

# Resisting the Algorithm or Chart-junk? Field mapping cultural history using visual metaphor

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**Abstract.** UK designers Dorothy have been mapping the history of music culture through their Blueprint series for 10 years. These prints all use a visual metaphor as a structural framework, an approach which can be critiqued as placing artistic preference over informative design. Yet recently their blueprint model has been appropriated by Google Culture and Arts as the interface to an immersive online exhibition *Music, Makers & Machines*, suggesting a subjective and authorial approach to mapping cultural history which is not only valid but may warrant critical examination. Bourdieu's Field Theory provides one such critical lens through which to examine visual maps and conceptual diagrams of this type, having been adapted by academics to present interesting ways to visualise in two dimensions the (often) complex mapping of people, artefacts, spaces and organisations across space, time, and concepts. This paper presents a reflexive exegesis of the design of Dorothy's Blueprints, placing their work in the context of a history of visual mapping and conceptual diagrams, whilst exploring and repurposing ideas related to Bourdieu's field theory as tools to further the visual analysis of their work, and is supported by interviews with Dorothy's designer-in-chief.

**Keywords:** Info-graphics / Field Theory / Mapping Culture / Conceptual Diagrams

## 1. Introduction

UK designers Dorothy have been mapping the history of music culture through their Blueprint series for 10 years. Their prints have grown from the relatively simple presentation of loosely grouped genres charting a few hundred electronic music artists to the more complex visual mapping of the history of dance music culture – drawing the dots between scenes, sub genres, clubs, record labels, artists and moments spanning 50 years and many continents. Although their posters are primarily commercial artworks, designed and sold for their aesthetic quality, they employ a model for mapping cultural history which can be examined from an academic perspective.

Since 2017 I have collaborated with Dorothy's designer-in-chief, Jim Quail, on the research and design of their *Acid House Blueprint*, its new editions, and associated

projects. Up until this point, Jim had worked alone, as researcher, author, and designer. The posters were his babies, and his process was his own. The collaboration uncovered several concerns, which from the role as an academic required further critical examination and explanation, specifically:

1. The strengths and weaknesses of using visual metaphor as a creative framework.
2. The issues of narrating the entangled history of a cultural scene which is hybrid in its very nature where most things are linked in some way to everything else.
3. The significance of the authorial role of the designer of these maps in comparison to more objective data-driven visualisation?

## **2. Methodology**

The approach to presenting an exegesis of Dorothy's blueprints is two-fold:

1. The blueprints can be situated within the context of a rich history of visual mapping and conceptual diagrams, and it is important to acknowledge this to draw comparisons and provide a historic underpinning for further analysis.
2. There are several ideas and tools that can be borrowed from cultural and social studies to analyse the design of the blueprints, such as field theory from sociology, entangled history from historiography and the rhizome model from cultural theory.

It is important to stress the reflexive and retrospective nature of this approach. I have a professional interest in the success of the work which does question my position as an objective researcher, and there is a risk of post rationalising the work to an extent that may present false narratives. However, collaborating closely with Dorothy has given me an insider's perspective, and privileged access to sources (Dorothy's process, opinions, and original artwork) which otherwise would have been difficult to uncover or use.

## **3. Exegesis**

### **3.1. Visual metaphor**

Formally Dorothy's blueprints all use a circuit diagram associated with the music or culture as a visual metaphor and a structural framework for the mapping to follow. A

diagram of a theremin is used for electronic music; an early transistor radio for alternative music; a guitar amplifier for rock and roll and a turntable for hip-hop. And in the case of the *Acid House Blueprint* (Fig. 1) the circuit diagram of the Roland TB-303 synthesiser (Fig. 2) that was responsible for the squelchy bass sounds that characterise the music. The visual metaphor also acts as a reinforcing signifier of the conditions required for a culture to establish and reproduce: “The circuit is dependent on all the components coming together at just the right time - in the right order.” (Quail, 2018)

