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In between: ghostly control through slowness and the relational

Benedict R. Gaster (he/him)

ECI Group, University of West of Engalnd, UK, benedict.gaster@uwe.ac.uk

***Abstract*—**

This presentation is about space and sustainability, exploring Massey's theory of space and how it can enform musical interface design. In particular, how something can be imagined from the old and remade anew.

***Index Terms*—** space, enviornment, music, interfaces

I. INTRODUCTION

Post-humanist theorists such as Haraway and Barad [1, 2] and their notions of entanglement and defraction, along with Massey's [3] theory of relational space, have long been adopted in the social sciences. Recent work has theorised a model of entanglement as a fourth wave for Human Computer Interaction (HCI), and this presentation explores incorporating Massey's notion of space into this understanding.

This presentation and its entangled interface is about space, from which old technology can be remade anew. About how not always pushing forward, instead adapting practices to fit within a modern existence, enables musicans, makers, and designers to draw on a shared history to create new pieces of art, machines, and most importantly space and entanglement within their emergence.

II. RELATIONAL INTERFACES

"Elegance is articulating the value of absence[1]"

Recent trends in Interaction Design often focus on visual feedback and touchscreen interactions in the context of musical interface design. Bak et al [4] proposed and developed an alternative foundation for design students, where they instead leveraged the potential of non-visual modes of interaction and provided them with tools and skills to develop complex multimodal, embodied experiences.

I argue that this focus on the non-visual highlights how, often, the screen is incorporated into instrument design without consideration for its material constraints. In the case of live musical performance, for example, it is a distraction and disembodies the actor, i.e. the performer and musician, from the process at hand, that of producing a tapestry of sound. Fixed physical interfaces provide for haptic feedback, location information, and fine grain control.

On the flipside the design, development, and maintaince of physical interfaces is hard, it requires resources, can be expensive, requiring specialized tools and labs, or can have a large environmental impact, for example, due to globalized manufacturing. In general, it is unsustainable to build specialised interfaces that have zero impact on the environment, but taking inspiration from Lepri et al [5], *what if* we put a stake in the ground and said this was indeed the goal? Is our greatest hurdle, in this regard, simply that we already consider the space for new musical interfaces closed?

Massey argues a relational space must be one where its history is not predetermined (or fixed), and thus multiple possible histories can coexist. What if we planted a note where the melody was not yet known, where the design and implementation of a new musical interface follows a simple set of rules (a *dogma*, if you will):

1. the interface must be 'representative';
2. only reclaimed or repurposed materials are used in building the interface; and
3. all materials used in building the interface can be reused or easily recycled at the end of its life.

What would these rules imply? Would they forge new paths of interface design? Would they encourage us, as designers to think about design in new and innovative ways? Would they make interface design unsubstainable? Would they focus design around reuse of materials, where sustainability, in all its guises, would be a key goal.

[1] Devine Lu Linvega.

III. REFERENCES

[1] D. Haraway, "A cyborg manifesto: Science, technology, and socialist-feminism in the late twentieth century," *Socialist Review*, 1985.

[2] K. Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*. Durham, NC: Duke University Press, 2007.

[3] D. Massey, *For Space*. Sage Publications, 2006.

[4] J. Bak, W. Verplank, and D. Gauthier, "Motors, Music and Motion," in *Proceedings of the Ninth International Conference on Tangible, Embedded, and Embodied Interaction*, Jan. 2015.

[5] G. Lepri, J. Bowers, S. Topley, P. Stapleton, P. Bennett, K. Andersen, and A. McPherson, "The 10,000 Instruments Workshop - (Im)practical Research for Critical Speculation," in *Nime 2022*, June 2022.