

Seeking Resonances for Remote Communal Chanting Practices

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ABSTRACT

We take a Research Through Design (RtD) approach to explore Buddhist communal chanting practices, seeking to develop tangible design research products that support meaningful techno-spiritual remote connections. This work is informed by an autoethnography in a Buddhist community in the UK. We focus on the experiential and multi-sensory aspects of these practices, presenting three experiments that expose the sound environment as a design material for our future work. In doing so, our attention is drawn to the resonances we encounter in the chanted vocalisations, the interplay with sonic ritual equipment, and the soundscapes of the rooms in which they are practiced.

Authors Keywords

Spirituality; Community practice of Faith; Buddhism

CSS Concepts

• Human-centered computing~Interaction Design

INTRODUCTION

In this Research Through Design (RtD) exploration of Buddhist chanting practices, we build on the recent published work of the third and fourth authors (Claisse and Durrant) and their investigation of community practice of Buddhism via Video-Mediated Communication (VMC) systems (i.e. Zoom) during the COVID-19 pandemic [4]. Ethnographic insights from interviews with community members showed the limitation of such platforms for genuinely connecting

with one another, particularly in the case of chanting and praying together. By default, modern VMC systems filter out “noise” from calls, but these non-speech sounds include many of those we find to be integral to Buddhist chanting and, by extension, other religious practices. We intend this to be understood in the context of other recent critical explorations of the normative expectation of VMC systems [6] and more broadly in approaches to Techno-spiritualism [1, 3].

The third author, Claisse, is a practicing Buddhist and a member of Soka Gakkai International¹, bringing an autoethnographic perspective to our explorations. A part of Claisse’s practice includes chanting the mantra ‘*Nam Myoho Renge Kyo*’ twice a day, in the morning and evening, in front of an altar. An important part is to practice with other members by visiting another’s home and chanting together. In-person community practice was impacted during the pandemic, pushing members to adopt video-conferencing platforms like Zoom in order to continue chanting together remotely. Whilst in-person visits have returned at time of writing, despite reported limitations, the desire for remote connections persists.

In this position paper for the DIS 2023 workshop on ‘Designing Tangible Interactive Artifacts for Religious and Spiritual Purposes’, we respond to the opportunities identified by Claisse and Durrant to make tangible interfaces for meaningful techno-spiritual connections