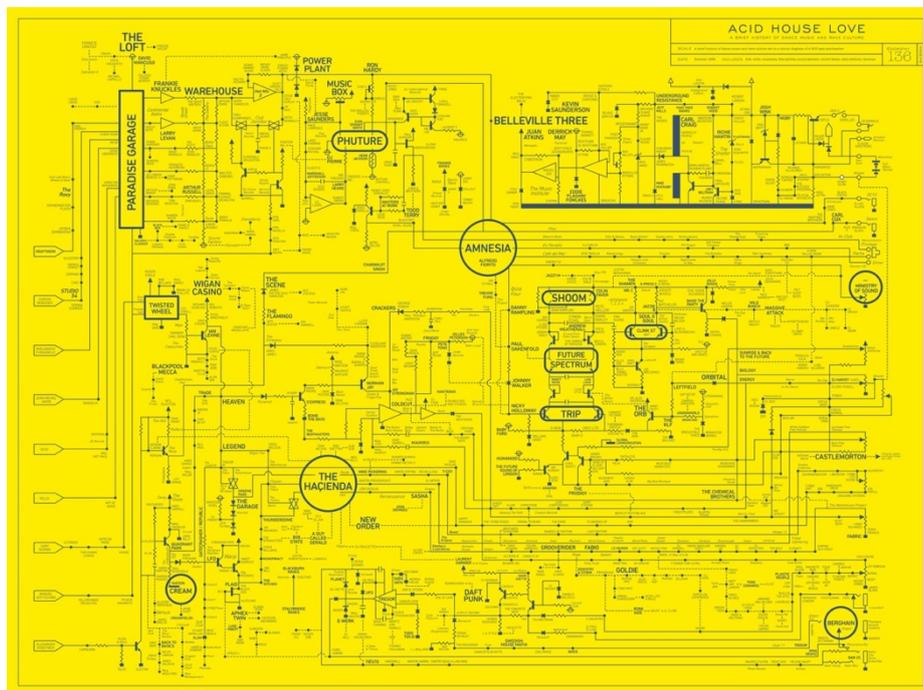


Fig 1. Quail, J & Mitchell, I, Acid House Love Blueprint, Dorothy, 2018.  
(<https://www.wearedorothy.com/collections/blueprints/products/acid-house-love-blueprint-a-history-of-dance-music-and-rave-culture-special-edition>).

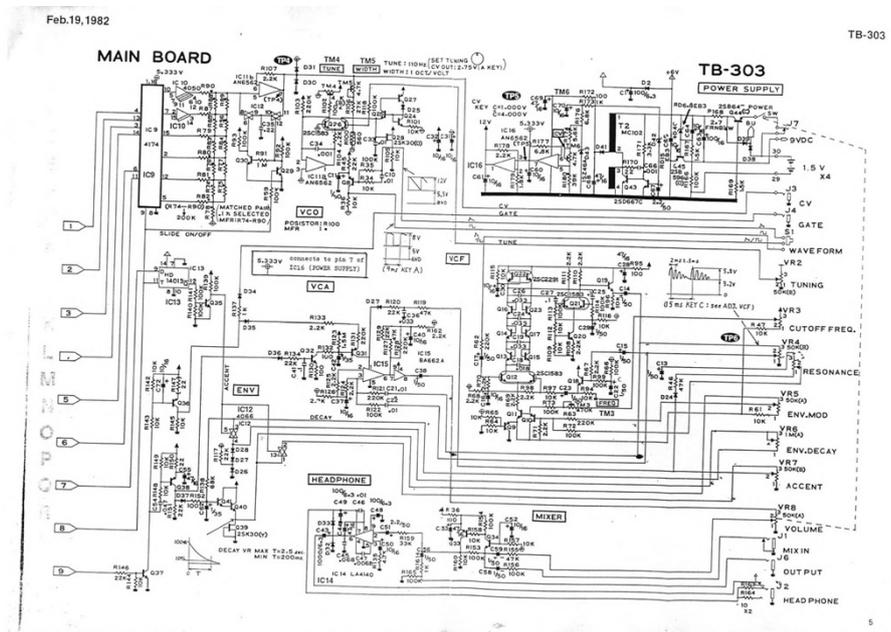


Fig 2. Roland, Roland TB-303 Circuit Board Diagram, Roland TB-303 Service Notes, 1982. (<https://archive.org/details/synthmanual-roland-tb-303-service-notes/page/n3/mode/2up>).

