

Translocation in Design

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In the early twenty-first century, designers and researchers have developed new methods, concepts, and frameworks that have enabled us to view the role of design as an active agent in driving both local and global cultural change. These insights and observations look beyond the activity of a particular practitioner or cultural group to see how shifts in the relationships between cultures, nations, and states have rapidly increased their porosity to external influences. This has occurred largely as a result of the capacity of digital communication technologies to transcend, transform, hybridize, and facilitate new forms of cultural exchange that question our relationship to context. As a result, we have begun to assemble a picture of the international shifts that have been driven by cultural transfer on the transnational plane and, by association, the trickiness of reconciling the partnership between nations and states in the twenty-first century. In a practical sense, this has led to the recognition that a nationally defined cultural group is very unlikely to reside in one location presided over by a single state. Fractured and misaligned borders, along with economic, climatic, and conflict-driven pressures have forced large groups of people into new locations around the world. Increasingly, the traditional mechanism of cultural nourishment linked to an ancestral homeland with its material affordances and affirmations of place and meaning have become stressed as digital reminders replace them. Immersive digital technologies (for example augmented reality, immersive web based gaming environment and second life) are increasing our capacity to live out more complex relationships to culture; in our multi-context, chameleon-like lives, physical cultural reminders struggle to maintain their traditional supremacy. These “imagined communities”—as described by Benedict Anderson—are becoming increasingly fragmented and are held together by more tenuous physical connections bolstered by digital mediums through which distortion, misalignment, selective representation, and technical limitations are introducing new agents of change affecting how cultural groups maintain and evolve their identity.

The political tools that shaped the twentieth century are struggling, in the twenty-first century, to cope with a combination of design thinking and innovative technologies that are increasingly blurring the national stereotypes that reinforce conventional political agendas. Neil Stephenson’s cyberpunk novel *Diamond Age* (1996) sketches out an interesting blueprint for the future, where nation-states have dwindled to be replaced by non-geographic culture-corporations. His character John Percival Hackworth, a neo-Victorian nano-engineer, embodies what is seen as the highest form of cultural etiquette and behavior (in nineteenth-century Victorian England), delivered through

nanotechnology in a Victorian physical world with technically advanced communications and smart materials. This vision illustrates a future scenario where cultural groups are no longer tied to a specific geographic region and are free from the control of nation-states.

In our twenty-first-century world we can see the increasing disconnection between state control and nationhood and that the traditional political tools of governance are under threat. The production of artefacts and experiences is a core activity facilitating this shift, and design, in the broader sense, is one of the main ingredients. Design is the mechanism by which we can create changes in the world through the ecology of artefacts and communication systems that affect the flow of cultural materials and the way they influence our sense of who, where, and what we are. In order to do this, we need to begin to build a picture of the way that nations understand their cultural design practices and to construct the meta-level concepts that underpin the relationship between design and nations.

An investigation into the layers of design-driven transnationalism will help us to consider developments from conceptual models of national design brands through to the design practices involved in generating individual artefacts, and how these can be modeled in a way that allows us to understand their effects on the global frameworks of cultural transfer that act as the ingredients of transnationalism. This essay traces a course through three different periods and locations in Asia that will enable us to begin setting up a trajectory of national design thinking spanning the late twentieth and early twenty-first centuries. (These imply a particular narrative or evolution for the role of design in establishing cultural identity; other locations and timelines could be selected, with variations on the conversation.) The intention here is to illustrate some of the broader trends and discuss questions at a national level that relate to design practices in the field.

Global Cultural Export and Transcolonial Creativity

The Japanese design boom of the 1980s stands out as a clear example of how one nation seemed to successfully blend technological advancement with a clear cultural expression of a design language that inhabited the sweet spot of being production-friendly, identifiable and yet complementary to the consumers of North America and Europe. The successful ingredients of postwar regeneration, island status, cultural cohesion, organizational discipline, and the involvement of visionaries such as Akio Morita of Sony have been captured by many authors, who have examined the influences of Japanese design by exploring cultural design through material groups. As such, Japanese design has served (and in some respects continues to serve) as the blueprint for an emerging economy looking to brand itself in the global marketplace through self-aware original brand manufacturing and industrial design. Regional competitors South Korea and China have in many ways now eclipsed Japan's industrial performance, yet both have struggled to project a strong design language that captures perceived national values so well. There are many reasons for this, including the increasing size of global markets and the efficiencies demanded by industrial production. In the early

twenty-first century, South Korea's chaebols (more than a dozen family owned global multinationals where the chairman has power over all operations) are serving a much bigger and broader global market segment than Japan did in the 1980s, and more competitive commercial margins give less space for the luxury of national expression and cultural individuality. Furthermore, success in the ubiquitous global technology product market of laptops, smartphones, tablets, and televisions means sublimating cultural signs that might reduce the breadth of market penetration and acceptability to the diverse range of cultures and people buying these products. The cultural customization that consumers continue to demand now sits in apps and media that are locally downloaded and projected inside the country being served. Unrelated companies often make these apps and software, a factor that increases the technological ubiquity of physical products. Consequently, high-volume physical products in the 2010s have lost the ability to serve as a physical global cultural influence in the way that, say, a Sony Walkman did in the 1980s or a Sony TV8-301 portable TV did in the 1960s. However, away from the vast volumes of ubiquitous technology products, the works of individual Japanese designers Kenzō Tange, Shiro Kuramata, Yohji Yamamoto, Naoto Fukasawa, and Tokujin Yoshioka, who work in various fields, continue to influence and drive cultural design change in a world of smaller-volume production and limited editions.

