisted of two parts. Before undertaking any research, ethical approval was sought through the university and participants asked to sign a consent form. The first part of the workshop was 45 minutes long. Participants were given a series of questions and asked to respond to them in their groups on large sheets of paper. These questions had been informed by another workshop that had taken place in earlier in the year in partnership with Edinburgh Interfaith Association and focused on participants who identified as actively being part of a religious group. The questions asked to the participants were as follows:

1. What does having faith or being spiritual mean to you?

2. When do you feel most spiritual and why?
3. What does sacred mean to you?
4. What spiritual or faith-based activities do you engage in?
5. Have you used any technology to help you in your faith, spiritual or sacred practices?
6. Are there any places you consider sacred, why?
7. Does being outside affect your sense of spiritual and sacred, how?

Fourteen sets of responses were gathered to the questions. An example of the responses can be seen in Figure 1.

Once the groups had completed the question responses, they were then asked to work together to make a 3D model using craft materials such as modelling clay, balsa wood, material, metal wire, paper and so on of an object that could support future spiritual and faith-based practices incorporating technology. They were told that the models were to be scanned using photogrammetry and a digital model of their creation stored digitally. The participants were also asked to create a storyboard explaining their project Figure 2. Vega (2021) discussed the benefits of

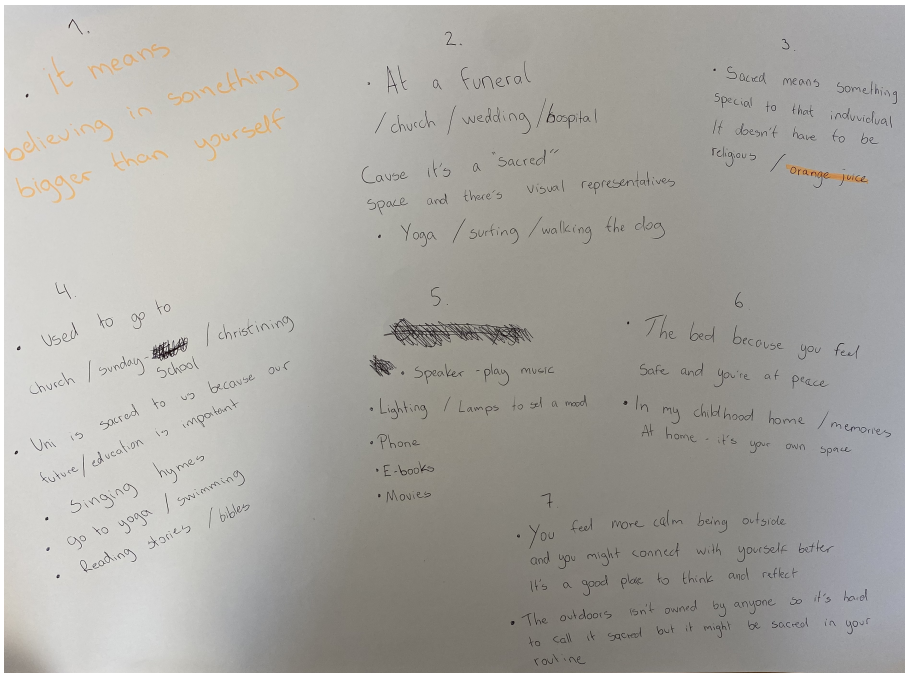

Figure 1. Example of group question responses.

thinking through making and highlights the importance of not just making for the individual but in the social as site of knowledge production. This highlights that thinking through making is a valuable method for not just the individual but for a group's understanding of each other's perspectives and as a learning opportunity.

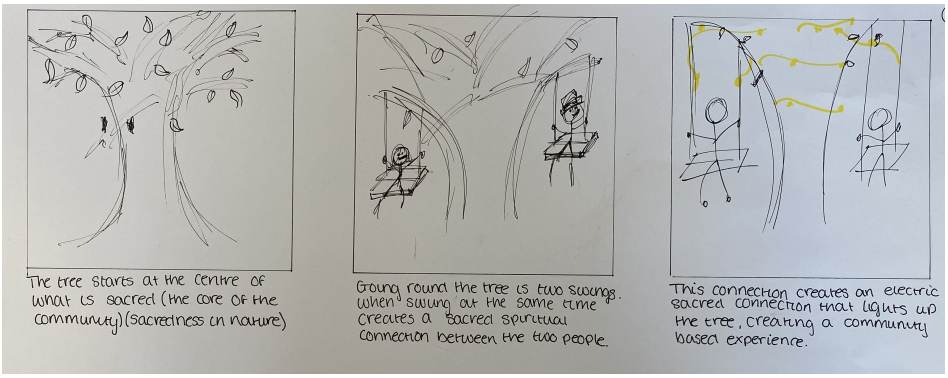

Figure 2. Example of a group storyboard.