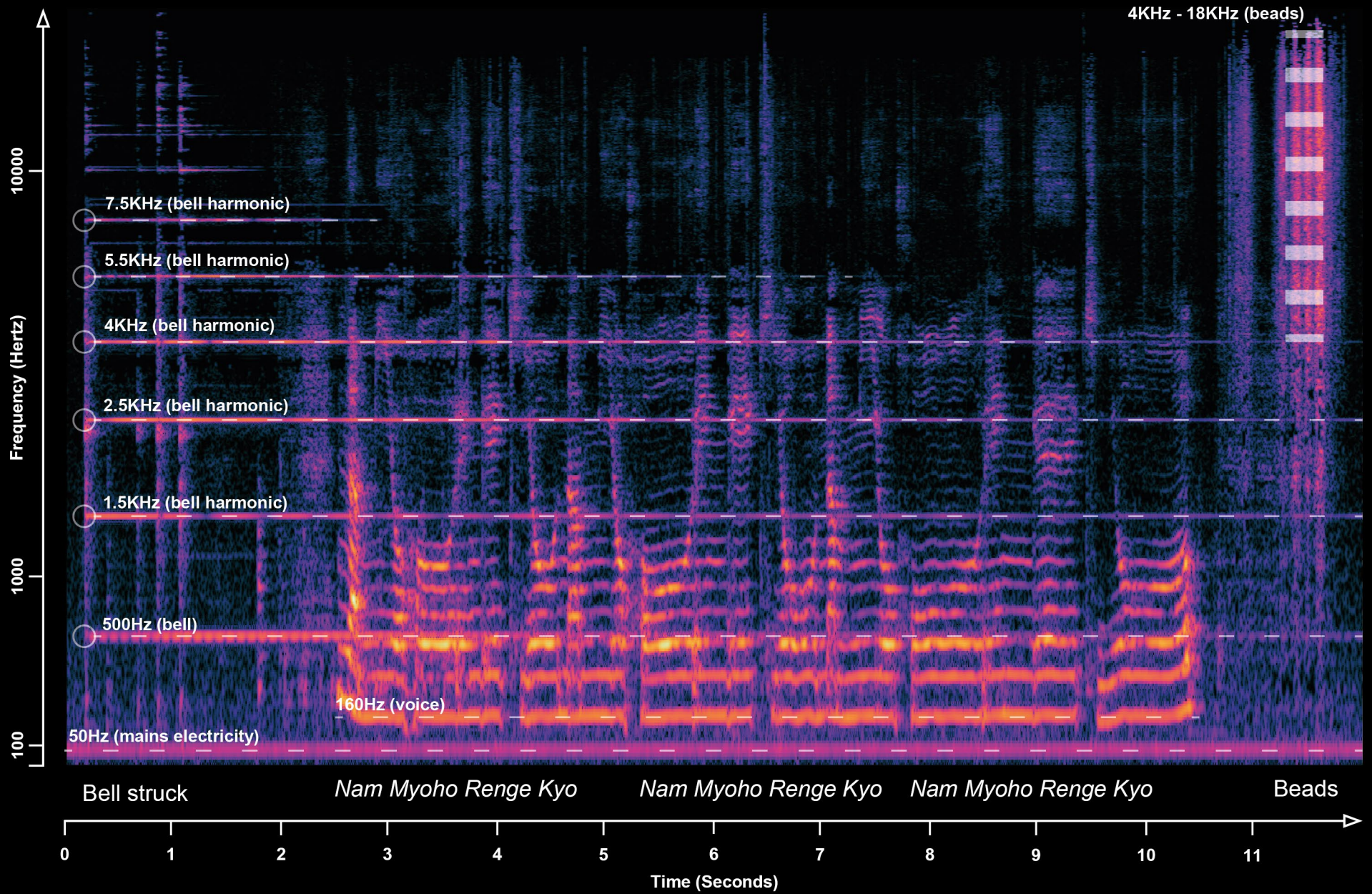
[4]. We focus on the experiential and multi-sensory aspects of Buddhist chanting practices, poorly rendered by modern VMC systems. As a demonstration of our work-in-progress, we present three experiments that expose the sound environment as a design material to be used in our future work.

MATERIALISING THE RITUAL ENVIRONMENT

Our desire to create some remote connection between remote practitioners means we must find some features of each environment to extract and share by some electronic medium. We are drawn to the rich sound environment of the mantra ritual, that as we have argued is poorly reproduced by modern VMC systems. In order to understand this sound environment in material terms, we present a spectrogram of the first few seconds of a typical chanting ritual on the on the following page.

A spectrogram is a well-known way to visualise the frequencies of sounds, to disclose their distinct properties – here the striking of a bell, the chanting of a voice and the rubbing of beads. We consider the spectrogram as a designerly way to materialise the ritual environment (the practitioners, their ritual objects, and the interplay with the acoustics of their rooms), that suggests some initial design experiments of what might be remotely shared. We then illustrate three such experiments responding to: *The Bell*, *The Voice* and *The Beads*.

¹More information about the Buddhist organisation via www.sgi-uk.org



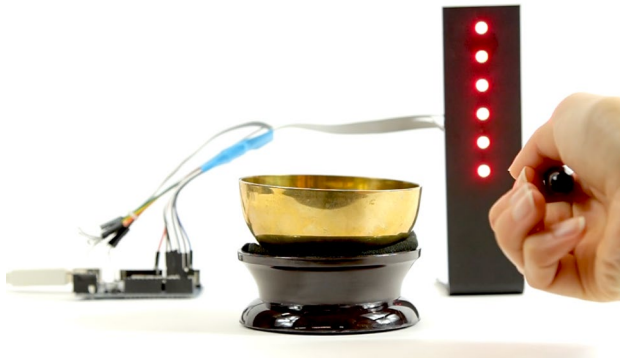
THREE EXPERIMENTS

We respond to the materialisation of the sound via the spectrogram and present here our three experiments: *The Bell*, *The Voice* and *The Beads*. Each tunes to the frequencies associated with an aspect of the chanting ritual, physicalises it and allows us to experience the machine's mediation of it.