By the 1990s, Hong Kong had evolved to present a very different model of cultural design practice. The unified series of values that externally unite a national culture had gone and instead we see a small but complex geography in the flux of local and globalizing influences. When British colonization ended in 1997 and Hong Kong came under the control of China, it brought forth a sophisticated set of hybrid design responses. In her analysis of a series of designers including Alan Chan, Vivienne Tam, and David Tang, Hazel Clarke (2009) extracts a number of cultural design methods ranging from the quotation of standard motifs, mimicry through localized versions, and cultural transformations. Vivienne Tam's assimilated Chinese cultural references applied through Western forms and Shanghai Tang's use of Deng Xiaoping and Mao Tse-tung as ironic nostalgic icons for a reconstructed past are but two examples. These design practices describe what happens when a national mindset and the cultural porosity underneath shift in response to new opportunities. Hong Kong wanted to supplant the British colonial mandate with its own enhanced cultural ownership before recolonization by China. Designers drew on a wide range of influences—from Hong Kong's traditional global trade network to colonial retail practices and communist design icons from the Chinese mainland, as explored by Shanghai Tang in their Mao watches and fashion collections inspired by the communist era.

The Japanese design model is often thought of and discussed as an internally agreed model of design creativity that is projected outward into the world. This is undoubtedly a simplification, and cultural influences from diverse sources will have enriched the evolutionary process. Hong Kong, by comparison, is initially more complex and most importantly marks a distinct break between a design approach that is seen as coming from a single nation-space to one that creates a hybrid between the historical colonial era and selected contemporary ideas from mainland China. Karen Fiss, in an introduction

to a special edition of *Design Issues* (2009), describes the benefit and risks of design-driven transnationalism:

The sharp rise in global trade creates more entrepreneurial opportunities for producers of art and culture by “liberating difference from geography,” making culture less about identifying with a particular region or location ... On the other hand, one also can argue that this de-territorializing of culture allows it to be “theme-parked,” creating a type of cultural diversity that is merely a simulacrum, and that no longer has ties to any “authentic” origin.

The recognition that we need a tie to an “authentic” origin is a key observation. It allows us to explore how far, and in what forms, design can be used to investigate the cross-fertilization of cultural design practices taking place between one location and another. Physical artefacts can serve as sources of influence and designers’ studios frequently include collections of inspirational objects that function as creative prompts for new design projects. For example, the designers Charles and Ray Eames collected a wide variety of artefacts from diverse cultural locations as a way of making a living set of cultural prompts in their Pacific Palisades studio in Los Angeles. This represents the classic model of design influence: inspirational objects are moved from one sociocultural space to another in order to observe and extract differences. The liberation of differences from geography (sociocultural spaces) continues to extend into the digital sphere: contemporary collections can be far more complex, with a mixture of physical artefacts, bookmarked Web pages, Pinterest groups, Facebook likes, cloud-shared photo collections as influences. The issues concerning digital networks and the relationship of objects to contexts are highlighted by Arjun Appadurai (2013):

The primary problem with images of object agency, network and the device is not just that they tend to lose the soul of objects, in spite of their intentions to reanimate the object, but that they have no real grip on the deepest problem of objects, which is their capacity to generate contexts. The problem of contexts is one of the black holes of current social science, and this black hole opens new possibilities for thinking about design processes from a social and cultural point of view.

Two important ingredients emerge here: the capacity of objects to generate contexts and the recognition that design processes operating in social and cultural viewpoints can be active agents in making this connection. We are considering cultural design practice here, object making with conscious and unconscious representations and reminders of both discrete and hybridized cultural messages released through physical affordances, not the ubiquitous decultured technology equipment of smartphones, tablets, PCs and the like. R. K. Sidhu (2003), writing in the context of education, has reinforced the lack of connection between theories of globalization and spatial relationships:

A collective limitation of many of the theoretical discourses on globalization is their failure to engage with a “vocabulary of space”, and with the contingencies of history ... these discourses reveal how relations of power produce, sustain and reinforce particular interpretations of transcultural exchanges and subject positions.

To bridge the gap between the desire of the social sciences for understanding how objects make contexts and the design perspective that seeks to uncover and visualize the spaces of cultural exchange requires new methods that open up the relationships between design action, flows of cultural material, and socio-spatial contexts. Design—as the investigating medium—has the potential to show how objects make contexts and also to shed some light on the object-context black hole of the social sciences identified by Appadurai. Specifically, design practice has valuable elements to contribute in its capacity to recognize cultural motifs and use these as the inspiration for new objects, and its capacity to experiment with new creative methods for cultural transfer (see above the examples of quotation, mimicry, and transformation from Hong Kong). The creative techniques used by designers leave trails of evidence ranging from drawings, models, molds, templates, and prototypes to samples and objects. This evidence can allow us to investigate the exchanges of cultural material and see where, why, and how designers act inside the flow of information to generate new objects.

The preceding examples illustrate the trajectory of cultural design and the emerging transnational practices of Japan in relation to the development of national design brands, and the evolution of transnational design characteristics driven by globalizing and trans-colonial influences in Hong Kong. Design practice is a potential platform through which to investigate the gap between social sciences and design agency on the ground. The transitional relationships between objects, space, and culture are the focus of this enquiry. So how can a designer, design agency, or even a design-driven institution recognize the creative tools at play in this ever shifting landscape? More to the point, how can they understand the impact of their actions? Some of these questions will be drawn out in further detail below, in practice-based design research projects.