However, the use of visual metaphor to present information and data can be considered problematic by some. The approach has been critiqued as contrived and restrictive, placing artistic preference over informative design by information design critics such as Tufte (2001), who disparagingly calls the outcomes of this practice “chart-junk”. In defence of Dorothy’s approach their prints are presenting qualitative information rather than quantitative data. The organisation of this information into diagrammatic form is highly subjective. No two people would map a subject the same way. In fact, this subjective nature is central to the use of other mapping practices such as the perceptual diagrams used in marketing and advertising.

### 3.2. Historic context

In the art world the interconnected flow of art movements is often visualised in diagrammatic form, from Barr’s much referenced chart of modernist art history for MoMA’s *Cubism and Abstract Art* exhibition catalogue, to the same museum’s more recent interactive diagram for their show *Inventing Abstraction: 1910-1925*. These two examples (Barr, 1936 and MoMA, 2013) present a contrasting approach to the visualisation of similar information. Barr’s original visualises the history in the form of an evolutionary tree diagram, whilst the contemporary visualisation renders the data as an interactive network.

Evolutionary tree diagrams have been used for centuries in western culture to characterise knowledge as linear, centralised and hierarchical. An approach codified in the 'Figurative system of human knowledge' in Diderot's *Encyclopédie* (1752) which shows knowledge organised into three main branches: memory, reason, and imagination. This approach has been repeatedly used through-out the 20<sup>th</sup> Century to chart the historic development of creativity; for instance, Jencks (1986, p.23 and p.37) and Maciunas (1966).

Similar approaches have been taken to chart the field of music, from Pete Frame's *Rock Family Trees* to Jeremy Deller's art piece *The History of the World* (1997). Frame's *Rock Family Trees* focus on the lineage of the traditional rock music unit of band line-ups. They are hierarchical and linear and restricted to representing musicians as players within a narrow field. Deller's diagram at first looks the simpler, appropriating the visual language of a scribbled mind map rather than a virtuoso piece of art. However, the text that accompanies the artwork reveals there is much more going on.

"I drew this diagram about the social, political and musical connections between house music and brass bands – it shows a thought process in action. It was also about Britain and British history in the twentieth century and how the country had changed from being industrial to post-industrial. It was the visual justification for Acid Brass. Without this diagram, the musical project Acid Brass would not have a conceptual backbone." (Deller, 1997)

The metaphor of the mind map gives Deller the opportunity to produce a non-linear, decentralised, and non-hierarchical network diagram, which makes connections between artefacts and players across fields of power and culture.

### **3.3. Entangled History**

Deller's art piece can be viewed as an expression of entangled history (Bauck, Sönke, & Maier, 2015) – where cultural works are understood as resulting from entanglements between socio-political and artistic discourse – in this case acid house and brass bands and everything in between. The term describes an approach to history where everything is considered connected, culture is hybrid and reciprocal, and where everything is influenced by everything else. In historiography entanglement is the rejection of a European and Imperialist point of view in favour of "a trans-cultural perspective". (ibid.)

Although there are significant differences in the motivations and objectives of Dorothy's and Deller's work, similarities can be found. Dorothy's network approach has the potential to chart society and social difference, which is one of the main concerns of field theory – and a lens through which visual maps and conceptual diagrams can be further examined.