Each experiment has been rapidly prototyped using combinations of *p5.js* (a web-based creative coding environment) to filter the sound from a microphone and the Arduino to physicalise the output. For each experiment, we provide a video, which demonstrates its temporal and audible qualities (see hyperlink).

When we start chanting together, the first ten minutes, maybe we are much more feeling kind of dis-harmonious, but towards the end, we are almost like one voice, gearing towards one direction.

Quote from one Buddhist member who participated in [4]



The Bell

<https://vimeo.com/842505753/b3216a4346>

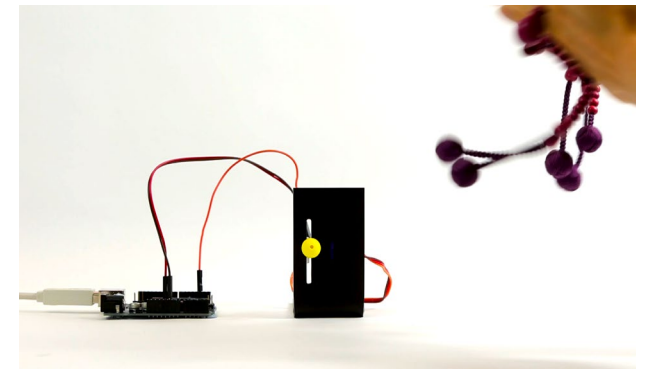
This experiment responds to the striking of the bell. Each LED light is tuned to one of the bell's constituent frequencies, as revealed by the spectrogram. The lowest fundamental frequency at the bottom is 500Hz and the highest harmonic, at the top, is 7.5KHz. This allows us to experience how different qualities of the strike and different room acoustics manipulate the sound of the bell. In the ritual, the bell continues to resonate as the chanting proceeds: both becomes enmeshed together.



The Voice

<https://vimeo.com/842505785/754d06b619>

This experiment responds to the chanting voice, such that the size of the yellow circle is maintained by the repeated mantra. As the spectrogram suggests, this is achieved by observing the energy at 160Hz. However, we expect that as we use it to explore different voices and the interactions between them, this frequency will alter in informative ways. This experiment was inspired by Kelly Dobson's Blendie [5], a blender that is controlled by the qualities of the human voice.



The Beads

<https://vimeo.com/842505732/39ec5ea538>

This experiment responds to the rubbing of the beads, causing the yellow mechanical bead to rise, indicating this event. Unlike the definite frequencies of the bell or the voice, the spectrogram shows that this action creates a high frequency noise from about 4KHz to 18KHz. This suggests ways to understand the phases of the practice, the rubbing of the beads here indicating the end of the opening sequence of the ritual.

RESONANT DIRECTIONS

Our materialisation of the ritual environment by the production of the spectrogram and our subsequent design experiments, draws our attention to the notion of resonance. We feel resonance helpfully expresses the measurable interplay of chants, sonic ritual equipment and the room's acoustics, whilst also allowing us to describe more poetically the experience between practitioners, who might be distant from one another. We reflect on our experiments and conclude that there might be ways of tuning-in to remote others to achieve resonance, using a radio metaphor. This direction demands that we now engage with related work e.g. [2, 7, 8, 9], of which Peter Bennett's exploration of Resonant Bits [2] seems particularly relevant.

To summarise, we responded to the DIS 2023 workshop call by exploring the experiential and multi-sensory aspects of Buddhist chanting practices. We presented three experiments that form part of the Buddhist chanting ritual with a focus on sound as a design material. Through our RtD approach, we identified the notion of resonance, which will inform our next stage of developing a series of tangible design research products that support meaningful techno-spiritual remote connections.

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