KARTOGRIFA IN-FLUX

A Pedagogical Tool To Challenge Eurocentrism In Post-Compulsory Education For Sustainable Design

INTRODUCTION

Kartogrifa In-Flux – Thinking, Talking, Building Alternative Pasts-Futures (KIF), the authors project (Schultz, 2012), is a mediation object created on the East Coast of Australia in 2012, KIF revealed valuable insights in relation to aiding students in navigating the complexities of challenging ‘Eurocentrism’. Samir Amin (2011) provides a thorough theoretical critique of Eurocentrism from which the context of the word is aligned here. Eurocentrism is an unsustainable dominant modern Western narrative of European reach and power being imposed on other parts of the world. The case is made that socio-culturally situated pedagogical tools can effectively challenge Eurocentrism in post-compulsory education for sustainable design. KIF has been used as a pedagogical tool to its full capacity with undergraduate university students of visual communication design, product design, exhibition design and design theory. It is also designed to be effective in mediating discussion among students of humanities such as cultural studies, history, anthropology, sociology and psychology, notwithstanding evidence of effective engagement with K-12 compulsory students. In both cases of exhibiting the KIF event discussed in this chapter, there were a mix of post-compulsory students and disciplines, K-12 students and members of the public. In order to refine the scope here, a reflection of KIF as a pedagogical tool for post-compulsory students engagement is outlined. KIF is a pedagogical tool with a purpose of unravelling the concealment of other forms of knowledge, in this case, Australian Indigenous Knowledge (IK). It is also an exemplar of creative and lateral design-thinking. The design-thinking however has a ‘decolonising’ agency. As such, KIF is ‘decolonial/design-thinking’ directed via careful and deliberate use of elements such as colour, form, and textual signs. The motivation for KIF is to mediate complex ideas among participants that go towards securing more sustainable modes of existence (whatever that may be in any given locality).

Eurocentrism and Sustainability

As is the case with Australia, the world faces a multitude of problems, many of which are capable of rupturing any recognisable future for humanity. Many argue that underpinning these problems is a dominance of Eurocentrism, or more simply, the West’s inability to see value in other modes of being-in-the-world. These other modes exist; they are alive, yet mostly find themselves in the margins, resisting
oppression from the colonial era’s imposition of modernisation. Eurocentric thinking rejects other forms of knowledge that derives from cultures often described as ‘inferior’ and ‘primitive’. Resisting Eurocentric thinking might open reservoirs for modern Western geographies to see alternative forms of knowledge as options of how they might survive extreme changes imminent in their own geographies. Learning from these cultures involves both unlearning Eurocentric modes, and learning other modes of being-in-the-world, of understanding sustaining qualities. Learning begins with the questions: what situated knowledge destroys futures and what creates futures?

If what destroys is rising sea levels, growing human populations, resource depletion, economic development based on consumer and industrial perpetual growth, then the underpinning problem is an inability to name what relationally connects these destructive forces. To begin to understand, to make accessible, to think and talk, hence, to build an ability to redirect the nature of the world, the West might identify Eurocentric thinking found in modernity and colonialism as if it were the relational connector of such problems.

To unravel and expose the foundations of modernity and colonialism gives the possibility of breaking out of its hold. Tony Fry (2011) suggests that this task is not one of ‘re-making’ technologies or daily behaviours, but being of a mind-set for the re-making of ‘us’. For the West, one example of this is to leave behind an assumed superiority over Indigenous Knowledge. Walter D. Mignolo (2011) calls this rejecting the ‘logic of coloniality’. He argues this logic is the presumption that western civilisations were the most recent civilisation in human history and that the rest of the world should follow suit. The logic of decoloniality would quite simply respond: this doesn't mean they’re the best (Mignolo, 2011).

Re-making is a conscious project, which will occur mostly by design, and as Fry (2011) admits, might be many decades or centuries in action. Kartogrifa In-Flux (KIF), the pedagogical tool case studied here, is one such contribution towards this goal. Design-thinking as a discourse aims to recognise such relational impacts, however, as is underpinning this chapter and KIF, decolonial/design-thinking adds agency to design-thinking: that of unravelling coloniality by design. This gives life to reservoirs of knowledge that may have far greater abilities to sustain than modern dominant narratives, but have been oppressed through the last 500 years of the modern era of colonisation.