Projects to Fill the Knowledge Gap

When we consider transnationalism and design, there are two main bodies of knowledge that we tend to draw on. Sociology and anthropology have given us a number of useful approaches, including Bruno Latour’s actor-network theory (hereafter ANT), a concept from the social sciences that reduces all the nodes in a network to “actors” in order to de-privilege humans in favor of other potentially more powerful agents. In global cultural anthropology, Arjun Appadurai developed a framework based on the suffix “-scape” as a way of discussing the globalization of cultural material flows and to identify disjunctions that create asymmetrical impacts on particular groups of citizens. A body of reflective, practice-based enquiry has been very successful in inspiring future action rather than just recording past knowledge. Between the two domains of research into global

concepts of culture and design practices there is a critical knowledge gap. Some researchers have proposed cultural transfer models for industrial designers; others have focused on improving economic opportunities for traditional crafts, the adaptation of crafts for modern consumer markets, and examinations of the wider urban context. Yet very little work has been undertaken at a detailed level on material exchanges or global concepts of cultural material flows. Sociologists and anthropologists have long complained about the lack of fieldwork investigating global cultural anthropology and the relationship between globalization and concepts of space, while designers have so far lacked an understanding of how actions on the ground can engage the mechanism of cultural influence that can inform concepts on a global scale. As such, the space between global ideas of culture and design practice remains under-theorized.

In order to explore the space between design action and global culture, a number of practice-based design research investigations were initiated by the author. These built on fifteen years of design practice experience, cross-cultural education initiatives, and research broadly around the theme of cultural design methods. The aim was to bridge the gap between design and transnationalism by uncovering the detailed material exchanges that take place between designers and makers from diverse socio-spatial groups, spatializing these practices in the context of concepts from the social sciences and global cultural anthropology.

So in November 2012, five projects exploring the way that design activity can liberate cultural differences from geographic locations were conducted in Gujarat state in India. The two that are described below positioned the researcher in two contrasting positions: first as internal to the research in reflexive-reflective mode; second as external facilitator. This enabled the researcher to both act and see the materials and events that contributed to the various types of cultural material exchanged between designer and maker, and the way that this could be acted upon to generate new types of objects.

Gujarat Project 1: Luhar Lamp

Gujarat was chosen for a number of reasons. The difference between the researcher's own background and that of the subject was assumed to be useful in highlighting cultural differences. In addition, Gujarat has a strong history of cultural craft practices going back generations, which poses a challenge for the researcher working in a postcolonial relationship. The project set out to discover what would happen when a London-based industrial designer developed sketches for a new design to be made by a copper bell maker in Nirona, a rural community on the edge of the desert.

The *luhar* (metalsmith) Umar Husen (Figure 1, left) was a sixth-generation copper bell maker living on the edge of the great salt desert in the Rann of Katchchh (local spelling is used). He would make copper bells for all the local livestock, ranging from 3in. (8cm) bells for goats to 12in. (30cm) bells for cattle. The bells used to be sold entirely to shepherds and cattle farmers, but a small tourist market had emerged (this followed a

long period of desertification as a result of a major earthquake in the nineteenth century, which had diverted the local river and reduced grazing and consequently the number of cattle).

The bells were constructed from flat sheets of iron (often recycled from cans or roofs) and beaten into bell forms, a lower lip tuned to make individual notes (Figure 1, right). The completed bell would be encased in slip (a watery clay), rolled in copper and borax powder (an anti-oxidization agent), and then wrapped in a thin layer of clay and fired.



Figure 1. Umar Husen beating a copper bell to tune the sound.

The London-based industrial designer Cairn Young agreed to make a series of concept sketches for a new design that would in some way extend or challenge the bell-making craft. In effect, this would introduce new cultural material into the bell-making process. The designer would not be present when the design concept was presented to Umar Husen and it was important that the researcher did not distort the reception or development of the design by having prior knowledge. The designs were collected from Young in a sealed envelope and transported to India. Husen was shown the design concepts (Figure 2, left) and asked if he could craft the design, making any changes he considered appropriate. The researcher aimed to capture and record the exchange of information, the reasons for Husen's decisions, and the final artefact.

Husen checked a few dimensions and confirmed the measurement scale as being in centimeters. A week later, the final lamp (Figure 2, right) was ready and the researcher's first impression was one of both confusion and intrigue, centering on cultural time and place. The lamp had a somewhat caricatured form compared to the original design, appearing to have been designed in the future and yet made in the past, a clear contradiction between Young's industrial design heritage and Husen's ancestry of carefully honed craft practice. Husen's reasons for the form he produced cited the limitations of the material-forming processes for iron sheet—the formers he used would only allow a certain radius, and that was larger than those in the original design. He had also made myriad smaller changes to lip details and other elements. The goosenecked adjustable stem was unavailable locally and it was unclear whether Husen had come across one before. He described how he bought a long spring in the local market and

used a solid brass rod in the center to replicate the component design. Young, in a subsequent interview with the author (Hall, 2013), confirmed the design intentions that brought about some of these differences: “I think the shapes that he was producing in his bells immediately brought to mind lampshades and lamp holders. So then taking that as a starting point and then looking around to try and find ways to apply things that he was familiar with as elements in his shapes.” He went on to say: “It’s got all of the flavours that I was hoping for. So it looks slightly machine made, but it looks ... what’s the word ... steampunk and he’s done a really impressive job of raising [the edge of the dished base and shade]. He’s adapted the shapes, they fold over like a mushroom shape, so he’s taken quite a lot of licence, which in this instance is fine.”