The value is highlighted by Wallace et al. (2024) who ran a workshop at TEI using a craft method to explore IoT and connected things. Posch and Fitzpatrick (2021) also highlight how this kind of making is inclusive as it can be done by both experts and novices and this in turn can help to bridge different areas of knowledge. Further, it could be argued that using craft methods can create more inclusive practice when investigating technology, focusing on how something could be done rather than the technical aspects, such as programming. The models were scanned using a mobile phone, Kiri Engine app and a Foldio Studio 3 to ensure lighting quality. An example of the process can be seen in Figure 3. This approach also gave the participants the opportunity to learn about photogrammetry scanning, and if they wanted could have a try of taking their own photos too. Using this approach meant that the models could also be displayed in different ways, i.e. using tablets or online spaces giving the artefacts versatility and future research potential. If models were damaged over time, a digital record of the artefact was still held.

A total of fourteen models was made and scanned and an example of the models can be seen below in Figure 4.

Key Workshop Findings

The approach to analysing the data produced in the participatory workshop is thematic analysis. While data analysis has not yet been completely finished, indicative key findings and other observations of note from the question section and model building are presented. The large questions sheets which are shown in Figure 1. were coded for key phrases. All of the groups' responses to each question were then brought together and sorted into themes.

Question Findings

1. What does having faith or being spiritual mean to you?

Figure 3. 3D scanning with Foldio Studio.

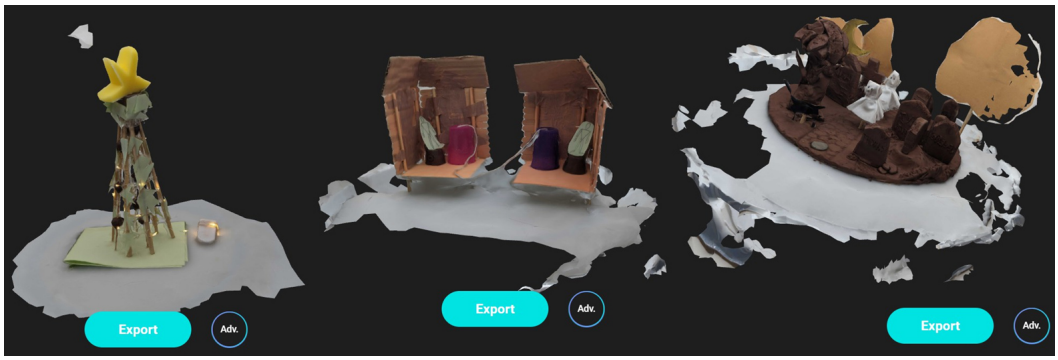

Figure 4. Example of 3D models in Kiri.

In response to question one, a key theme was the concept of considering something bigger in yourself. Common responses in this theme included “trusting in yourself and the future”, “belief in the greater good” and “belief in something bigger than yourself”. Another theme identified was a way of living and seeing the world. Responses in this theme included, “comfort”, “feeling peace”, “a way of life” “belief in something you find important”, “people”, “taking care of yourself” and “faith as a form of encouragement”. What is striking is how few of the responses are aimed toward more traditional religious notions of faith and spirituality. Religion was a theme but only received three responses: “practicing a faith”, “being part of a community that’s religious” and “devoted to an ideology”.

2. When do you feel most spiritual and why?

The first theme that emerged was religious events such as Easter and Christmas which were commonly mentioned. However, it is interesting that the participants feel most spiritual around the times of mainstream British religious holidays, but they did not connect this with question one, around having faith or being spiritual.

Self-care is another predominant theme which appeared to be important such as relaxing, taking a bath, spending time with friends or family.

Another major theme was exercising and being outside in nature such as walking the dog, climbing and wild swimming. Music was also a theme that emerged as participants commented that "they liked the way it made them feel". Self-care and connection are the two dominant themes here showing that participants consider the body and their sense of self as spiritual.