Colonialism and Australia

Upon Captain Cook’s mapping of the east coast in 1770, and Governor Phillip’s arrival with eleven ships (The First Fleet) to create a penal colony in 1788, the geography of Australia was the last of Europe’s major colonial conquests. Australia, as a categorisation of land under British law, was ‘desert and uncultivated’, which gave the British their own authority and justification to seize the territory under their doctrine of _terra nullius_—as unowned land (Banner, 2005). As was the charge of the harsh, impenetrable, rugged wilderness of Australia, Aboriginal people were regarded as more of a burden than an asset. It is a commonly accepted argument in studies of Aboriginal issues, for example from Attwood and Arnold (1992) and Lattas (1997), that during the early decades colonisers were ignorant to the existence, or potential usefulness of the forms of
knowledge used by Aboriginal inhabitants of the land. As was the case in other geographies, dominant European narratives obstructed, or at worst cancelled out, entire Indigenous patterns of knowledge writing, which have at least in the last few decades, noted to be extremely sustainable modes of living. People concerned with Australian droughts, fires, extreme climates and degrading soil, along with those concerned with a search for more sustainable mind-sets, might find answers within Indigenous patterns of knowledge.

The perception of the Australian Indigenous people as ‘primitive’ came with the boats to Australia in 1788. To deconstruct this perception is the first step to opening the reservoirs of knowledge that might secure more sustainable modes of existence. Knowledge transfer in Australian pre-colonial Indigenous societies was a pedagogical transfer of spatial-historical narratives. Mary Graham offers a succinct conclusion for her conception of modes of knowledge production: ‘multiple places = multiple dreamings = multiple laws = multiple logics = multiple truths’ (2007, p. 6). This is a clear distinction from the Eurocentric view that imposes knowledge through both colonisation of the mind and geographies.

The case is made that KIF acts as a critical tool in exposing and unraveling the relationship of Eurocentrism with sustainability via decolonial/design-thinking. Even though KIF is socio-culturally placed in Australia, readers will identify outcomes and insights that can be transferred into other pedagogical tools in other localities, including: (i) rejecting dominant Western linear pedagogy through employing post-structural1 methods; (ii) using narrative fictions to write alternative histories, sediments for alternative futures; and, (iii) using culturally constructive (rather than culturally destructive) semiotic and symbolic deployments to trigger a questioning of the politics of representation inherent in each locality.

There are two positions underpinning this chapter. First, sustainable design might only be effectively taught once an educator has unravelled and challenged Eurocentric tendencies in student designers. Second, the act of mediating complex ideas, such as challenging Eurocentrism, works most effectively when socio-culturally situated; as a positive and culturally constructive semiotic deployment via careful and deliberate use of sign functions.

**Background**

Kartogrifa In-Flux (KIF) is an interactive event where participants move around a table (2400mm x 3600mm) while reading a textual narrative within a graphic layout (see fig.1). On the interactive table are tactile, moveable objects (printed acrylic discs and metal objects) symbolising land, human and the artificial, which participants are encouraged to move and slide in and out of ‘place’ (see fig.2). The tactile objects correlate with the textual narrative. Both these mediators function to expose Eurocentric thinking. They literally appear and read as Indigenous knowledge and values represented through the contrast between living in
reciprocity with land, and arriving as a European culture ‘separated’ from the land. The ‘branched’ narrative tells an original fictional story, of a Cartographer walking with an Australian Aboriginal tribe around the time of ‘First Contact’ in 1788. One branch leans toward the cartografía valuing Indigenous Knowledge (IK) systems and ways-of-being. The other branch reads as though the cartographer does not. Hence the two branches are on one hand similar stories, yet remarkably different.

Objective

The main objective is for participants to reflect on the value the Cartographer finds in IK and whether these values are evident in their society today, or whether these values fit into their perceptions of a sustainable future in any given locality—as ‘options’ for different viable futures. Hence, participants are alienating themselves
from Eurocentric thinking through reading a narrative and visual signs, and interpreting seemingly non-sensical Eurocentric thinking that came with the ‘First Fleet’ in 1788.

