Transnational Experiences
India and China in Australian Industrial Design Education

Educational experiences that equip undergraduate Australian industrial design students with a practice of design capable of effective engagement with Asian cultures and industries are of increasing professional importance. To enable this, the Industrial Design Program at RMIT University has had to shift paradigms. Long-held and essentially Eurocentric notions of the discipline have given way to being independent in its view of what the future of Australian industrial design would look like and where it's main locales of disciplinary engagement would be. The rapid economic development of India and China, and their respective differences in design capabilities to those of Australia, has provided an opportunity to build transnational design relationships through a program of integrated curricula and funded student mobility with partner institutions in China and India. This paper discusses the key issues of training Australian industrial designers for transnational practice.

1. Introduction

Mass-manufacture in Australia has been in decline for many years, making its inclusion as a curricula priority difficult to authentically facilitate in the situated project modality of studio based learning. Counter to this is the growth of the industrial production base, domestic consumer markets, and considerable export capacities of India and China, and their new focus on training industrial designers to service this growth. The rapid economic development of India and China, and the new phase of economic codependence that Australia has with both nations has done two things: firstly, it has highlighted the disjuncture of locales of professional practice and their discourses, the authenticity of curriculums and disciplinary aspirations that exist in Australian industrial design education; secondly, it has provided an opportunity to reclaim a notion of design for mass-manufacture back into the curriculum. To this end the authors have conceived and implemented a project of building on the transnational inclinations of students and the university to construct a coupled curricula framework that promotes learning that is both locally and internationally relevant. For the past four years this has involved collaborating with partner institutions in China and India through a program of integrated curricula and funded student and academic mobility.

Within the context of the undergraduate Industrial Design Program at RMIT University the negotiation of a solution to this disjuncture, between design capability and the needs and types of design opportunities that local industry presents, could be two-fold. The first process is to change the curriculum to train students for a more relevant and localized practice. This requires a transformation

from a curriculum that focuses upon mass-manufacture in favor of a curriculum that focuses on design as a practical education in the humanities, thereby achieving a 'meaning' of design as a mechanism for the types of redirection needed in a post-industrial economy. Such a curriculum could equally reposition Industrial Design as a generalist multidisciplinary practice capable of adapting to disparate areas of creative engagement. The second process is to keep enough of the traditional mass-manufacture oriented design curriculum and attempt to connect students to an Indo-Chinese client base. Activities to achieve both these goals began in 2004. The paper sets up a discussion about establishing a rationale and methodology for educating Australian industrial designers for transnational practice through the re-think of curricula, its embedded values and relationships to broader shifts in the Australian economy. It then goes on to describe the transnational capacity developed in the participating students.

2. The 'Local'

Since formalization of the Industrial Design Program at RMIT University in 1949, mass-manufacture as a central discourse within the curriculum has provided relevant learning and a proximity to a future client and employer base for students. Here the idea of design for mass-manufacture has been elevated, perhaps optimistically, as an integral element of Australian economic development and independence, and as an important practical and political expression of the roles that industrial design plays in motivating cultural aspirations and cultures of production. Industrial design in Australia found its feet as a codified profession in the years following the Second World War as a necessary mediator between building and maintaining Western consumer aspirations with the cost and logistics of pursuing this Western lifestyle on the other side of the world. The import of goods from abroad was both slow and expensive leading to the creation of market conditions favorable to local design and manufacture. While distance provided the incentive, much of the mass-production infrastructure, and many of the large manufacturing business entities were established with significant government support as part of the war effort during the 1940's. The sectors' heritage in many ways became representative of the political desire for Australia to share the socio-economic values of its closest allies who were also its largest trading and strategic partners at that time – Western Europe and North America [1]. Throughout the second half of the Twentieth Century the shifting of populations between rural and urban sites of production via large-scale immigration programs, which in turn brought multiple cultures and social aspirations, kept the complexion of the profession internationally attuned and diverse. Immigration saw the rapid growth of a multicultural urban Australia with comparatively benign class structures, high standards of living, functional governance, and employment stability that ultimately helped to solidify Australia's manufacturing base.