### 3.4. Field Theory

Proposed by French sociologist Pierre Bourdieu, field theory is a way of graphically mapping social fields to explain how members of different social classes may relate to culture. In *Distinction: A Social Critique of the Judgement of Taste*, Bourdieu sets the scene for the broader practice of mapping culture visually in diagrammatic form:

“The mere fact that the social space described here can be presented as a diagram, indicates that it is an abstract representation, deliberately constructed, like a map, to give a bird's-eye view, a point of view on the whole set of points from which ordinary agents (including the sociologist and his reader) see the whole world. Bringing together in simultaneity, in the scope of a single glance – this is its heuristic value – positions which the agents can never apprehend in their totality and their multiple relationships” (Bourdieu, 1984, p.93)

His basic methodology has been adapted by academics as tools to understand and chart a variety of other cultural or artistic production within the fields of media and journalism (English, 2016), the alternative press (Baines, 2016), visual art (Grenfell & Hardy, 2003) and the music industry (Cooke, 2020).

Although these field mappings prioritise sociological or ethnographic concerns and rarely consider the visual maps as the outcome or conclusion to their research, they do present interesting ways to visualise in two dimensions the often-complex mapping of people, artefacts, spaces and organisations across space, time, and concepts. For instance, Grenfell & Hardy (2013) in their mapping of the Young British Artists (YBAs) use an approach derived from Bourdieu's *The Rules of Art* (1996) to present both multiple timeframes and contexts in the same diagram – also a key feature of Dorothy's blueprints.

Grenfell and Hardy (2003) outline a three-step methodology to map cultural fields, which has informed the analysis of the blueprints and the deconstruction of the design process:

1. The Logic of the Field
2. Mapping the Field
3. Insider accounts as data

To understand the logic of the field, one must define its underlying structure – often using a two-axes scatter chart, like the perceptual maps already mentioned. At first glance, the *Acid House Blueprint* doesn't use 2-axes, instead using the circuit diagram structure. However, there is a loose timeline that can be overlayed along the diagonal axis, with a further axis exploring points in time that does show some similarity in form to Bourdieu's and Grenfell & Hardy's structure (Fig. 3). This timeline also reflects a

generalised history of the culture that in isolation can be critiqued as reductive and linear when the reality is messier and more nuanced – or perhaps “entangled” to use historiography’s term. However, this dominant narrative needs to be acknowledged as it exerts such influence on the logic of the field at the macro level.

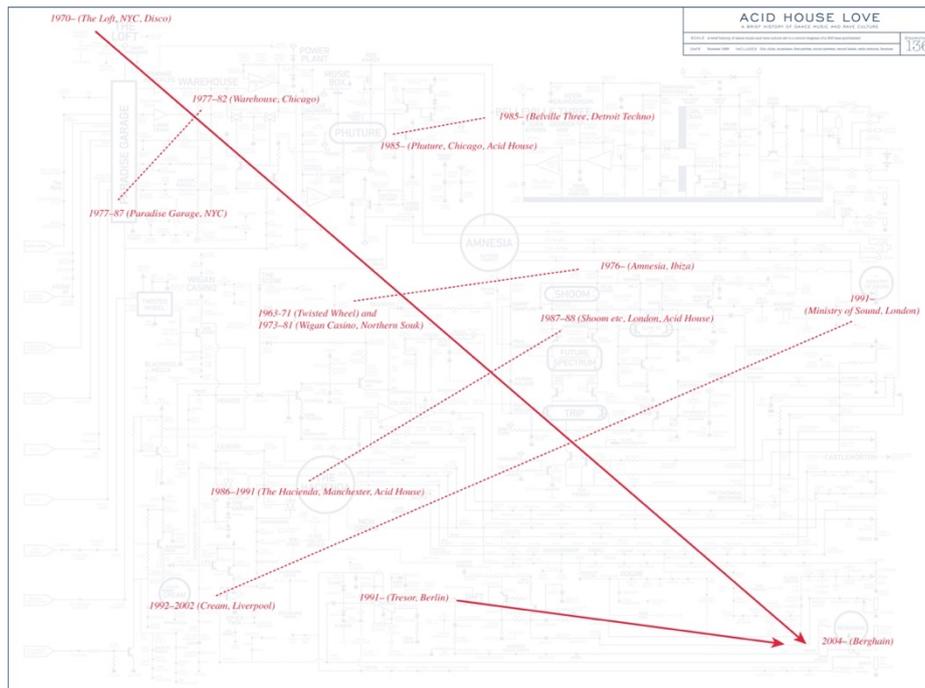


Fig 3. Mitchell, I, Acid House Blueprint, temporal (diachronic and synchronic) structure, 2022.

