ResearchSPAce

http://researchspace.bathspa.ac.uk/

no mapping

mapping: an operation that associates each element of a given set with one or more elements of a second set.

We are used to decoding the visual display of quantitative information. The use of data graphics in newspapers, transport network maps, science textbooks, and many other contexts is commonplace and facilitates our understanding and interpretation of complex data. Edward Tufte notes that 'graphics are instruments for reasoning about quantitative information'. A map of Japan showing population densities is clear because there is a caption and key that explains what is largely self-evident in the map: colour shows the density of a parameter in relation to a bounded geographic space, and the key presents the specific context. We understand the map as an established construct that represents something in the real world, and use this as a starting point for understanding the mapping. But it is artificial and subject to its creator's aesthetic priorities.

Sound is also useful as a means to understand quantitative information, although it is less common as a medium for mapping data in a way that makes it available for interpretation. Auditory graphs that map data to sound provide useful analytical tools, whether they sonify gravitational waves or x-ray scattering data, helping us spot patterns in complex streams of information. But the question of the aesthetics of sonification presents a problem when this is framed as music. As Stephen Barrass and Paul Vickers note in 'Sonification Design and Aesthetics', whether a sonification draws on the language of, for example, tonal music or musique concrete, it is subject to the style's distinct aesthetic. When this mapping is presented as a kind of truth, suggesting we are listening to the sound of solar wind or climate change, this arbitrariness compromises both the data and the resulting music.

Although data mapping as music is a particularly problematic case given the misleading claims and associations it can create, the issue of mapping other domains to music can be equally compromised. When asked to hear paintings that are transcribed to manuscript paper for example, the mismatched spatial configuration of a canvas and page of staves renders any such mapping via a set of Cartesian co-ordinates spurious at best. Mapping can work in some cases where, for instance, the source can be coherently related to pitch and duration in a limited way and the resultant patterning is clear. I would suggest Tom Johnson's music is a good example of this approach. But in general the need to explain what is happening undermines the mapping. Where the elements being mapped from the source data generally have no tangible relationship with the context to which they are mapped it is all but impossible to hear any relationship: it becomes a piece of process music with a programme note to locate it. That is fine in itself, but the suggestion that we are hearing the data is misplaced. We need to be told what is represented by what we are hearing. It is this framing of the mapping which is where the problems arise for artistic representations of data. We can suspend belief and accept what we are told, but for me this is not sufficient if it cannot be heard without explanation.

translating: the process of moving something from one place or condition to another.

A different approach to engaging the world as music is translating, particularly in the geometric sense of moving something so that it maintains its integrity. Translational music compositions incorporate real-world material in a way that retains its integrity, autonomy and consequent relationship to the world in order to enhance our engagement with and understanding of the everyday. The musical discourse of these compositions is not purely abstract or self-referential and does not map data, but uses strategies such as framing, embodying and repurposing the everyday to create tangible connections with the world. In such pieces, the translation is not an abstract mapping or sonification, but, rather, recognisable materials and experiences from the world are translated directly into the work, with their provenance having an explicit impact on the audience's experience. Within this music the focus is on the everyday, with works drawing attention to the mundane, prosaic, and that which is ignored or discarded. Translating is concrete and evident. The elements being translated retain their form in observable ways and are present in the new context. Translating highlights the source, it does not obscure it. The substance of the original material

is at least partially retained in the new context. We do not need to be told what we are hearing and what it represents. It is self-evident.

I take this approach in my recent work that explores group behaviour. For example, *everybody doing what everybody else is doing* (2014) presents a similar decision-making problem to that which we face when standing outside two restaurants, where one is busy and one is empty. Should we choose the popular restaurant but wait to get served, or the empty one and risk poorer food? And what might another potential customer do an hour later when a shift might have occurred? In the piece, players choose either to join in with the most popular sound choice the group is playing, or do something different. The piece produces a chaotic swing between stable states, interleaved with moments of ambiguity. Players' individual choices within the constraints of the composition expand to create a global behaviour that is visible to the audience. We recognise this decision-making and hear it encoded in the behaviour of the players and the music it produces.

This attitude is also found in Steve Reich's desire to hear the process through the sounding music, or in Alvin Lucier's reflexive treatment of the spoken text in *I am sitting in a room*. More recently it is apparent in the co-presence of recordings and transcription in Peter Ablinger's *Voices and Piano* series, the physicality of hot air balloons in Michael Maierhof's *EXIT F*, the annotated commentaries of Joanna Bailie's *Artificial Environments*, or the use of mundane samples in Matthew Shlomowitz's *Popular Contexts*. It appears in work where the process is gradually revealed, such as Luke Nickel's *String Quartet No. 1,* Louis d'Heudieres' *Laughter Studies,* or David Pocknee's *New Fordist Speech Construction*. It can be seen in work where the physicality of human behaviour is foregrounded, as in Jennifer Walshe's *ALL THE MANY PEOPLS*, Natacha Diels' *Nystagmus* or my series *things to do*.

Despite a reliance on information from other domains in order to effect a translation, this work does not need an explanation in order for us to understand its relationship with what we see and hear. It might not be revealed instantly, there might be some mystery or opacity, but it is self-evident. Mapping associates elements in one set with those of another set in an arbitrary way. Translating moves one set of elements into the context of the other set in a concrete way. For me the benefit of this approach is that it makes direct connections with the world as the material of the work. It connects music with the tangible everyday. It embodies the world rather than represents it.

James Saunders, February 2016