While industrial design education in Australia imported many curricula values from Europe and North America throughout the Twentieth Century, it steered away from any deep inclusion of design as a theoretical, abstract and speculative practice. The discourse of design as a practice in the modernization of indigenous crafts was also not deeply privileged. Instead, a technically and industrially grounded discourse of design for mass-production and mass market was largely favored. This preference has a lot to do with the social and curricula histories of many of the institutions that offer industrial design training in Australia. The working class technical training colleges that were established in Australia in the late-Nineteenth and early-Twentieth Centuries formed the early incarnations of many of the universities in which industrial design education was formalized. Curricula that grew out of working class industrial arts and engineering education in these colleges has provided a particular linage of disciplinary ideology and pedagogy. This saw trainee designers' work in close proximity to their future client base with a view to participating in the cultural project that was 'building' Australia's creative and productive capacity in the best traditions of industrialization as humanism. To this day this orientation to the discipline remains significant.

Hidden under the relative economic prosperity of the past decade has been a shrinking of the local manufacturing base [2], and a steady drift towards offshore production by Australian companies. This has resulted in a marked contraction of the scale and range of local mass-manufacture that has run counter to the increased size and economic capacity of the domestic Australian market over the same period [3]. This contraction has its roots in a set of macro economic factors that need to be seen in context to appreciate the level of change that the Australian industrial design community has had to contend with: the economic deregulation and incremental removal of import trade tariffs of the 1990's; the increase in the export of commodities by primary producers to emerging industrial economies in Asia; a political and cultural aspiration to move away from secondary industrial production activities towards service oriented tertiary industry sectors such as finance and higher education; a cultural aspiration to mark prosperity through a level of material and technological goods consumption not seen since the years following the close of the Second World War [4]; and, the rapid expansion of Asia's economic capacity to service the aspirations of a booming Australian economy with a level of diversity that local industry struggles to compete with in the absence of robust organizational and brand structures. Lastly, the causal economic effect of the growth of near neighbors, namely the liberalization and industrialization of the Chinese economy, and the growth of the massive middle class of India, has enabled the potential of a new and vibrant Indo-Chinese client base for Australian designers [5, 6, 7].

The consequence of this contraction has been a change in the local contexts of design engagement and the opening up of new contexts and approaches. There has also been a reduction in opportunities for Australian industrial design graduates to engage in locally based careers within the milieu of design

for mass-production or mass market. The privileging of North America and Europe as pivotal to the disciplinary discourse within the curriculum of design for mass-production, as those locales de-industrialize, has shifted towards a greater inclusion of Asia as a key sphere of economic interdependence. This shift has forced industrial design curriculum to grow beyond its traditional and dominant practice discourses of design for mass and medium scale manufacture for local markets into more multifarious and contemporary notions of the discipline. The nature of employment in industrial design in Australia has for many changed from that of being in the service of a company (manufacturer or consultancy), to being a career constituted by forays into design projects where the context of engagement and not the activity, be it production, market or message, defines the method and approach in which design is undertaken. Many designers in contemporary Australia need to orient themselves as multidisciplinary practitioners working on projects: they may work in the realms of art and performance; designing bespoke and batch manufactured products; as researchers, or as generalists working across areas of design, marketing, and production in small and medium sized enterprises.

These new notions of practice can be seen as causally related to two main factors. Firstly, many designers have little option but to practice in a piece-meal fashion as the nature of employment in design has moved from that of being in the service of an organization to being a contractor within the time frames of a specific project. While moving from project to project has enabled industrial designers to increase the ambit of their design repertoires, it has also resulted in the diverging and amplifying of the notion of industrial design as generalist specialism to becoming two professional modalities: the design specialist and the design generalist. Rarely is there the authentic opportunity to orient careers in the traditional sense of the industrial designer as a specialist designing mass-produced objects for a mass-production company, save those that work within the few multinational companies that have retained an Australian design component within their global operations. Industrial design as a generalist specialism is important within the context of design for mass-manufacture in large organizational structures given the diversity of roles and responsibilities that that context of practice demands.