Mapping the field is in fact done at three levels: the macro, the mezzo, and the micro. The first macro level is concerned with mapping the field of power. In Grenfell & Hardy’s example this level maps the fields of culture, commerce and politics related to the YBAs. Analysing the *Acid House Blueprint*, the fields of power are an extension of the logic of the field, such as genres and geographic locations, rather than the politics, economics, and external social forces. However, there is some power at play. These genres and geographic fields are anchored mainly by clubs – the sites where the culture is played out – rather than artists. On the blueprints these anchors tend to be placed in circles or rectangles – the form for electronic transistors in circuit diagram language. This was an intentional break in approach from Dorothy’s other blueprints where the macro level is defined exclusively by artists. This allowed the mezzo and micro levels to be defined by the people that participated at the grass roots – the clubbers and the network of local DJs and club nights. Layering this visual analysis into one diagram (Fig. 4) shows some complex stuff going on at this macro level in the *Acid House Blueprint*, despite Dorothy’s limited awareness of it at the time of creation.

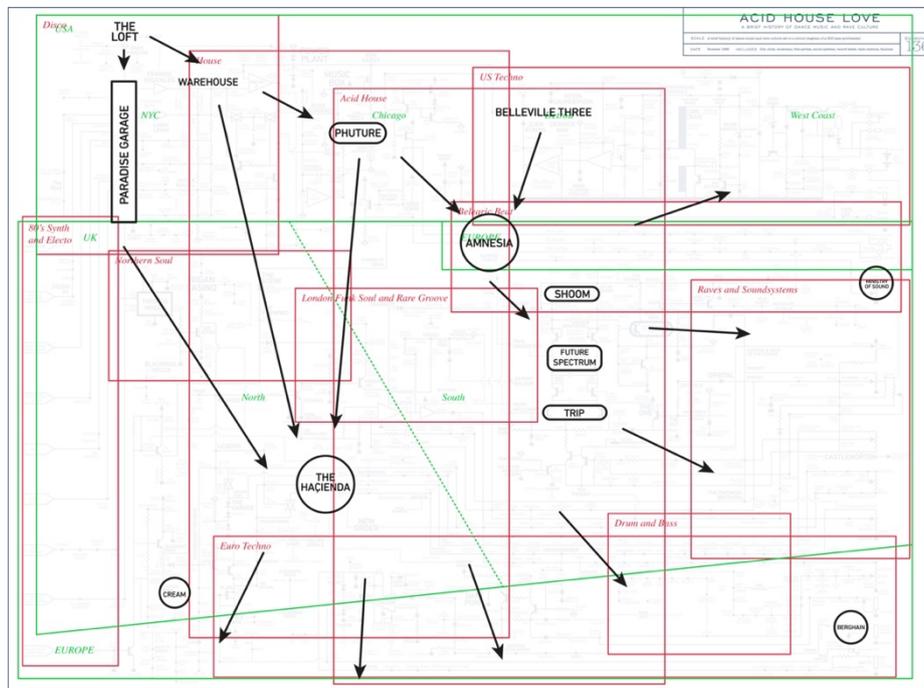


Fig 4. Mitchell, I, Acid House Blueprint, macro level fields, 2022.