Figure 2. Cairn Young’s “Secret” design and the final Luhar Lamp made by Umar Husen.

The result asks significant questions about how objects make contexts, or, in this case, how an object transcends context and refuses to live comfortably in the sociocultural space of a London-based designer or a Gujarati bell maker. It is as if threads of cultural connection exist from both sociocultural spaces: mass-produced industrial design intentions from London and the heritage of generations of copper bell makers from Gujarat. In a sense, this produces a type of de-territorialization, a refusal to sit happily in either context while being able to remind each of the other. This is an effect of the aesthetic spatial shift between Western industrial and Indian craft material cultures.

In order to capture the flow of design process and cultural material, the exchanges of drawings, communications, and objects were mapped against Arjun Appadurai’s (1990) framework of “-scapes,” a summary of which is given below:

Ethnoscapes—The flow of cultural information contained in and transmitted by tourists, refugees, visitors, migrants, workers, and travelers.

Mediascapes—The production and distribution networks of images containing cultural information broadcast by traditional and new media outlets.

Technoscapes—The technologies that support the flow of cultural transfer by communicating, hybridizing, and interacting with culture.

Financescapes—The network of financial instruments, currencies, bonds, and shares

on a range of scales from the individual to the continental and global.

Ideoscapes—The collections of ideas from individuals to movements, politics, philosophies, religions, and other conceptual models.

The framework is intended to facilitate conversations around the global flow of cultural material across interpenetrating isometric landscapes where material flows weave a path through the spaces they affect. Appadurai conjectured that disjunctions could be identified and these would help to describe the asymmetrical flow of particular types of global cultural material, the people that it could affect, and the way it could change their lives.

Each stage of the Luhar Lamp project was mapped according to Appadurai’s framework as a way of understanding the extended lines of communication. In particular, these attempted to concentrate on media and exchanges of material as the design and making process developed (Figure 3).

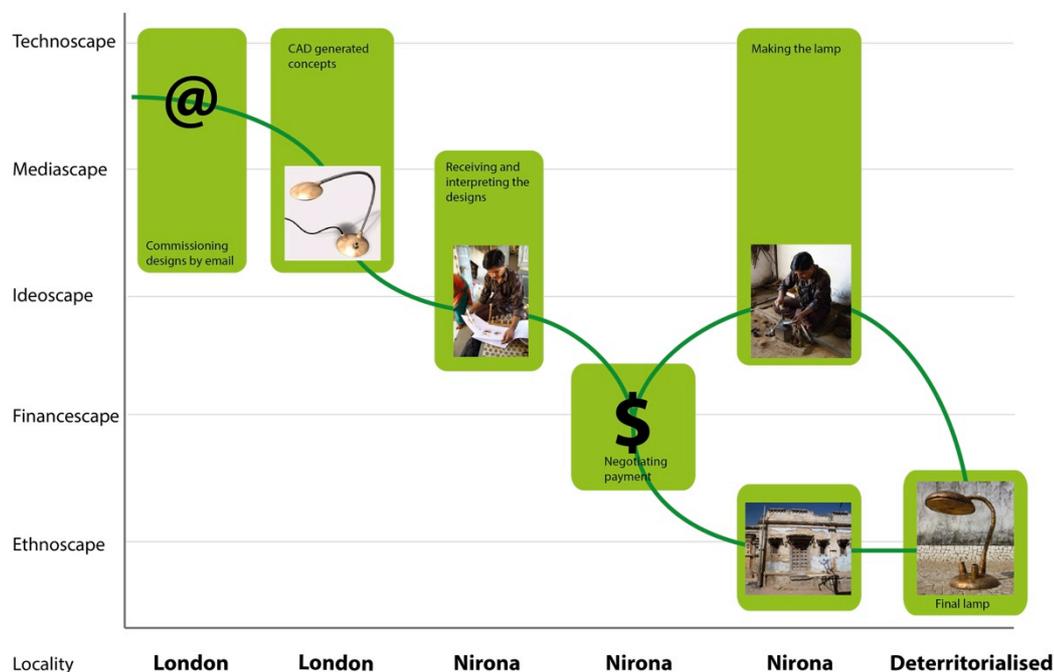


Figure 3. Luhar Lamp process mapped according to Appadurai’s framework.

The mapping illustrates an evolution from the technoscape and mediascape, which facilitate exchanges of knowledge as ideas on the ideoscape, through the financescape, and eventually place the artefact and its significance on the ethnoscape, where its cultural location in space begins to shift and form questions. We can see a gradual revelation of the design process from the mediascape to the ethnoscape, where cultural influence is recognized and takes place. This provides a useful initial view of cultural material exchange from an external position, but for a more detailed view, the research needs to uncover the internal thoughts and actions of a designer in practice.

Gujarat Project 2: Copperking Stool

In the second project, the researcher was positioned in a very different relationship to the design process, researching through design in action. The initial motivation came from a series of iron stools designed by Matthew Kavanagh and Ashley Hall at Diplomat design. These were strongly influenced by a trip to West Africa that had included a visit to a bronze foundry in Kumasi, Ghana, and time spent in Mali, where a wooden stool made by the Lobe tribe was purchased.

The Malian stool and the casting process came together to satisfy the designers' long-term creative interest in cast metal and micro-furniture for seating. Inspired by the lost-wax process (making a wax master which is coated in clay, the wax is melted out and the cavity is filled with molten metal) of the bronze foundry and the one-piece wooden stool, they created a localized version using production materials and processes in London—a kind of one-way cultural transfer. The resulting Ironman Iron Stools were a successful combination of industrial production processes and the influences of cultural craft-making (Figure 4).



