

COGNITIVE REDIRECTIVE MAPPING: DESIGNING FUTURES THAT CHALLENGE ANTHROPOCENTRISM

DESIGN AND ITS WILD CARDS

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ABSTRACT

Humanity is facing, at both global and local levels, unprecedented challenges as the future, a by-product of modernity, hurtles towards us. These future challenges are complex and world changing and include, but are not limited to, climate change, population growth, increasing poverty, the continuation of colonialism, war and the effects of technology. As designers we need to make use of the power that design holds not just to recognise, consider and design for these futures that we are facing but equally, to design for the ontological redirection of destructive future scenarios.

To address these destructive futures and harness the transformative power that design holds new design thinking approaches need to be developed and explored. This paper will explore the use of Cognitive Redirective Mapping as a design thinking approach. Cognitive Redirective mapping has been designed as a process that challenges our destructive, anthropocentric being-in-the-world through an exploratory approach to the production of knowledge that traces relational impacts of things with regard to their indivisible relation to the creation and destruction of a future for our species.

INTRODUCTION

People have been mapping for thousands of years. What is mapped and the visual form it takes is informed by the information processing epistemologies of the time. The historic trace of mapping gathers and is present in the mapping methods of today. This is clearly evidenced in the history of tree maps, traced back to the Porphyrian tree of the second century based on Aristotle's categorisation of nature (Lima 2014, 27). This lineage can be traced forward to the tree maps of the High Middle Ages, a result of the burgeoning fascination with the categorisation of knowledge, through the Renaissance and a continuation of the Medieval emphasis on visual ways of understanding knowledge through the Enlightenment where a faith in science and reason was explicit in clearly defined, quantitative, diagrammatic maps. (Drucker 2014, 25)

This mode of mapping and categorising of knowledge has been beneficial for both western modernity and modern society. However, this method has equally been instrumental in the destruction of knowledge, not least through the logic of coloniality that denied the validity of other forms of knowledge and their use in the manifestation of patterns of information, for instance, through storytelling, dance, narrativised visual mapping and other forms of knowledge production (Mignolo 2011, 206) displacing and demystifying 'older kinds of transcendent narratives.' (Jameson 1990, 2) The affect of this has been a lack of recognition of relational pattern thinking retained in many of these ways of knowing. Yet, the ability to think relationally is becoming increasingly necessary when faced with future challenges such as climate change, population displacement and the depletion of resources.

In the maelstrom of Enlightenment's superstructural legacy, namely the propulsion of modernity providing the justification for coloniality, there have been continued attempts at representing the dialectic

between everyday human lived experiences in place and the conditions of local and global existence in that experience. Psychosocial cognitive mapping, in this sense, is what Colin McCabe describes as ‘the metaphor for the processes of the political unconscious...and the model for how we might begin to articulate the local and the global.’ (McCabe in Jameson 1995, xivv) However, today’s global social complexity has made it increasingly difficult to cognitively grasp our psychosocial lived experiences. Jameson argues that we lack ‘cognitive mapping’ skills to address the diabolical future challenges that we face, or the means to make our own world intelligible to ourselves through a situational understanding of our own position (Srnicek 2011). Jameson’s work critiques and extends on Kevin Lynch’s ‘Image of the City’ to state the need to identify effective aesthetics and representations not only of cognitive mapping as an individuals relation to the city (psychogeographically) but instead as their relation to an entire social system (psychosocially) (Srnicek 2011).

The subjugated pressures of today, 25 years after Jameson’s call to action, are not only more difficult to ‘see’, but are increasingly threatening ‘a future’ for sustainable lived experiences. This recognition directs an imperative to explore ways beyond linear, logocentric, textual form that combine cognitive thought processing with visual forms to produce knowledge that can navigate paths through a problem and draw things—causalities, concerns, appearances and gatherings (see Figure 1)—together in order to contribute to redirecting destructive futures. In response to this and in recognition of the ability, held in other ways of knowing, to think relationally we are interested in exploring a decolonial aethesis; a rejection of imposed colonial aesthetics (Mignolo & Vázquez 2013), that is capable of inscribing a sense of the complex global colonial system. This offers the potential to challenge existing, dominant modes of thinking about the world leaving open the possibility to approach future challenges from perspectives that are potentially less anthropocentric and more capable of sensitivity to ecological and social complexity. We are critically conscious of the

problematic of representation of a cognitive map’s trace left behind simply as an image or spectacle where the referent disappears, as Guy Debord and Jean Baudrillard warned us it would. Equally, we are against a cultural authority of objectivity or an assertion of the aesthetic conception of a global social totality, both of which are of course unrepresentable.