Mezzo level mapping is more obviously aligned with Dorothy’s conscious approach. This process was primarily intuitive and reflexive and done by trial and error. What might be called heuristic in academic speak. The process was underpinned by my prior knowledge and lived experience – the clubs, events, and venues I experienced first-hand, and the records I bought at the time, with the gaps filled in by extensive reading and research. Each item was researched further by Jim to inform the translation of the research onto the circuit board framework. Fig. 5 illustrates the process of mapping the history of Northern Soul, from the macro anchor of the club (Twisted Wheel) through the mezzo level of key DJ’s and artists and the other clubs and people who were influenced by or surrounded them to the small details or insider stories. In the case of Northern Soul, it’s the three songs that were always played at the end of the night at Wigan Casino, known as the “3 before 8”. These micro narratives are important features of the blueprints. They are the things that only mean something to you if you were there. Only a few people might pick up on them, but they show that Dorothy has done its research. They also help flatten out the hierarchy of the mapping, placing things at the periphery in the same field of vision as key players.

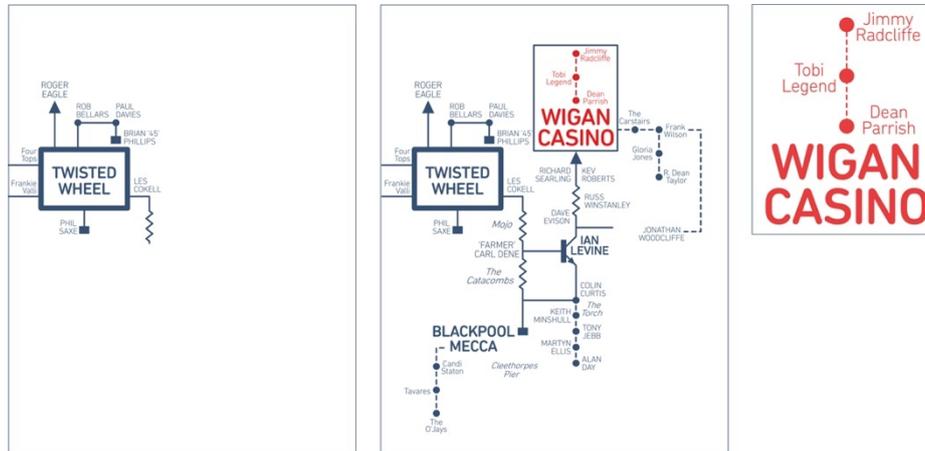


Fig 5. Mitchell, I, Acid House Blueprint, from macro to mezzo to micro level details, 2022.

### 3.5. Habitus

The micro level introduces one of field theories key concepts – the habitus of the agents and players. An individual’s habitus depends on various factors such as social class, education and past choices that influence their ways of thinking and behaving (Bourdieu, 1984, 1992 & 1996). This reveals the sociological origins and concerns of field theory. These factors have not been considered whilst producing the blueprints. However, there are factors that can signify habitus for this culture that could be used to inform the mapping, such as longevity, impact at the time, influence, scope, and commercial success. Crucially these can all be measured – some objectively (by units sold, chart position etc.), or a subjective value can be assigned to them. These metrics could then determine the scale of items in relation to each other, which is a feature of the blueprints that often lead to questions from the audience – e.g., why is Orbital set in a larger point size than The Chemical Brothers?

When questioned about this Dorothy are very clear – the simple choice of what point size to set an artist in is a key curatorial decision based on a range of subjective value judgements. Importantly the authors of the Acid House Blueprint (Jim and I) are the unseen agents in this map, who have our own dispositions and relationship with the field – our own habitus.

There are other features that could be used as a signifier of the habitus of artists. For instance, the distribution of artists whose practice places significance on a specific production value such as a bass sound; or artists who used the acid house sound of the 303 synthesiser (Fig. 6). Both show how entangled the culture can be.