**Pedagogy**

Pedagogical success has rested on the ability to trigger responses specifically accessible in the Australian modern, post-colonial context, with people who are willing to engage in other ways of being-in their world. It shows that participants are willing to engage in complex information when that information is mediated by a creative and interactive multisensory experience.

At first glance, two disc colours signify the two cultures, while green signifies the land. The metal nuts immediately signify that which is not human or nature. The discs and colours alone stimulate an explorative response. Once students engage, they find they are interacting with an oversized visual diagram. The diagram visualises patterns of the consequences of colonialism, instead of relying on heavy theoretical writing on the subject. This allows students to arrive at their own questions that further reading in texts can assist to answer. The fictional narrative in KIF is also a major pedagogical tool aimed at teaching students that history is subjective, and is written in accordance with agendas. Both the diagrammatic and fictional natures of the project represent post-structural methods of pedagogy. This aligns with rejecting the Eurocentric tendency of placing superiority on structured linear forms of learning such as from academic texts.

**SUSTAINABILITY / LEARNING**

**KIF and Sustainability**

The tactile moveable objects in the tool aim to direct the conversation toward thinking about the separation of ‘human’ and ‘land’ as being intrinsic to ‘our’ ability to sustain. ‘Sustainability’ in dominant discourse all too often does not reach such a deep level of questioning. Sustainability is still (mostly) rhetorically employed within the terms of a human-centred conversation. This human-centredness means the word retains its relation to human technological and scientific ‘progress’ and ‘development’ through control over nature (Fry, 2011). Arturo Escobar (2008) argues that this ‘integration of the natural, human, and supernatural worlds [leads to] the complex historical developments associated with capitalism and modernity [hence] the objectification of nature as external to humans and its subsequent treatment as a commodity’.

KIF attempts to alienate the participant from this conditioned normality by exposing this perception as only one story. The project provides another imaginary—an Aboriginal conception of ‘human’ and ‘land’ as being in a reciprocal bind. This is known by Mary Graham as ‘custodial ethics’(2007), ethics that one could argue have proved to sustain Aboriginal cultures for thousands of years. Graham defines ‘custodial ethics’ also as ‘looking after country, looking after kin’(2007). Custodial ethics, in common Western discourse and Aboriginal
discourse, is also often described as the ‘dreaming’. It can also be described as ‘Aboriginal Law/Lore’ or ‘Law of Place’. Custodial Ethics are such that all perspectives are valid and reasonable and all localities/Places, have their own unique voice. It is a system of geo politics of knowledge writing.

The narrative in KIF depicts potential exchanges of custodial ethics between a cartographer and an Aboriginal tribe, if only taken on board as a new way of being-in-the-world by the colonisers. On one side of the branched narrative participants read, they unpack conceptions of ‘progress’ as intrinsically tied with custodial ethics with land; as an immaterial culture living ‘in’ the environment, with less human-centred tendencies. On the other side, they read conceptions of ‘progress’ as Eurocentrically understood - as ‘nature’ commodified.

KIF raises the stakes past the dominant discourse around the term ‘sustainability’ and posits it in a new realm. One where ‘sustaining of being’ is found in a shift of mind-sets, not in a techno-centric fix.

Terms of ‘learning’

To learn from KIF, is to learn with and from the mobilisation of a decolonising mind, rejecting what Mignolo (2011) calls the ‘ego-politics of knowledge’ (knowledge that has been imported and imposed from other geographies). To be most effective, a conscious effort would be made by the KIF participant to see beyond the veil of their colonised minds in order to view decolonial options as ‘sustainable’ futures. Mignolo (2011, p. 217) frames the task:

Decolonial options are roads toward the future. If you follow them you would break away from the legacies of the Renaissance and the Enlightenment, you would begin to shift the geography of reasoning; shaking off your body the enchantments of liquid modernity and the chains of coloniality toward the sear of an-other language, an-other thought, an-other way of being in the world.

A ‘sustainable future’ means different things within different localities, and decolonial options recognise plural ‘geo-politics of knowledge’ (Mignolo, 2011), that is, knowledge which is socio-culturally placed.