MAPPING TODAY

There are broadly two areas of cognitive mapping today: Psychosocial mapping and Psychogeographic mapping. However, the idea of cognitive mapping can be traced to Edwards Tolman’s 1948 paper Cognitive Maps in Rats and Men. Cognitive mapping was further developed in the 1960s when it was applied to psychogeographic mapping, which developed at this time along two quite divergent paths. Kevin Lynch was conceptualising psychogeography for purposes of and within the confines of city planning. At the same time Debord and The Situationists were exploring alternative modes of psychogeography in their dérives of Paris streets. They were letting themselves be drawn through the city by the city, rooted in surrealism and a commitment to dialectical materialism (Wood, 2010). Both forms of mapping however, suggest an emphasis on the current circumstances of lived experiences in the city for the now, as does much of the psychogeographic counter cartography and critical mapping drawn from these canons today. Layers of past, present and future, along with an understanding of the relations of the local with the global in any lived experience are often neglected.

While psychogeographic mapping maps human interactions with space psychosocial mapping maps patterns of thought relating to social phenomena. An example of psychosocial mapping today, that has good intentions yet remains flawed, is Robert Horn’s Mess Mapping (Horn & Weber 2007). Horn’s maps of wicked problems are representative of a common failure to recognise dominant Western narratives of assumed neutrality and distance as mapmaker.

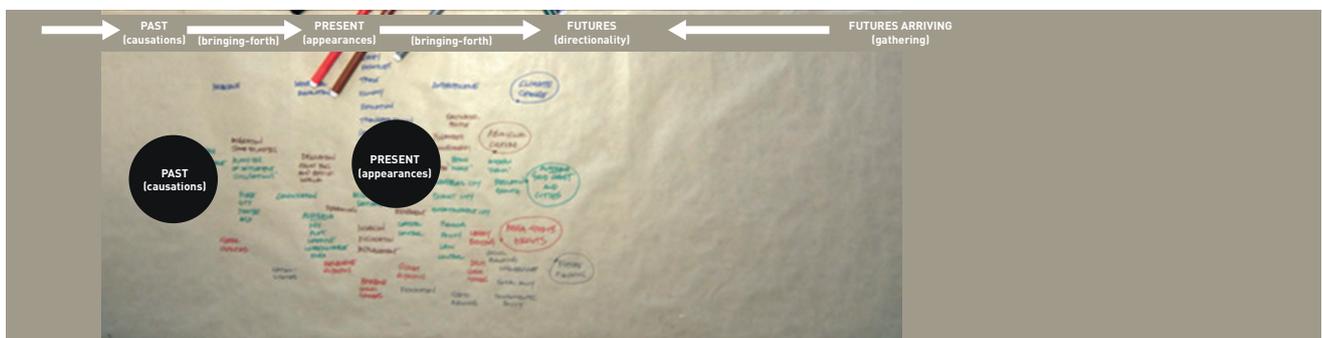


Figure 1: The map is guided by ‘Pasts (Causations)’ bringing forth into ‘Present (Appearances)’ and ‘Futures (Gatherings)’. The present is mapped first. At least three narratives might be explored. The narratives named in the present depend what the map is trying to explore, past examples have included waste, youth migration and drought. These are then tracked back in time to name what in the past might have caused their appearance in the present. The map can look as far into the past as is necessary. For example, many of the authors’ maps look at least as far back as Western Enlightenment

Using default suites of clip art icons, colours and pictograms in multiple contexts fails to recognise that those elements design back on the reader of the map, therefore designing their perception of the content and context. Just as there is no universal truth or finality in a wicked problem, there is no universal visual language in which to map diverse cross-cultural complexities. To design with neutrality is to neglect the presence of the ontological agency of the visual language being employed.