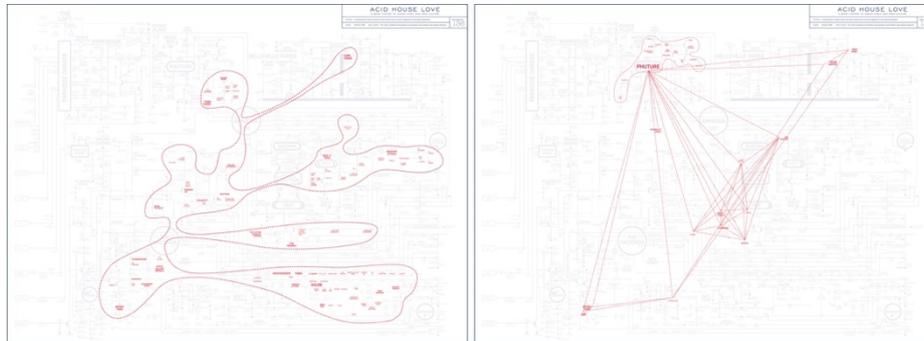


Fig 6. Mitchell, I, Acid House Blueprint, production factors influencing the habitus of artists within the fields, 2022

### 3.6. Rhizomes

The field is not the only model for mapping culture that is so entangled and potentially dynamic depending on viewpoint. The rhizome, as defined by French theorists Deleuze and Guattari (1987), is one such model.

“As a model for culture, the rhizome resists the organizational structure of the root-tree system which charts causality along chronological lines and looks for the original source of ‘things’ and looks towards the pinnacle or conclusion of those ‘things.’ A rhizome, on the other hand, ‘ceaselessly established connections between semiotic chains, organizations of power, and circumstances relative to the arts, sciences, and social struggles.’ Rather than narrativize history and culture, the rhizome presents history and culture as a map or wide array of attractions and influences with no specific origin or genesis, for a ‘rhizome has no beginning or end; it is always in the middle, between things, interbeing, *intermezzo*.’ The planar movement of the rhizome resists chronology and organization, instead favouring a nomadic system of growth and propagation.” (Deleuze and Guattari, cited in Heckman, D, 2002)

The idea of any map of culture being just a snapshot, one layer of a greater body, which could be re-configured in different contexts, resonates with our emerging understanding of the model of the blueprints.

A traditional reading of the map would suggest that clubs and artists that are positioned a great distance from one another would have little in common. Yet there are connections, which a rhizomatic form can resolve, with the connections folding the map in on itself (Fig. 7). Any one of the points can be moved into the centre. In this case the Berlin club Berghain which is very much at the centre of the current club culture. The map can then be rebuilt around it, somewhat like the alternative versions

of maps of the world which place China and East Asia at the centre. Both uncover the myth that maps provide an objective and scientific depiction of our world, whether physical or conceptual.