Western education for sustainable design rarely recognises this. Western educational institutions tend to be steeped in historically constructed, Eurocentric ego-politics of knowledge, underpinned by development, superiority, universality of reason, globalisation and broken capitalist ideologies—all of which are part of the same unsustainable story. KIF, as a pedagogical tool, aims to rupture this perception, essentially providing an entry point for students into what needs to be un-learned in order to learn. Through trigger events in the narrative, KIF brings criticality to thinking about what ‘we’ are, what ‘we’ desire, what ‘we’ value, and how this may serve what Fry (2011) coins, a sustain-able future, or sustainment’.
THEORETICAL UNDERPINNINGS

Translating Difference into Values

The task in designing KIF, is inescapably involved in sign coding, or “re-valuing what modernity devalued” (Mignolo, 2011, p. 179). The illusion of Eurocentrism is that difference is an object of exchange, a commodification, not an actual real and living alternative world. Unlike the illusions floating in air as commodified sign values, the solid differences are situated in place having socio-cultural functions.

KIF highlights several signs of difference between the Aboriginal and Non-Aboriginal parties colliding in the textual narrative, and aims to translate those differences into values, not of political economic values tied in with globalism, but rather as equitable cultural values. In KIF’s visual language, aligning with the textual narrative, the project rejects a coding biased to either a tokenistic Western or Aboriginal sign value. Avoiding this trap is extremely important in Australia, as what commonly occurs is appropriation of visual language of Aboriginal culture, reduced to a tokenistic, decontextualised and commodified sign value. As Fry (1990, p. 92) cautions:

The nationalistic search for signs to symbolize Australian identity has resulted in a raid on Aboriginal culture - a cruel appropriation when viewed against the history of genocide and neglect of Aboriginals by the state.

It masquerades the appalling situation many Aboriginal communities are in today, allowing at best a Eurocentric reductive iconographic analysis by the viewer, and at worst a disinterested aesthetic ‘spectacle’ (Debord, 1994).

This highlights the importance of careful and deliberate socio-culturally situated, semiotic mediation when designing pedagogical tools. In this context, there can be no universal notion of ‘sustainability’ sign values to unravel Eurocentrism. The task is socio-culturally situated within what Modernity devalued in each locality in order to eliminate the difference, and therefore can only be engaged through re-valuing that difference with critical knowledge from within that locality. So, in educating for ‘sustain-able design’ anywhere in the world, it is necessary to engage culturally relative forms of the sign including language, systems for counting, diagrams, maps, mechanical drawings and so on (Vygotsky cited in: Wertsch, 1989, p. 137). Wertsch (1989, p. 140) extends Vygostsky’s theory, pointing out “all human mental functioning is inherently situated in cultural, historical, and institutional settings.” As such the human mental functioning of complex ideas, such as exposing Eurocentrism to a student designer, might also be socio-culturally situated, via careful and deliberate use of culturally relative and constructive signs, mediating differences and values.

DESIGNING THE KARTOGRIFA IN-FLUX EVENT

The first stage of KIF involved understanding and prioritising what needed to be said, and how best to communicate it to the largest number of people. Furthermore, it was a process of framing this in a way that would alienate and deproximise
participants from the dominant Australian Eurocentric order of thinking, without seeming non-sensical.

The designing of a material and spatial event was chosen as the most effective method to initiate and pollinate this conversation. The actual object is large enough to allow large groups of people to talk face to face. ‘Narrative’ was chosen as a useful way to draw people into deeper engagement with the tool. Participants are required to invest time into remaining inside the event once they begin reading the story. Narrative also humanises the otherwise complex issues underpinning the tool.

Key triggers in the narrative force readers to contemplate actions and consequences in an emotional story that relates to their own lived human experiences. There is a moment when a mother dies upon giving birth to her child and this is a trigger that personalises the story through engaging the emotions. The intention is for the reader to become emotionally attached and therefore more inclined to search for a way out of the situation, between the lines of the story. This attachment becomes ever more potent, the more socio-culturally situated the participant is.