3. A Transnational Experience

In Australia today industrial design education in the main continues to educate in view of developing capabilities in designing for a mass market and a large company, despite, as previously argued, it being an unlikely professional activity for the many graduate designers who situate their careers within Australia. The context of design for mass-manufacture now sits predominantly in Asia. The experiential engagement with user and market sits in Australia, while disciplinary aspirations remain largely directed at Europe and North America. Since the proximity of the designer to both the site of

production, user and market is important this segregation of locales of practice questions the authenticity of training designers for a full sense of practice in the area of design for mass-production. Alongside this is a reluctance in university programs to recast Australian industrial design curriculum to such an extent as to be either 'localized', and therefore entirely representative of the nature contemporary industrial design as it is practiced in Australia, or to remove the 'local' and transition to a curriculum that is 'international' in its entirety. It, therefore sets up both a need for a transitioning of the curriculum so as to be more reflective of the types of local practice opportunities that industrial design graduates will have, and a need for a mechanism that can link Australian industrial designers with the mass-production opportunities that exist within Asia in order to provide access to an authentic locale of practice.

Depending on their size most Australian undergraduate Industrial Design programs now have a coupled local and internationalized curriculum as central to the ways that design in Australia is to be understood. For these programs this curricula 'coupling' raises questions of direct local relevance of content, and of the depth of meaningful penetration into the international spheres of practice that their graduates will embark on. There is no neat fit for a curriculum that is stretched between two poles, however, most programs cannot afford to not be international in orientation given the origins and trajectories of their students, just as they cannot afford to neglect to service the needs and help direct the futures of the Australian design sector. To make any shift away from the local in the formative training of designers carries the danger of further marginalizing the remnants of a local design industry for which the idea of a design service to local production and consumption is significant.

Of most importance to this reticence to 'localize' the curriculum has been the concomitant increase in the internationalized nature of students of design. When viewed as a 'transnational' disposition two main factors inform this internationalized nature: one, the professional trajectories of international students, and two, local students with a transnational appreciation and the means to effectively practice across multiple cultures [8, 9, 10]. Most undergraduate Industrial Design programs in Australia have a high proportion of international students that are in Australia for the purposes of professional education with a view to translating that training back into their countries of origin. Within the RMIT Industrial Design Program international students make up about 30 percent of the total student cohort. Many of these students are from Asia, where the notion of mass-manufacture is, and continues to be, a significant element of economic development. Other international students from Europe or the Americas within these programs often come to study design in Australia because of its proximity to Asia. For both groups of international students Australia represents a middle ground between the contextual opportunities of emerging Asian industries and markets and the design values of developed and de-industrializing Western economies.

The generation of 'local' students that have entered industrial design programs over recent years have a different sense of what Asia means to them than previous generations of students. Many have some Asian heritage or have developed a greater value and awareness through studying Asian languages and cultures as part of their primary and secondary education. For these students the Australia is a legitimate part of Asia and therefore a desirable context for design practice [11]. This is evidence of a move away from the idea of Australian design being an adjunct of Euro-American design values. Both groups of students engage in educational contexts that provide a highly reflexive enmeshment of cultural values. This enmeshment is further facilitated through the use of universalized information and communications technologies, and visual communication conventions particular to design, such as the sketch and the model, that transcend linguistic barriers.

In response to these changes the authors developed a project of coupling the local with the transnational via a set of opportunities that students can choose to engage in. Here the 'transnational' is encountered by the student in three different ways. Students can undertake 'transnational coursework' that includes design studio projects that focus on designing for real world client organizations and manufacturers in India or China, and design history and cultural theory courses that provide a focused study of design in either India or China. Alternatively some students can do an 'exchange' which involves spending a semester abroad in a partner university in India or China, or coming to RMIT University with an aim of immersion and familiarization in a culture and design practice of another country. This provides students with a grounded appreciation for other sites of professional activity and the capacity to build lasting professional and social relationships in their host nation. Finally, students can engage in 'localized' coursework. This involves working in a team on a design studio project that is grounded within the local practice discourses of design. Project teams are made up of international students enrolled in the full four-year degree program, local students with some or no prior experience of India or China, and students on exchange to RMIT from partner Universities in India and China.