These examples illustrate good intentions tarnished by traps of Eurocentric modes of map-making. However, one may be sympathetic of the fact that there also remains little to no grounded research in a decolonial aethesis (Mignolo & Vázquez 2013) that navigates these traps. Peter Hall begins this process when he speaks of a need to move toward a synthesis of an artistic, scientific and journalistic interpretation and making of maps (Hall 2011). In this vein, Cognitive Redirective Mapping, as outlined below, has been developed with the aim to contribute to visual forms of knowledge production through *praxis* that avoids aesthetic fetishisation, totality and objectivity. The practice draws on the history of cognitive mapping but adds the objective of redirection to the mapping process: a cognitive redirective map

is drawn to explore alternative futures that challenge anthropocentric, objective and often Eurocentric worldviews. It is through doing this that the maps encourage those engaged in the mapping process to be sensitive to biological and cultural diversity.

COGNITIVE REDIRECTIVE MAPPING

In this paper, and in our work, we are primarily focused on psychosocial cognitive redirective mapping. Mapping used in this way aims to redirect unsustainable practices that take the future away (defuture). Cognitive Redirective Mapping (CRM) has been designed to do more than just make the invisible visible; map patterns of information. It is designed, as a process, not as a reductive ‘tracing’, or a reproduction of what is already known but rather aims to uncover connections and relations previously unseen as well as realities previously unimagined. CRM is not conducted in order to merely identify what is known but to imagine, through informed knowledge, what is brought forth (see Figure 2) and gathers as directionalities of future circumstances (see Figure 3). Mapping in this way enables the potentiality of complex challenges to be located, remaking the way those engaged in the map are

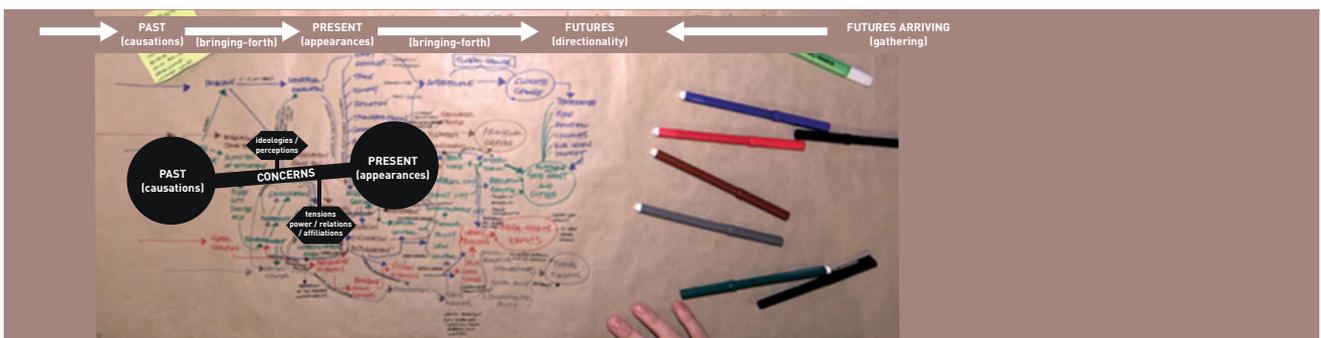


Figure 2: To connect the past and present the mapmaker focuses on locating matters of concern, or that which was ‘bringing forth’ the appearance of the scenario into the present. Concerns may include perceptions, ideologies, power relations, political and social affiliations, relationships and wounded spaces. Cross-causalities, such as climate, technology and demographic often relationally slice through all of the narratives being considered, creating a web of relations, as do concerns. Identifying causalities and cross-causalities involves the naming of ‘things’, the concerns that connect causalities affect ‘things’.