Complex terminologies and sentences are introduced in key areas to direct the reader toward more advanced concepts and language not often used in mainstream society that can assist in more efficient and rhetorically accessible conversations. As is the case with the branched narrative, intended to fixate the participants in solitude and contemplation for longer periods of time, the tactile objects also engage and sustain the audience. Both the nature of a branched narrative and the moveable tactile objects serve as an effective post-structuralist mapping experience. The main character Kartogrifa, would have also had this experience if we imagine him walking with the Indigenous tribe. He may have increasingly found value in Indigenous Knowledge, shifting between imposing linear cartographic practices and witnessing subjective lived experiences of mapping land. It must have been a real moment of flux. Here is an excerpt from the narrative illustrating one such moment:

Valuing Indigenous Knowledge side:

…their movements within the country are guided by the tribe’s sharp observational abilities in reading signs and patterns of the land. Living in simple dwellings often assembled and disassembled in place, the guests remained free of contact from their fellow boat arrivals. By the fire conversations with the tribe remained free of the shackles of imposing western science and philosophy. The guest family could feel their minds pushing and pulling between western linear knowledge that seemed separated from land, and Indigenous knowledge that seemed to ebb and flow within the land.

Not valuing Indigenous Knowledge side:

…their movements within the country are guided by their probes and devices. Living in simple campsites, the invaders often encountered the native
population, trying to conciliate affections from a safe distance. Campfire conversations with the white expedition filled their minds with aspirations of heroic pioneering and control over land in the face of such a harsh inhospitable environment.

The timeline seems amongst the most inescapable metaphors we have as a way of representing history (Rosenberg & Grafton, 2012). The object represents a single axis timeline in Australia from 1788 to Federation in 1901. Distribution of time along the timeline however, is irregular and conceptual rather than measured, coded and evenly spaced. There is a sense of arbitrary time intrinsic to the event, in line with a non-compliance with Western linear thinking. The objects represent both the Kartogrifa’s mind, and time. They are chronological indicators of events rupturing Kartogrifa’s ‘colonised mind’ as he journeys with the Aboriginal tribe. Below is an example excerpt from the narrative immediately after Kartogrifa has been exposed to a totem initiation:

Valuing Indigenous Knowledge side:

…The inconceivable differences between the West and the ‘Other’, differences he had been taught to fear, and eliminate, soon begin to be translated into values, ethics for a new way of seeing the world. A new reality… (See fig. 3)

Not valuing Indigenous Knowledge side:

…These differences were translated into disadvantages in advancing modern civilisation. There was only one way of seeing the world, only one reality, and whatever the natives were doing did not fit.
Figure 3. Differences translating into values

The event is effective as a multisensory experience: the room is dark, and Australian bird sounds play loudly through several speakers. This muffles outside noise, allowing participants to immerse themselves in isolation to digest complex and critical information. The object is best experienced when directionally lit in a way that commands attention.

RESULTS

Preliminary findings of the KIF project have shown a strong dichotomy in levels of engagement, according to the environmental placement of the event and the presence of a facilitator. Environment (a), enjoyed high volume traffic (15-20 people around the object at all times), with a highly immersed multisensory atmosphere. A facilitator was present at all times (during a five hour session) to offer verbal prompts, inevitably resulting in mediation via an author’s subjective contextualisation. This resulted in a high percentage of ‘high to very high’ levels of engagement. This level, as an observing ethnographer reported, included:

People who read both sides of the story board, interacted with the moving parts in response to the story, responded to the audio and indicated a full understanding of the message at a conceptual level (time spent in exhibit between 6-10 minutes). The majority of people who made this depth of commitment progressed further to complete the feedback form and to talk to the designer. These people tended to return to the exhibit one or more times throughout the evening, bring others with them, explaining and guiding them through the process.

Environment (b) was a situation in which there was a low level of natural traffic and resulted in an almost opposite level of engagement from environment (a). The traffic volume was 1-2 people every hour. No facilitator was present, but contextual reading leaflets were provided, and the event remained displayed for 7
days. Evaluations of environment (b) show that participants committed to mostly ‘medium’ levels of engagement, explained as:

When people entered the space, they scanned the environment, read one full text block, or one side of the story board, showed acknowledgement of the background audio, moved the pieces of the exhibit in response to the story and indicated understanding of the main aspects of the story (time spent in exhibit an average of 3 – 5 minutes).

Whilst in environment (a) over 60 feedback forms were collected in 5 hours, in environment (b), only 6 feedback forms were left in the feedback box over 7 days. This highlights an obvious issue with environment (b) lacking contextual verbal mediation.