The co-construction of project-based learning activities by academics from the various Universities involved has been a major aspect of this project so as to ensure that the key learning objectives of each institution are met. Constructed design projects have included the opportunity for students to work within the areas of: design for the mass-production of ceramic goods in Foshan, China; the design of products and services systems with NGO's and fabrication industries in Ahmedabad, India; design projects with Australian automotive companies and sustainability, and social innovation design research projects in Melbourne, Australia. Additionally students have undertaken design studios in Australia directed at both Indian and Chinese contexts of application. These include transportation design, design for mass-production and product design for grass-roots inventors in the process of commercializing inventions. Critical to the learning in these projects has been the amplification of

local design discourses so that students on exchange have to contend with differences of culture and discover the values of design, production and practice particular to each context. Alongside these design project learning experiences students sit practical and theoretical coursework as normally taught in each of the Universities. For RMIT students in China or India this has provided authentic learning in design for mass-production and mass market.

Set up by the authors as a project, these encounters have involved the development of academic and institutional linkages and the securing of Australian Government and University grant funding and scholarships to facilitate the mobility of students and staff between key institutional partners. Since 2004 the project has enabled the funded outbound exchange of fifteen students from RMIT Industrial Design to India, and sixteen students to China. It has also provided the mechanism for the funded inbound exchange of forty-seven students to RMIT from Indian and Chinese undergraduate Industrial Design programs. To date a total of seventy-eight students have participated in exchange between Australia, India and China. When added to the many hundreds of students and academics at each of the universities involved that have interacted with students on exchange or on their return, either through projects or socially, the project represents a significant quantum of transnational activity. Such a degree of sensitization to different contexts has enabled a familiarity and fluency of working across locales for participants. It has also provided the program with a mechanism to proactively confront the standing and implicit notion of India and China as 'other' to the established values of industrial design in Australia.

The learning that happens in these constructed transnational contexts has a few key aspects, as gleaned from the values expressed by the students who have participated in the programs and projects via course experience evaluations and feedback. Students relay the effect of learning new ways of working as a fundamental re-articulation of the design processes previously learned and considered universal by "adapting key routines, rules and practices with each actor acting from a specific socio-cultural background" [12], when they study and experiment under different conditions, and when they jointly invent new products, services and systems within a transnational or localized project context. Students encounter new parameters of evaluation, where good design is defined in different ways, leading to an understanding that the knowledge constructs of industrial design are fundamentally arbitrary and locally contingent. This realization enables a greater openness to an exchange of cultural and disciplinary knowledge, ideas, strategies, and expectations. Many of the students that have participated talk about the act of confronting the 'other', and their own perceived limitations, as a critical and self-actualizing moment. This moment provides a scaffold for developing new ways of looking at the world, appreciating difference, and adapting to environmental and socio-economic conditions. For some students these changes manifest as incremental enlargements and improvements in ways of functioning, but often they can also be fundamental in their reordering of the very nature of

design as understood by the student. In the latter, the degrees of misalignment felt towards 'localized' curricula suddenly dissolve so that subjective and deep assumptions learned previously are questioned. This often results in the transformation of the very way design projects are constructed, through a "forgetting" or "unlearning" of accustomed routines and outdated knowledge and the replacement of outdated institutions, roles, and procedures with new and more effective ones.

Conclusion

Visualized as an ongoing project of capacity development for future Australian trained industrial designers this paper argues the rationale and timeliness of a more effective engagement with Asian cultures and industries as a formative learning experience that is critical to the discipline and its sites of practice. The project group at RMIT University arrived at the need for this project through a sensitization to the career trajectories of students given the changing nature of the profession and its curriculum in the Australian context. Key to the authors position is the belief that the role of design for mass-production provides industrial design curriculum with the necessary depth of content to impart contextually transferable knowledge and practices that sufficiently account for the social, technical, economic and managerial elements that constitute a robust foundation to the practice. A method of approaching this belief through an integration of the activities of student exchange with curricula design and delivery and its impacts on learning is described. The belief that there is still an important place for a curriculum of design for mass-manufacture for students of the Industrial Design Program at RMIT University, despite the continued shrinking of the sector locally, has provided for the authors a way of engaging students with the new centers of mass-production. Opening out India and China as legitimate pathways for learning and professional practice has enabled a clearer view of disciplinary and curricula priorities, and a deeper value in the transformative power and authenticity of contextually situated learning.

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