Figure 4. Ironman Iron Stools with influences from Ghana and Mali, designed by Ashley Hall and Matthew Kavanagh, 2012. An evaporative casting process was used.

Although the designers found the project satisfying, they were frustrated about the one-way nature of the cultural exchange and the lack of opportunity to iteratively learn from the bronze foundry techniques in Ghana and the influences present in the Malian stool. So for the second design project in India, Ashley Hall had this in mind when he decided to embark on a rather risky strategy involving a non-anticipatory design approach. Effectively this meant traveling to India without any planning as to the product types, material processes, or cultural materials in order to be open to local opportunities and influences while working in the city of Ahmedabad in Gujarat. After visiting a range of different making processes including papier-mâché, birdcage making, copper vessel production, weaving, slotted steel furniture, and leather, he discovered a nonferrous metal foundry run by Omprakash Kothari, who used the dokra (lost wax) casting process

for making bronze religious figures. Combining the subtle influences of the existing Ghana to London cultural journey, the local influences of Indian form generation, the dokra casting process, and the opportunities of bronze as a material, a new stool design was developed in collaboration with the foundrymen.

After developing a number of different concepts, the designs returned to a direct evolution of the Ironman stools, with subtle form modifications derived from Indian castings, the warmth of bronze, a more organic and deeper seat indent form, and more conspicuous handles on the ends. Evaporative casting, which involves the carving of a full-sized polystyrene foam master, was used. The polystyrene is evaporated by the molten bronze as it pours through the mold to take its place. Once the master has been carved and embedded in the casting frame, surrounded by sand, it can only be used once, so a fair degree of skill is required to keep the weight at an acceptable level (under 22lb./10kg) and also prevent the molten metal from eroding or damaging the mold as it flows through. Once cast, the stool was allowed to cool overnight, the legs were adjusted before the crystalline structure had fully set, and the surface was hand polished to a high finish.



Figure 5. Copperking Bronze Stool, designed by Ashley Hall and made by Omprakash Kothari at Allwin.

The final result combines a series of cultural transfers from Ghana to London and Ahmedabad. When comparing the Luhar Lamp and Copperking Stool, we can see a different set of narratives and relationships at play in terms of cultural transfer and the relationship between sociocultural contexts. The lamp has the de-territorialized quality derived from a more abstracted creative process. The abstraction is reinforced by the mass-production practices of industrial design and the craft production of copper bell makers, and also by the tacit knowledge embedded in these practices and their surrounding cultures. Contrastingly, the stool brings cultural transfer in the designer's journey from Ghana and Mali to London and Ahmedabad, with the added commonality of a single shared material and process. The traces of spatial separation are more subtle and cumulative and are driven through a single creative practice and mindset, as opposed to the "handover" that occurs in the lamp. Appadurai's "-scapes" were again used to capture the main exchanges that took place and we can see some similarities in

the way that the design process begins on the technoscape and mediascape, to generate ideas on the ideoscape, and delivers its sociocultural value on the ethnoscape. However the Copperking Stool does not have the same sort of de-territorialized qualities as the Luhar Lamp and this must be the result of the design process and material exchanges that took place.

These practice-based design research projects indicate that different types of design approach can liberate cultural influences from one sociocultural location and embed influences and traces into artefacts produced in another. However the key moments, exchanges, understandings, and misunderstandings that drive this activity remain elusive. Moreover, the reconnections to global structures of cultural material flow have yet to be captured in their spatial relationships to one another.

Spatializing Actor–Network Theory and “–Scapes”

One of the initial considerations, when searching for globalizing concepts and frameworks, was to map the design research exchanges onto an actor network in order to see new types of relationship and how they might develop understanding of the exchanges that take place. Bruno Latour developed ANT as a material semiotic theory that affords new ways to view the “social” by constructing networks of relationships that allow humans and nonhumans an equal capacity to exert influence. This attempts to deconstruct the colonialist and human-centered views that can occlude and obscure new understanding of how other actors may influence social contexts. However, Christian Toenneson *et al* (2006) reviewed seventeen ANT journals and found inconsistency in what was described as ANT “material,” making definitions between actors and intermediaries along with issues in the attribution of authorship and responsibility. Alistair Mutch (2002), and Harry Collins and Steven Yearley (1992), have also problematized the impartiality of actor networks. Bearing these limitations in mind, it was decided to map the relations between the various actors on a network in order to investigate the potential for new views of the social relations and cultural flows that took place. Actor networks can be generated in several different ways, including those that are algorithmically produced by mining digital data sets. One example is the work of the Aedas architects’ research group in mapping ANT relations for the urban development debates around the London Olympics. However, due to the relatively small number of actors and the density of the network, construction of the Luhar and Copperking networks was carried out manually through a software drawing package.