3. What does sacred mean to you?

The main themes that emerged in response to this question where Relationships, Intangible, Nature and Things of High Importance. The responses to this question fell mainly into two categories, connection and memory. Under connection, responses included: "something passed down", "family time", "relationships" and "being together". Under memory, responses were similar, for example, "great value", "holding personal items", "something we attach memories to" and "means important to you".

Connecting both sections are the responses that indicate that to them, sacred is something that is important to them. Some specific things are mentioned, such as nature, family and animals and pets. One response that can link both of these categories is "something intangible" That is striking because it is the meaning that we give to objects that makes them sacred/valuable. It is a representation of memory. We like spending time with people but we also like what it gives us, i.e. a sense of connection.

4. What spiritual, sacred or faith-based activities do you engage in?

The themes that emerged from this section were Exercise, Religious Holidays and Events, Connection, Self Care and Festivals. There were expected responses that fell into the religious theme such as Easter, Christmas, funerals and reading the Bible. One interesting response of note was "wearing meaningful jewellery". Objects that hold memories is a sacred act, possibly even the act of memorialization itself is sacred.

Another interesting theme that emerged was Self Care. Within the theme included hobbies such as drawing, building Lego, reading and music. The theme also included things such as taking time for yourself and going for coffee. Engaging in hobbies or possibly activities that put you in a focused flow state. Again, being in nature or walking, exercising such as swimming and engaging in Yoga and meditation practices featured prominently in the responses, again, showing the connection between physical activity and state of being.

5. Have you used any technology to help you in your faith, spirituality or sacred practices?

The three main themes identified in response to this question were Music, Apps, Entertainment Music was a popular response that included things such as Spotify for music, and speaker to play music. This is possibly the way that music makes us feel, or expresses things we struggle to say, it evokes emotions, and it could be the affect that music has on the self. Apps was the biggest response. The majority of responses included the use of apps such as Headspace, Yoga and meditation apps

to support mental health and wellbeing and engaging with social media. Apps also included more traditional religious responses such as engaging with sermons online via zoom and using the internet to look up information about specific religions and apps to annotate their bible.

The theme of Entertainment included responses such as playing PS5 and watching Netflix. This could be as a way to relax and possibly distract the mind. It was interesting that participants consider engaging in things such as social media or gaming as spiritual, faith or sacred practice and this could be explored further.

6. Are there any places you consider sacred, why?

Four main themes were identified in response to this question: Home, Religious Sites, Outdoors and Gym. A small number mentioned places such as churches and graveyards. A major theme was the stating of specific outdoor places such as the beach, walk, woodland and nature. The theme of Gym included responses such as workout routine and yoga. Surprisingly, the largest number of responses related to specific places mostly within the home or specific places within the home such as bedrooms, kitchen making food or in the shower. Some participants elaborated that it was a "safe" and "personal space". There are two dominant components of what created sacred place. A feeling of safety and security, and a feeling of being connected and in a natural space. The aim of these two activities is to evoke a feeling of calm and groundedness, which if achieved, by its nature creates a feeling of safety.

7. Does being outside affect your sense of spiritual and sacred? How?

There were three main themes that emerged from this question. The first theme is Calm. Participants reported a sense of "clarity", "calming", "zen" and a feeling of being "more free" and that being outside can help "you feel you might connect better to yourself". The second theme is Places. This included responses such as "the woods back home" and "the sea". This indicated that specific places can be more spiritual that others. The third theme to emerge was mindset. This included responses such as "communing with nature" and "forced to think about spirituality when not on phone." This indicates that depending on where you are can shift your mindset into a more spiritual place. Two participants responded with concerns for their safety stating. "No protection or safety outside" and "No privacy or peace" One interesting response of note was "Forced to think more about spirituality when not on the phone".

Model Findings

Considering the work of Andersen and Wakkary (2019) and their approach to workshop contributions. It was not possible to get participants to physically design technology rather representations. While participants were asked to imagine future technologies, participants were given freedom in how this was expressed and were not guided back to the brief if they drifted. Personal interpretation can also present interesting contributions which can be interpreted and considered and as Andersen and Wakkary (2019) suggest helping to reframe the enquiry. They also argue that

while the artefacts created may not answer the researcher's aim of the study, they could offer insightful critiques to problems posed. While the analysis is still ongoing and exploration still underway, key themes that emerged from the questions were around nature, app usage, connection and relationship, and religious interactions. This can be used as a guide to frame the analysis of the models. It is understood that participants may critique the topic in the theme instead of designing a specific technology.