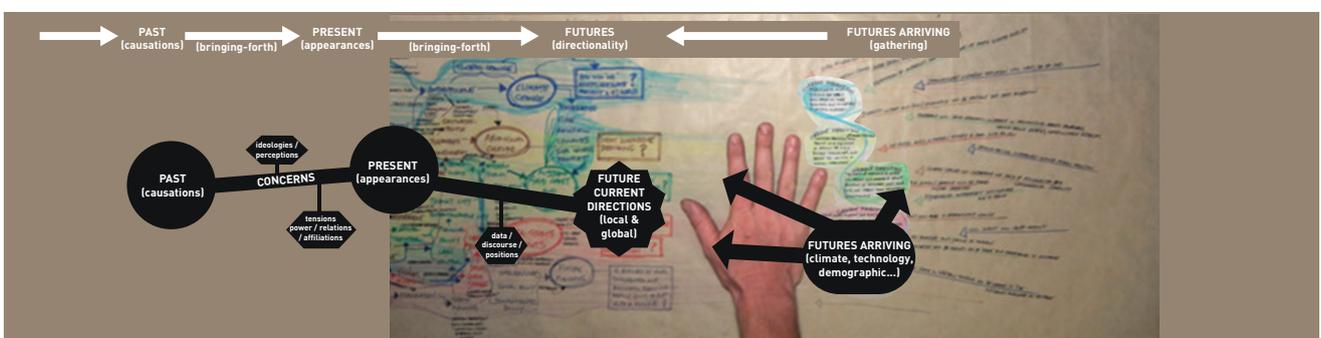


Figure 3: As the map unfolds it becomes possible to develop an understanding of how causalities, through concerns, are bringing forth appearances, which inextricably, is an explication of how the scenario/s are gathering in the future. This is better understood at both a local and global level. If nothing were to change, no interjections or redirections, there is a current direction that we are heading towards. This future is drawn from an understanding of the already mapped past and present. As well as current directions travelling forward that can be drawn into the map, there are future challenges travelling back; arriving. The future is full (not empty) of current directionalities. These directionalities can be drawn into the map by pointing back towards the present. Future directionalities are informed by concerns such as data (scientific analysis) and critical discourse (ethical and philosophical analysis). The mapmaker can then ‘see a clash’ where destructive futures arriving collide with current directions.

able to see the world and therefore unfolding a variety of previously unrecognised possibilities.

If we recognise that maps are not neutral, they are performative, participatory and political (Crampton 2009), maps are no longer to be understood as object, but rather as practice replete with actors. In this way Actor-Network Theory (Latour 2007) is a fitting approach applied in that CRM explicates powers at play between human and non-human actors as matters of concern and as webs of relations. There are no definitive realities, no imposition or assertion of truths, only actors. This begs further qualification and what follows is our attempt at developing guides of *praxis*, while moving beyond previously mentioned traps, when mapping. CRM seeks to take into full consideration five areas; Sustainment, the ‘thinging’ of the ‘thing’, the intercultural, design as a hermeneutic practice and working alongside the method of design fictions in order to envision, and therefore design for, a future with a future.

SUSTAINMENT

While recognising that people view the world from multiple and varied perspectives our CRM practice focuses on future scenarios, such as climate change and the effects of technology, aiming to redirect our trajectories away from that which takes time away; defutures. This process of redirection is informed by Sustainment. The position taken here is that alternative futures need to be futures of sustainment. Sustainment is understood as an alternative response to sustainability, countering the defutured futures that we are facing and recognising that unsustainability and our anthropocentric way of being-in-the-world is not a choice but a structure of our *habitus* (Fry 2009). CRM is used as a tool to identify these structures and their historic causations with the aim of redirecting them. When mapping from this perspective, we confront anything that negates time; that negates a future for humans and the biophysical world on which we depend.

THINGING

This framing of a new time demands that we recognise the ‘thinging’ of the ‘thing’ at the level of Martin Heidegger, who in 1924 wrote ‘time is that within which events take place’ (Heidegger 2008). Things have a life; they live in time, as a ‘nominated time of their operative existence.’ (Fry 2012a) All things come and go; they are an event as well as an object. This understanding recognises that things are performative, they are indivisible from conditions of the everyday that they populate and in which they function; how they function changes over time. In recognition of this we aim for a particular method of visual manifestation that takes into account the ‘far’ past, brought-forth into the present, as ‘things’ that gather into the future, well

before and beyond their often short-term operative existence. Heidegger’s modes of causality are central to this understanding (Heidegger 1977, 7-10).

Where thinking of things in time might once have needed affording only philosophical pondering, we are at a point where a recognition of the finitude of our anthropocentrism is increasingly obvious. Our human-centred way being-in-the-world and bringing into existence things of human fabrication and prefiguration is illustratively presenting itself as taking away time, most evident in climate change. This realisation demands a new relationship with things and more exploratory approaches to tracing relational impacts of things with regard to their indivisible relation to the creation and destruction of time, a future for our species. Implicated in an investigation of things, we recognise there is no universal time, nor a universal truth embodied in a thing other than what we humans have invented for it (Kuhn 1962). This anti-foundationalist position is taken as a direct contestation that knowledge might be ‘founded’ in our maps upon a basis of traditional, absolute certainty; there is no certainty in our maps, no universal truth or universal time in our interrogation of things. Every thing has its time. CRM interrogates which thing, which time/s embody it and which human and non-human actors are implicated and with what agendas in mind. From this interrogation it becomes possible to see how this web of relations is or has been integral in the creation or destruction of time.