For the purposes of this mapping, the actors included the human agents, concepts, making processes, communication technologies, methods, companies, and institutions (Figure 6). Upon completing the map, the limitations of ANT described by Toenneson, Mutch, and Collins and Yearley seemed to be borne out. One of the issues was that of having to artificially decide on the number of actors in the network and how far the influences could flow across the network. This is a situation called “punctuation,”

whereby it is assumed that influences will not usefully extend beyond a certain point or actor. However, there is no agreed strategy for how to punctuate a network ending at one actor and how to know whether more important potential influences lie beyond. We know from chaos theory that sensitive dependence on initial conditions can produce an unexpectedly large difference from what are considered small initial influences, and so it is possible that unrecorded actors may potentially skew the readings across large networks. Concepts are also difficult to gauge in terms of their penetration. For example, participatory action research could be connected to every element as an overall research method or it could be focused only through the mindset of the researcher. If concepts are to be mapped, it must be assumed that ANT should also be included and that there would be some kind of recursive feedback loop. A further limitation is in the strength and influence of the intermediary connections. These tend to be represented in most network maps as uniform in influence, yet we know that different types of connections retain the capacity to influence in different strengths. The production of actor networks through the mining of large data sets can function to remove some of the human-centered limitations of having to assign links and prioritize decisions about what constitutes an actor and how to link relationships. However, in the cases analyzed here, the relations are made from the researcher's knowledge of the design practice and cannot be easily described as data sets.

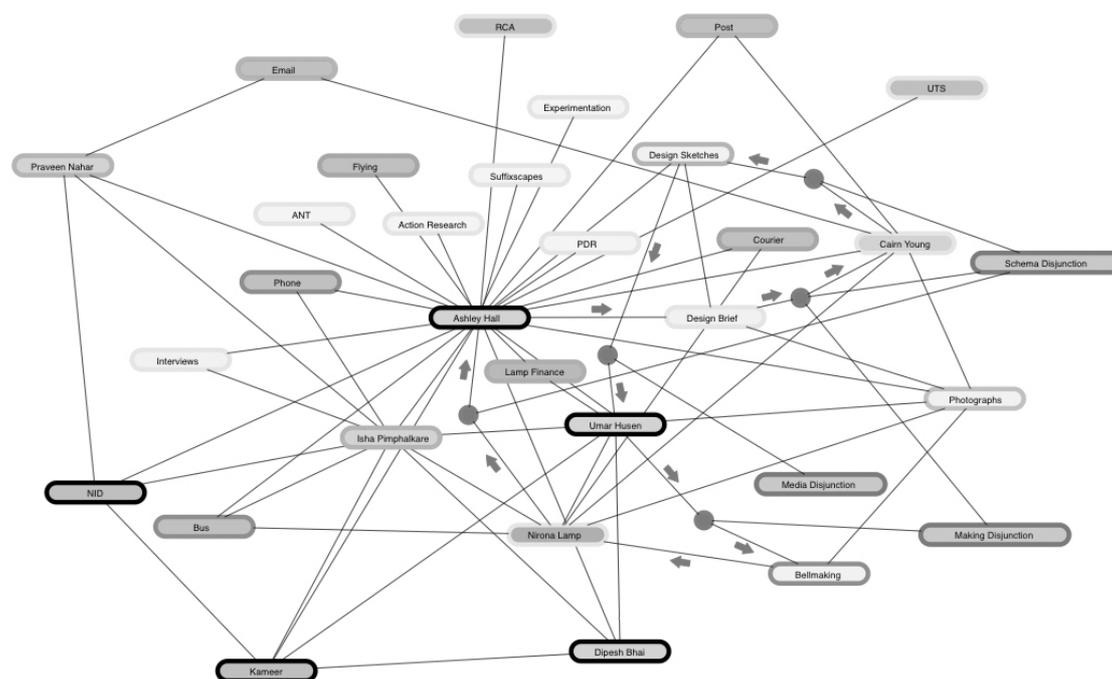


Figure 6. Luhar Lamp actor network showing disjunctions connecting to physical features on the lamp.

It became possible to visualize the disjunctions that led to changes in the flow of cultural material (dots on the diagram) that influence the design and making of artefacts. A decision was made to combine ANT and Appadurai's "-scapes" in order to culturally codify the actors and project them onto a framework of global cultural anthropology to trace their relationship to landscapes of cultural information flows. This made it possible to see new structures emerging and led to one of the most significant findings of the

research. Appadurai has described the disturbances that can occur between the landscapes of cultural material flow and hypothesized how these can lead to the asymmetrical influences that he named “disjunctions.” It would seem that the dots in the Luhar Lamp actor network could be considered as examples of disjunctions that take place when material flows are interrupted through human agency. They might come about as the result of understanding, misunderstanding, distortion, exaggeration, and other creative strategies (disjunctions have been added to the network as emerging new actors, large nodes placed between existing actors in Figure 6). Furthermore, it became possible to classify three different types of influence:

1. Media disjunctions. These occur when information is exchanged via a medium that is either accidentally or deliberately misinterpreted. The medium itself is the driver of the disjunction. In the Luhar Lamp, for example, several differences occurred though reading the technical lamp diagrams in a different way to that intended by the designer.
2. Schema disjunctions. Schema disjunctions occur where cultural mindsets are partially or wholly misaligned. A piece of cultural material is communicated from one location to another and while this may be done clearly, the projection and reception mindset “models” are divergent, resulting in a form of distortion. An example of this takes place between Cairn Young, the London-based industrial designer, and Umar Husen, the copper bell maker and his craft process.
3. Production disjunctions. These are due to differences between making cultures and manufacturing processes. For example, Umar Husen used inflated forms due to the limitations of his sheet iron tools and created his own semi-functional gooseneck, as he could not source one locally. Cairn Young used a CAD program intended for accuracy of industrial production rather than an open craft interpretation.