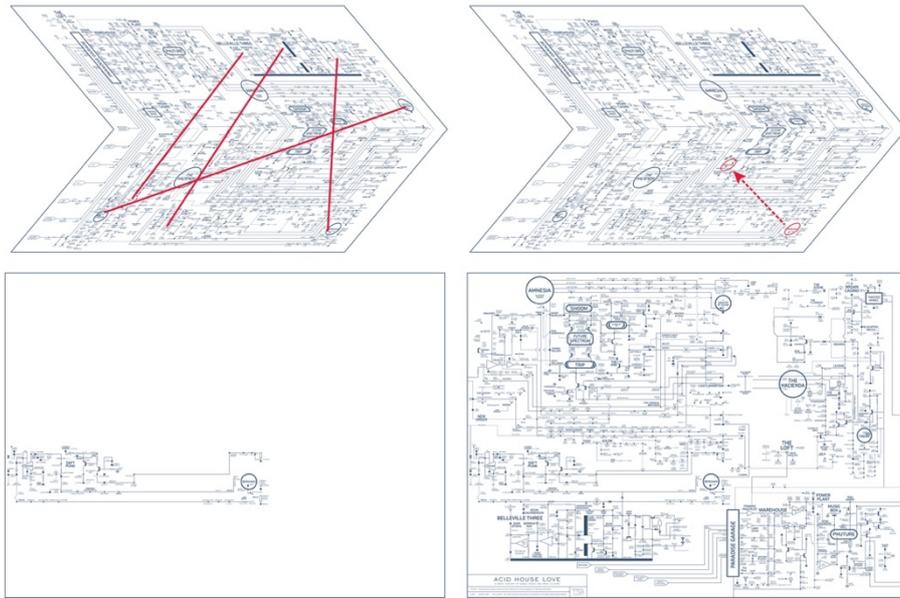


Fig 7. Mitchell, I, Acid House Blueprint, rhizomatic re-centring of the field, 2022

Fields can also be traversed in rhizomatic form. Fig. 8 visualises all the items on the acid house print that are also on the other blueprints. Viewing the blueprints in this way can draw out some of the deeper issues the maps may present for different readers – for instance a musicologist may be able to take insight from these visualisations.



Fig 8. Mitchell, I, Acid House Blueprint, rhizomatic traversing of the field, 2022



Fig 9. Dorothy and Google, Music Makers Machines, website interface, Google Arts & Culture. (<https://artsandculture.google.com/project/music-makers-and-machines>)

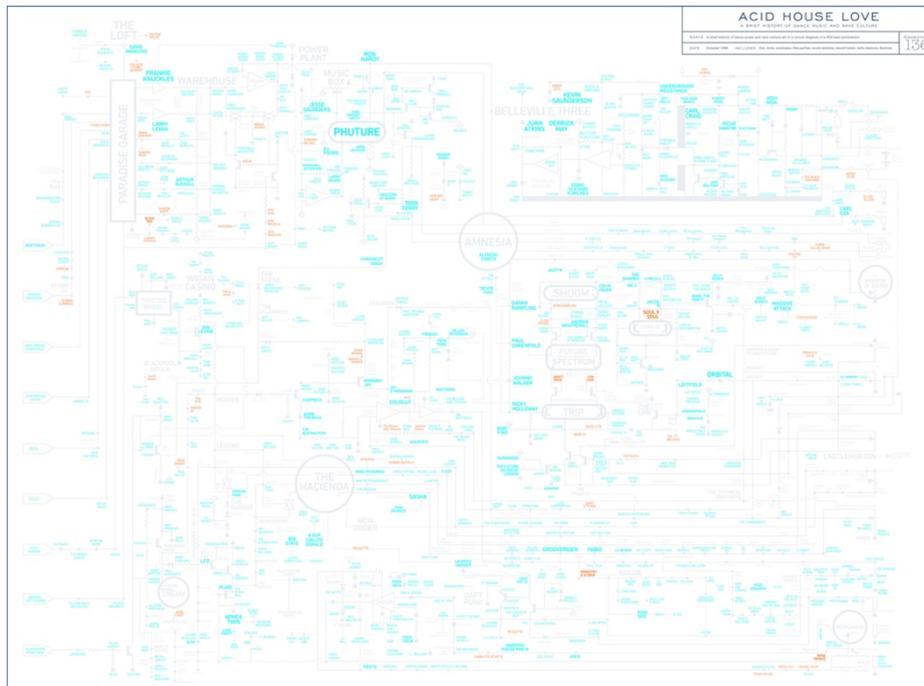


Fig 10. Mitchell, I, Acid House Blueprint, representation of women and men, 2022

The interpretations of the cultural theories used to analyse the maps are just that – interpretations – and may not stand up to scrutiny by a sociologist or cultural theorist, however, from a personal and reflexive perspective, they have been useful in helping to understand certain features. First it revealed what Dorothy (James and I) did intuitively. Secondly it suggested ways to read the maps and their potential as learning tool. For instance, Fig 10. maps the representation of women and men across the cultural field. A similar analysis of the representation of people of colour, or more nuanced gender representation and inclusion could be explored – but would need far greater research. Finally, it has challenged us to explore more methodological approaches, whilst offering lots of justification to remain loyal to our subjective and intuitive process.

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