THE INTERCULTURAL

Anti-foundationalist perspectives inevitably allude to an intercultural perspective of making a cognitive map. A rejection of neutral, objective or homogenous ideas in the map-making process allows for a fecundation of other cultural contexts in which one is dealing with in mapping. For example, mapping with Aboriginal Australians in contemporary ‘yarning circles’ exploring Indigenous Knowledge (IK) one of the authors drew together non-linear conversations that entail patterns of information able to be visually ‘tracked’ in a cognitive redirective map, while honouring the conversation with a visual form that relates to the layered nature of the conversation. Moreover, honouring with respect, that for other cultures, knowledge is not considered as it is in the West, as something freely acquired. It is something that might be only respectfully shared with or passed down to those who show suitability to receive the knowledge.

There can also be an opportunity to learn from others’ philosophical and ontological modes of enquiry that can then be integrated into a map. This was the case when one of the authors found commonalities-in-difference between a Canadian First Peoples knowledge map that explains respectful knowledge production, with that of the ‘hermeneutic circle’ and was able to map patterns in a conversation that integrated both bodies of knowledge,

taking into account alternative scales in conceptions of time and space between ontologies. This sensibility of intercultural understanding through decolonial thinking when producing a map allows borders to be transgressed between ‘Global North and South’ ontologies, i.e. between Western and Indigenous explanations of being-in-the-world. CRM aims to inquire interculturally through this kind of ‘border thinking’, explored in detail by Walter Mignolo (2011).

HERMANEUTIC PROCESS

CRM recognises that design is a hermeneutic practice; ‘we design our world, while our world acts back on us and designs us.’ (Willis 2007, 80) This circularity is not a closed loop but a hermeneutic circle. It is the hermeneutic circle, the process by which interpretation transforms meaning and the condition of possibility that this creates, which explains how our ontologies are structured. We are structured by our world (world here is not ‘planet earth’, nor wholly individualised, subjectified spaces but ‘circumscribed, situated and multiple’ (Willis 2007, 84), this designs how we act in, on and towards the world which in turn structures our world, and so on. It is this process that provides the conditions and possibility of change.

Recognising that design is a hermeneutic practice that effects both the designer, those human and non human actors who come into contact with the design, directly or indirectly, and the world, all to varying degrees, depending on what has been designed, is important in the process of CRM for a number of reasons. Firstly, it makes it possible to see how the past is brought forth and gathers in the future, to see the historic roots of defutured futures. Secondly, CRM engages the map maker in a process of making marks (lines, nodes, blobs, scribbles and words) in conjunction with where their minds traverse when thinking about their own lived experiences and conditions of local and global existence in that experience, thereby situating oneself in the drawing out of webs of relations and concerns. Thirdly,

a hermeneutic interpretation provides the potential for change; for new paradigms, new patterns of thought and ways of being-in-the-world. The ability, as designers, to work in recognition of this gives us the ability to bring into existence otherwise incommensurable visions of futures based on multiple cosmologies and ontologies; through pluritopic hermeneutic thinking. (Mignolo, 2013) These previously incommensurable futures then open previously unconsidered design opportunities. These considerations inform not just our approach for mapping but also more broadly, our approach to ontological design and form the basis for redirective practice.

DESIGN FICTIONS

Design fictions, also referred to as design scenarios, are utilised in conjunction with CRM to bring into existence and make believable alternative visions of the future (see Figure 4). Scenario building through fictions puts options on the table that can no longer be ignored. They provide realities to work towards, offering identifiable, humanised, emotional character loaded narratives. Design fictions are a powerful transformative design method frequently employed today by companies such as Intel ‘to create narratives based on their advanced research.’ (Willis 2014, 154) While using fictional futures for design has a history that can be traced back to Plato (White 2015) in their modern form they have been used to display desirable future visions that were adopted by many wealthy nations in the early 20th century such as Tony Garnier’s Cite Industrielle, Norman Bel Geddes’ Futurama and Henry Dreyfuss’ Democracy. When these utopian visions of the naturalised-artificial urban dream turned to realities they have proved to be highly unsustainable.