In environment (a) written feedback from participants stated that it “demonstrated a distinctive way of teaching that is more intuitive” and that it “opens conversation about topics Australians are not used to talking about”. Many students commented how the event was also “a great example of lateral creative thinking”. On the other hand, environment (b) showed that the lack of verbal contextual mediation resulted in a lack of commitment by the participants to critically engage in the content, or give useful feedback.

Also, it is evident in environment (b) that effectiveness was minimised through the lack of group/peer encouragement to collectively absorb the complex information, i.e., there was no collective mental functioning to ‘act critically’ in reading the signs. For the individual participating in the event alone, the participant’s inherent Eurocentric thinking may preclude the intended ‘semiotic mediation’ of identifying value.

DISCUSSION

The results briefly discussed above highlight both the effectiveness and limitations of KIF. There is a need to test KIF in further varied environments in order to locate a balance, where levels of engagement are high and critical, but also where the requirement for verbal contextual mediation is low. If mediation through excessive verbal facilitation is needed, students will be swayed and not develop their own abilities to read the signs built into the object. Verbal interjection both (negatively) influences the effectiveness of the object as a pedagogical tool for semiotic reading, and as an inanimate tool for decolonial/design-thinking. On the other hand, in the spirit of unraveling Eurocentrism for students via the most efficient approach, verbal interjection proved to fruit the highest levels of understanding and engagement. Verbal mediation therefore also requires further framing within calculated triggers, openings and questioning, rather than explanatory conclusions.

Understanding the potential of the socio-culturally placed pedagogical tool for educating sustainable design requires further understanding of how it might be developed, in order to transcend its obvious appearance as ‘medium’ or ‘image’. For all its intents and purposes as a visual communication tool it should appear as rupturing and restructuring power relations between the coloniser and the colonised. The message should not be mistakenly found in the medium, or the
image. The social relations are the message (Vodeb & Janovic, 2010). In this case, it is the relations between the Kartogrifa and the Aboriginal tribe. KIF attempts to highlight the unsustainable social relations inherent in Australia’s modern colonial world.

KIF presents an opening to a conversation—a ‘thinking-in-action’ about ‘our’ relationship with the natural environment, and ‘our’ social relations. This may be regarded as an initial phase, which with time requires further framing within the wider context of shifting ongoing perceptions through experiences that follow the initial interaction. KIF proved to educate students in the short term. A larger project in line with KIF may strive to restructure public social relations in the long term.

CONCLUSION

Regardless of the global locality, KIF highlights commonalities that could bind the premise of what it brings into existence with what other projects in other localities might reveal. The ultimate goal is a critical exposing and unraveling of the relationship of Eurocentrism with sustainability via decolonial/design-thinking. Commonalities across localities are: (i) rejecting dominant Western linear pedagogy, such as employing post-structural methods; (ii) using narrative fictions to write alternative histories, sediments for alternative futures; and, (iii) using culturally constructive (rather than culturally destructive) semiotic and symbolic deployments to trigger a questioning of dominant narratives inherent in each locality.

The situated learning practices developed in KIF reveal effective outcomes and valuable insights in relation to aiding students in navigating the complexities of challenging Eurocentrism and unraveling its relationship to sustainability. Although this chapter refined the reflection of the projects effectiveness at a post-compulsory level, subsequent events have been with K-12 participants. As was anticipated, the younger the group, the more context and verbal mediation needed. Considering the complex nature of the socio-cultural connotations there is opportunity for further investigation into using accessible rhetoric in briefing younger students. In the instances discussed in this chapter, and in subsequent events, KIF is proving to be a strong example of creative and lateral design-thinking. What is most important to note is that design-thinking in this instance is one with agency - of ‘decolonial/design-thinking’: of unravelling coloniality and Eurocentric thinking by design.

NOTES

1 Post-structuralism is a label given to a critique occurring since the mid 20th century, on structuralism. Structuralism is a model developed in Europe from the early 20th century arguing that all human cultures can be understood by means of models and structures, such as ‘structural linguistics’. Post-structuralist authors would reject structural models, such as the binary oppositions primitive/civilised and inferior/superior. Key authors of the critique of structuralism some of whom reject the label ‘post-structuralism’, include Michael Foucault, Gilles Deleuze, Jacques Derrida, Jean Baudrillard.
REFERENCES AND BIBLIOGRAPHY