A theme that seemed to run through many of the responses created was the use of nature to represent interactions that connected people together. As can be seen in Figure 5, this response used a tree to represent what is sacred. The tree would light up when two people swung on the tree in the hope of creating a spiritual connection between the two people. Considering this response in relation to a techno-spiritual practice, the themes of nature and connection are present, suggesting that there is scope to employ digital approaches to how participants can connect to each other through natural spaces. Another interesting response under the theme of connection was the creation of a set of empathic smart hats (Figure 6).

Figure 5. Sacred Tree Model.

These hats allowed people to input your thoughts into the hat and share them with other people. This would allow you to gain an empathic perspective of others. It would also serve as an educational tool. This is interesting as when considering this from a techno-spiritual perspective, the ability to engage in empathic practices seems important to the individuals in this group and they see that technology could support that in some way.

Figure 6. Empathic hats.

In relation to apps, one group made a model of a maze with different social media icons dotted throughout. They saw the maze as a commentary on phone and social media use stating that people view them as sacred. It can be suggested that for techno-spiritualism the immediate reliance of phone or app usage may not be the right path forward to be more connected to the world around you. Following on from this, two responses focused not so much on creating something to facilitate interactions with spirituality using technology, but more of a comment on society and its use of technology. One group presented technology as something that we are over reliant on and struggle to cope without it (Figure 7a), while another group used a Tetris representation to indicate how technology helps them fit in and feel part of society (Figure 7b).

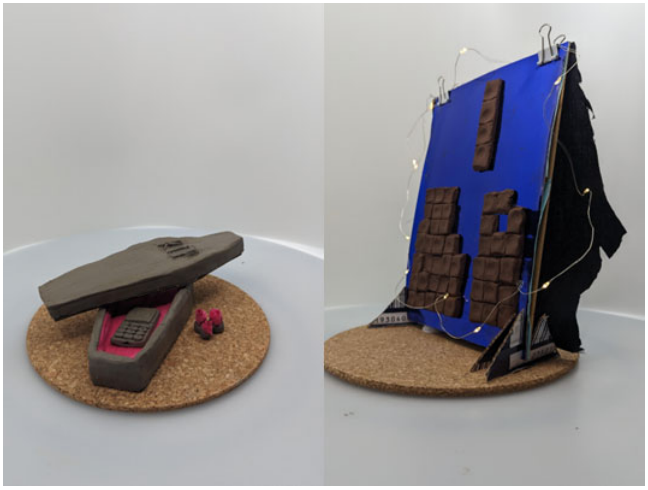

Figure 7. a & b Society responses .

Evaluation

The participants were asked for feedback on the workshop. This was an opportunity to experiment with evaluation tools and Padlet was chosen. The participants were asked

- What three phrases would you use to describe the workshop?
- What did you take away from the workshop?
- Anything that could be improved?
- Is there anything new you have learned?
- Anything that you struggled with?

While some useful feedback was provided, on the whole it was not a useful tool for feedback gathering as students could see other responses which changed the trajectory of the feedback. It became much more about details about the modelling tools and responses for comic effect for their peers to see such as "dirty hands" and "messy tables" when as what did you take away from the workshop. The participants generally found the workshop "fun", "collaborative", "creative" and "engaging". A lot of responses stated that it made them realise all the different understandings we have of faith and spirituality. For improving the workshop, most of the responses wished it could have been longer as one hour was too short to come up with an idea.

Discussion

While analysis is still ongoing, it is clear there are connections between modern interpretations with spirituality and overall health and wellbeing such as self-care, exercise, nature and interaction with other people. A core of new approaches to spirituality and sacred acts can be closely aligned with self-care practices. This idea of something being "bigger than yourself" is an interesting set of responses as it could be suggested that many of the responses in questions and model responses are attempts to engage and connect to that something bigger. This is done through a variety of mediums, walking, apps, talking to others, hobbies, to try and find that connected and grounded sense of self. Doing these things naturally ties in with mental health and well-being. This is interesting if we consider question five and technology use, where people consider using apps for mediation, Yoga, fitbits, ebooks and social media as spiritual or faith-based practices. While there are still more traditional religious practices for a number of participants, such as praying, there is a thread of trying to connect with something more or bigger and achieving a holistic sense of self. The findings suggest that there is scope to explore a middle group where people want technology, the support information and the practices, but not to be totally distracted by the phone. Could this mean there is a space to design new non-obtrusive technologies to support connection with space but not distract from it?

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