The defutured future, a product of Western modernity and enabled by the use of fictions to create defuturing desires, forces us to imagine a different way of being, politically, economically, and culturally. The intention of design fictions in the CRM context is to

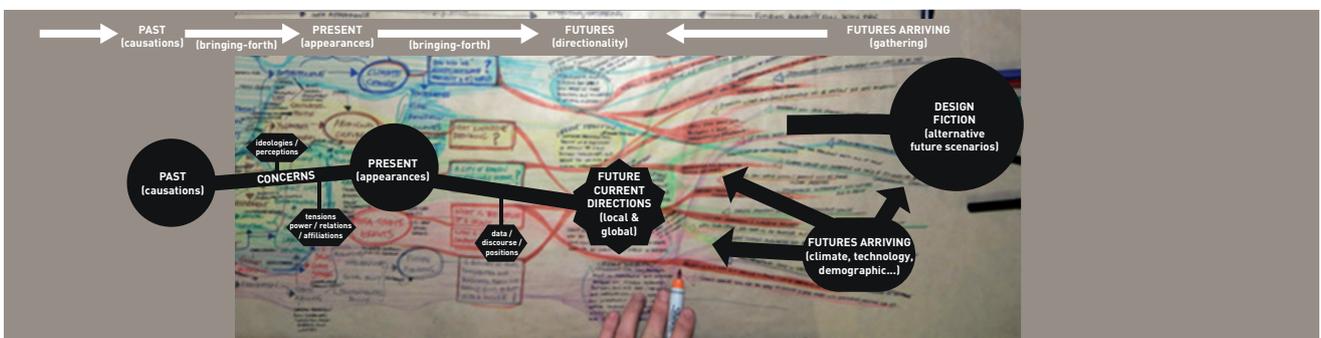


Figure 4: The collision in space and time between current directionalities and future challenges arriving is now a built scenario/s on the map. The intention of the cognitive redirective mapping process is to depart from the current direction and its clash with futures arriving. Something needs to be put in place to traverse this clash. This is done using the informed knowledge drawn into the map to build a Design Fiction of desirable futures. These fictions are not utopian; they take into consideration the futures arriving and are typically set at least two decades into the future but can look forward at least a century.

contest the imagining of a utopian universal future informed by the logic of coloniality and covered up by the rhetorical fiction of modernity. CRM *praxis* is to think pluritopically, to dwell in the border, scenario building plural futures in a world entangled through and by the colonial matrix of power (Mignolo 2013) As such, design fictions need to be able to work with the dialectic of Sustainment, that to create we must destroy and vice versa, and so must imagine what has to be prevented or avoided whilst at the same time imagining what has to be created in the aftermath of modernity. (Fry 2012b, 191) As was recognised above design is a prefigurative process and design fictions provide a useful tool to begin creating a new narrative about the sort of futures we want as well as some of the means to begin getting there. They provide the ability to ‘put on stage’ possible futures, stimulating democratic and productive discussion between various social actors (Manzini & Jegou 2013). Design fictions provide a way to think about the future in a situated way and provide tangible scenario’s that take into account what everyday life might look like. These fictions offer the potential to be designed back from. Anne-Marie Willis describes “designing back from the future” as ‘a prompt for designing now – for designing processes and things that could contribute to the arrival of preferred futures.’ (2014, 159)

While design fictions, written, spoken, mapped or otherwise, provide glimpses of possible futures like all stories, constructions of knowledge and unfolding of potentials, they are always appropriated from previous interpretations and perceptions of the world. They are always a causation of the past brought-forth into the present into appearance and gathering into the future, they are always informed by a worldview. Design fictions suit being drawn out through all stages of a CRM. Following the approaches outlined above, a rigorously populated CRM with located future design scenario potentialities places one in a position to begin a process of Ontological Design (Willis 2007) in order to begin the redirection identified as necessary (see Figure 5).