Media, schema, and production disjunctions can also be related directly to physical features of the lamp, as illustrated in Figure 6. In effect this creates a link, at the conceptual level, from Appadurai’s framework and Latour’s ANT through design practice to differences in physical objects produced through variations in the flow of cultural material exchanged through collaborative design and making partnerships. Disjunctions have highlighted the path of design and making events that led to the production of the de-territorialized Luhar Lamp.

Through this study it became possible to trace the loop of reflective design research practice (arrows) through the Luhar actor network (Figure 7), capturing a form of translocated making. In effect this is the idea that making itself has been liberated from a discrete spatial location and is able to accept and project influences through cultural exchanges. A final iteration involved creating a three-dimensional CAD model in order to spatialize the relationship between Appadurai’s framework and ANT in order to see if

there was a connection between the activities on specific layers that could be highlighted through the positioning of the actors on their respective “-scapes.”

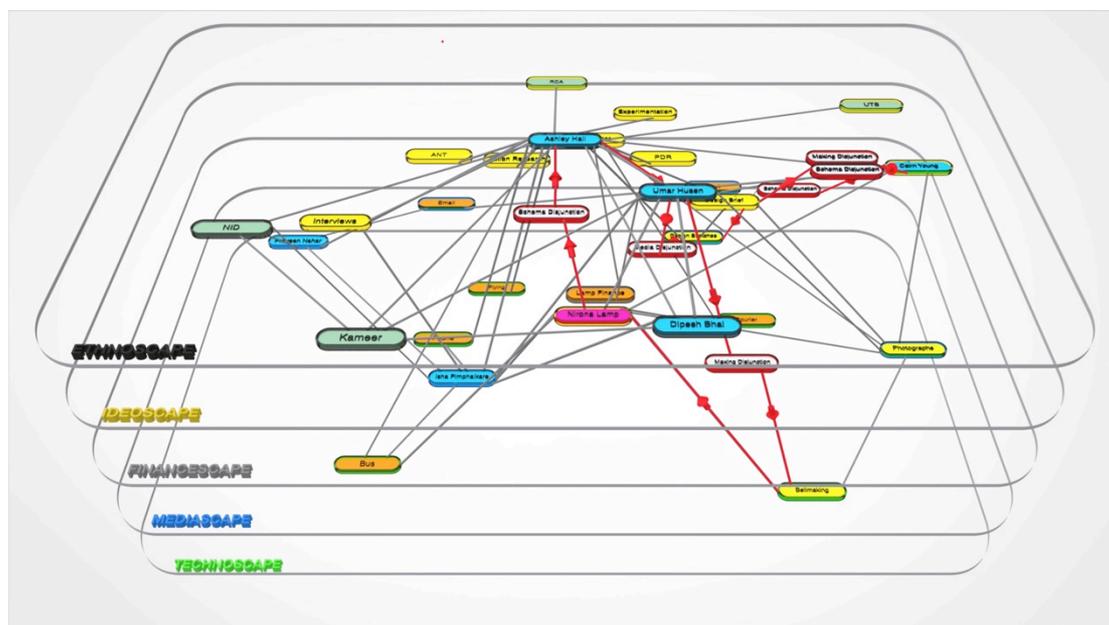


Figure 7. Actor network and “-scapes” spatialized as a 3D cultural model.

The resulting cultural spatial model allows us to see more clearly which types of activity take place, the communication and making mediums that are being used, and the effects on output from the design and making activities. The design process can be seen clearly on the right (arrowed lines) moving across all the levels of the framework; however, when we look more closely at a more oblique angle between the layers, we can see that design activity is clearly focused both on and through the ideoscape. Design activity takes place on the ideoscape via a number of actors that include design approaches, concepts, and methods including action research, “-scapes,” ANT, and experimentation. It also includes less expected elements, including Cairn Young as the generator of the original lamp concept, the lamp itself as the physical repository of design ideas, and production results that have come about through the exchange of cultural material. In the ideoscape and the design and making process we can see media, schema, and production disjunctions emerging between actors to affect the transmission and reception of cultural design information. It also brings together two very different types of space: the internal design space that is created where cultural material exchanges in and among design practice, and the global space, a space formed of networks and material flows. Combining these two very different spaces not only connects theory to practice and concretizes design influences, but it also structures a space where context, artefacts, space, and frameworks can come together to shine some light into the black hole of how objects make contexts.

The final iteration of this research requires a four-dimensional model to explore activity further. Currently, all the connections are visible and accessible all the time and the model is therefore static. A live three-dimensional, time-based model that changes the network structure in accordance with real-time developments could bring the research

and understanding even closer to design decision-making and there is the potential for disjunctions to be positive generators of new transnational artefacts. Visualizing the evolution of connections over the collaboration's timespan could open up new associations and limitations in the reduced number of connections.

The identification of disjunctions has emerged as a pivotal moment when cultures can benefit from creative reconstruction, as has been explored here through design and making collaborations. Tyler Cowen (2002) and Kwame Appiah (2006) describe it as a necessity for all successful cultures in a continual process of modification and assimilation. Furthermore, it is a model for designers to gain new insights into how practice-based research can enrich our making cultures.

For a moment I would like to return to Appadurai and his call to explore the black hole of social science and the way that objects make contexts. This research has explored how objects can transcend contexts and how they can become de-territorialized from specific sociocultural locations and come together to form objects whose locale is indistinct. While not specifically addressing how objects make contexts, it does explore how objects can culturally transcend context or at least inhabit multiple contexts at the same time. In order to achieve this, a process of re-anthropocentrizing the field of view has been necessary in order to allow design practice to begin to understand how cross-cultural collaborations can drive transnationalism.

Design and Transnationalism: Conclusion

The discussion so far has begun to unpack the layers of transnationalism from the distinct national design brands of 1980s Japan through the transitional colonial states in Hong Kong and its desire to establish its own global creative design identity through its unique position at the international gateway of diverse cultures, trade, and communication routes. Actor-network theory and "-scapes" have provided a social theory and a cultural framework to conceptualize the flows of material and relations that take place. The design research investigation in Gujarat showed us how we can deploy design methods that can liberate cultural material from a single sociocultural space and create new artefacts that challenge their spatial relationships to the cultures that made them and particularly their sense of place. Designers are key agents in cultural transfer and their actions can be part of a generative process of creating new differences. This is a major contribution to a field dominated by analytical and conceptual models that describe and decode what has already been made. Building new forms of knowledge for action is a major motivation for designers seeking to explore how they can make positive differences in collaborative design activities when practicing in the complex postcolonial world.

The transnational design layers we have explored here can be summarized as follows:

Nations and states. The realization that the idea of homogenous and defensible national cultures was an imagination of the twentieth century and that the

politics of cultural control are in the process of being liberated from nation-states.

Creative destruction. Understanding that creative enterprises are continually undermining the classic notions of nations and cultures of people residing within state control. Creative destruction is a major driver for successful cultures to adapt with the continued porosity brought through new communication platforms. Actor networks and “-scapes” are but two of many ways that we could frame these relationship in order to begin understanding how designers can understand their agency and responsibilities.

Cultural transfer. The methods deploying knowledge for action by designers in the field to collaborate and liberate cultural material while creating new artefacts. In particular, the models generated here can allow us to begin conversations around equitable relationships and to configure exchanges for mutual benefits.

Disjunctions. The key moments when new and unexpected connections arise and distort the expectations of designers, makers, and cultural analysis. Disjunctions can be tools for both domination and creative liberation.

Deterritorialized artefacts. The products and physical objects that carry the new cultural affordances that begin to shift their relationship to place and space. New types of objects, symbologies, innovations, and concepts can emerge in the hybridization space that is generated when we liberate differences from geography.

Its is important, therefore, to use our knowledge of the layers of transnationalism to build a model of cultural transfer as a design practice that seeks to establish equitable relationships through understanding more about the people and exchanges that take place. This is crucial to overturn the extraction model of cultural transfer, where material is taken from an “exotic source” and commercialized under the designer’s own brand. It avoids a form of cultural theft where the originators of the inspirations are often cited as little more than brand additions to the designer’s ego.

Transnational Futures

Looking ahead, we can already see that new complexities in the landscape of cultural identity are intensifying and it would be a mistake to see the research and discussions here as attempting to provide a comprehensive overview of what has become one of the most complex challenges for contemporary design. Design provides tools to liberate and to de-territorialize, but it also provides forms of affirmation. It can link us with cultural making practices like the six generations of the Husen family of copper bell makers centered on Nirona in the Rann of Katchchh. Yet design engages from the detail level of individual exchanges right up to formulating national strategies.

The disconnection between nations and states has been partly fueled by creative activity delivered through technology, and this brings into question the vision of nation-based cultural design practices. It implies a fundamental shift away from an idea of cultural design practices being embodied in artefacts, cultural motifs, and branded national identities located in specific geographies toward a concept of cultural design as navigating flows of information between spaces. Crucially, this involves interceding and acting on disjunctions in the information flow to create new opportunities for design innovations or to avoid damaging imbalances. Fundamentally, this requires a rethinking of cultural transfer and the unique qualities of cultural groups as “understanding” and “being active” in the flow of cultural material; this activity contains the real material of transnationalism, not the end product of physical artefacts. The choices made in these situations alter the balance of global flows of cultural homogeneity and heterogeneity and will demarcate between diverse socio-spatial groups. In the future we will increasingly learn to express our cultural values through the different ways that we deal with the disjunctions we encounter according to our cultural persona’s.

The implications of this shift are profound. When faced with digitally fueled transnational design, the model of national design brands conceived around simple ideas of protection and difference become increasingly hard to maintain. In the shift from objects to networks, reception and exchange will become important qualities as designers, institutions, and governments are challenged to realign their notions of design around different approaches to creative processes of exchange rather than focusing on an end product. Determining a national brand for design in complex exchanges of influence where physical features matter less in a world increasingly driven by digital experiences will undoubtedly prove difficult. Moreover, the idea of connecting the concept of nation to a cultural design brand is increasingly insecure. The traditional motivation for this came from protecting national corporations, but in a world where some global corporations exert more influence and are wealthier than national governments, this strategy will be difficult to maintain in the long run. This leads us to the idea that we may need to reassess the purpose of national design stereotypes and instead to begin thinking about how we can visualize the new dispersed physical and digital borders of culture, and ask who the new caretakers are.

Of all the world’s continents, Asia is meeting this challenge head-on. It has some of the planet’s fastest-growing economies, many of which also have a great diversity of cultures, with living conditions ranging from subsistence farming in the countryside to world-leading techno-cities. It is also adapting quickly, as we have seen through developments from Japan to postcolonial Hong Kong. Yet as the pace of new physical and digital infrastructures accelerates it is all too easy to focus on the functional benefits while ignoring that which is more subtle and difficult to gauge—the exchange and impact of cultural transformation. This provides Asia with a unique opportunity in exploring how cultural design thinking can build new models of cooperation and exchange for future mutual benefit in the transition from national to transnational cultural design strategies.

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