THE ACT OF DRAWING THE MAPS

What has been spoken about thus far can be regarded as a positioning of the theoretical framework that informs the *praxis* of drawing Cognitive Redirective Maps. What has not been reflected on is the way these maps are hand rendered and why. CRM employs a lo-fi, analogue performative drawing of assemblages (Latour, 2005) represented as visual schemas, such as blobs, lines, visual ordering and hierarchy. Through this creative expression of visual knowledge production patterns of information and ways of understanding, previously hidden in logocentric forms of knowledge production, can be identified.

In contrast to technical perspectives and celebrations of digitised critical visualisations by practitioners such as Edward Tufte, CRM elevates the value of visually ‘drawing together’ (Ingold 2011) by hand, important in two ways: a) it elevates the value of human cognition moving through the body to the hand as replete with performative qualities that sustain hand skills rather than mediated by software tools and, b) sustains a relation to mapping within reflexive, messy and phenomenological scales of time and space. This approach to visual knowledge production, also explored by Drucker (2014) in her call for a humanist approach to mapping, contests Cartesian logics of time and space and scientific rationality all too present in contemporary information visualisations.

Finally, drawing together patterns of information, performatively by hand has shown in participatory sessions to be a strong mediator to break down barriers between visualisation as designer and visualisation as public participant, democratising the process. It becomes accessible to groups at various levels of engagement and enables opening of conversations via the pen and hand. It is a creative methodological process, which simultaneously acts as participant capacity building and research gathering.

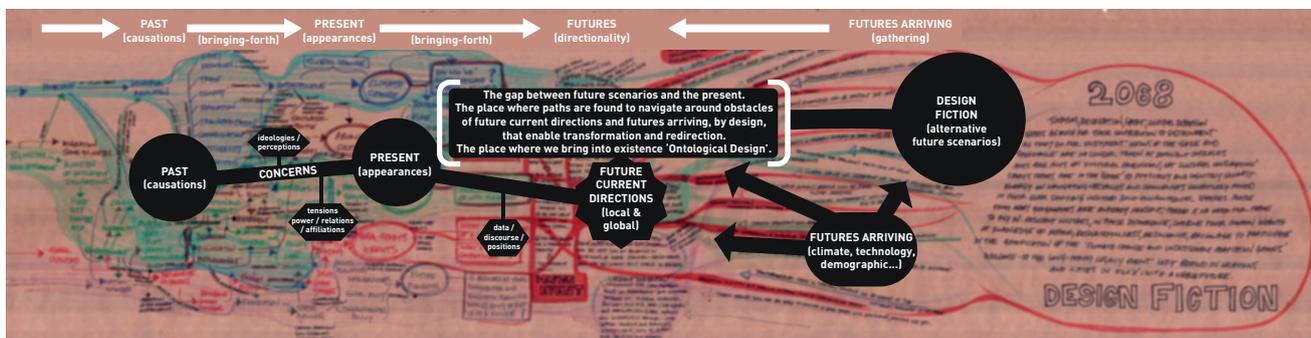


Figure 5: It is at this point that the focus of the designer shifts away from the map and instead towards filling the gap between the futures imagined in the design fiction and where we are in the present. Redirective actions can begin to be located in the form of ontological design: designed events, systems, visual communications and other forms of design actively directed towards transforming our modes of being with the agency of sustainment. This part of the process actively considers what can be brought into existence that transforms *habitus* thereby transforming experience and, as a result, the way people act in the world. The next step is to begin implementing these designs.

CONCLUSION

Mapping is an historic practice that has transformed the way we think about and understand the world we inhabit in a variety of ways. It is becoming increasingly clear that in the face of the increasingly complex and interwoven world we exist in we lack the ability to address these challenges; we lack the cognitive mapping skills required. Cognitive Redirective Mapping aims to address this insufficiency and utilise the way mapping enhances our ability to understand the world around us, find alternative pathways forward and utilise ontological design to redirect people towards those pathways.

Cognitive Redirective Mapping aims to confront the Eurocentric history of mapping and the devaluation of other ways of knowing in seeking to understand both the problems we are facing and potential alternatives that may have been lost or ignored in the maelstrom of modernity. Beyond using a psychosocial mode of cognitive mapping in order to understand the future that we are facing Cognitive Redirective Mapping seeks to take into full consideration Sustainment; the 'thinging' of the 'thing'; the intercultural; design as an hermeneutic practice; and work alongside the method of design fictions in order to envision, and therefore design for, a future with a future.

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