

A new beginning for teaching Design for Sustainability

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The project of design's engagement with sustainability over the past two decades has been fraught; one, the discourse has been about consumption and western lifestyles, and two, the construction of the practice of sustainability has been reactive. For a long time design positioned itself as a profession that would react to design briefs set by a client and this directly created a format for design for sustainability as an activity of redesign. When engineering adapted methodologies of manufacturing practice, such as TQM and value engineering, to include issues of pollution they created new specializations of engineering that could handle incremental transformation of product manufacturing towards more environmentally appropriate practice. The fact that big industry would not be needing designers to work of the eco-redesign of their products did not dawn on the profession of design and even less on design academies. This fact of being repeatedly rendered irrelevant in the discourse of sustainability is the essential character of design's engagement with sustainability over the past two decades. However this fact is not acknowledged and quite effectively hidden as the profusion of published outcomes allows design to talk within its community of practitioners without needing to seek acknowledgement from the wider world. As a marginal discourse sustainability is high profile and very visible in exhibitions, websites and books. Queried as a valid practice with examples of best practice design has little to show. I propose to create a still point where we can pause and ask if the new fascination with service design and social innovation is valid in its claim to be the new face of design for sustainability. I propose that it is not though it does expose a fundamental flaw in the way the practice of design was constructed in the last century. I then go on to show that the emerging trends point to interesting possibilities of reinventing the practice and for the complete transformation of the way we look at studio practice in design education.

Background

Edwin Conan, a student at RMIT Industrial Design in 2009, designed this car for his 4th year Project. Late that year images of the design went viral on the internet. RMIT marketing opened a special file cataloguing instances of its occurrence in print publication in Australia. The images of this project are still going around. The latest is that the design is now featured as a wall-paper.

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While this project may well have been the outcome of a car styling studio it in reality was not. Edwin was one of four students who had come into a year-long fourth studio titled 'car of the future'. In 2009 January they were fed with speeches of Barack Obama, the president of the united states of America, and asked to speculate upon what cars would be like if the stranglehold of the car companies was removed (2009). While this was the context of the student projects, in the background was a larger project, an engagement with the transportation research and manufacture sector in Australia. The academic staff had constructed a larger project which would provide a laboratory for students to come into for studios and to do projects of their individual idealistic explorations within the paradigm of student culture that is training itself for work and employment in contemporary Australia (and potentially overseas). The staff research is a sustainability project which has been set up as a platform for dialogue and engagement with a wide cross section of stakeholders in the transportation sector in Australia. Now both the existence of student designs and the research network owe their existence to a particular set of circumstances that are in some respects unique to the Australian Industrial Design condition and the project of engaging with design orientated sustainability discourses that are relevant to industry.

RMIT has been recognized for some time as a significant location for ecodesign discourse in Australia. This is in a large measure due to the work of the Centre for Design, which under the leadership of Chris Ryan in the latter half of the 1990s saw itself as a "catalyst(s) for change, a way of shifting the terrain of competition for new product development"(Ryan, 2003, 10-12). The Centre pushed EcoRedesign, both through the widely distributed video and through courses and training programs, as a definite process that designers could undertake in redesigning products to make them more eco-friendly. Yet today a decade or more later there is very little evidence of ecodesign education within the design schools in Australia (Ramirez, 2006).

With hindsight we see that while EcoRedesign, with Government funding, was being developed as a future way of design practice on another side Australia's manufacturing base was shrinking. Potential opportunities to practice eco-redesign in a mass-manufacturing contexts were being extinguished. With the very subject of design for manufacture getting gradually marginalized design began to privilege a discourse of making one off artifacts. EcoRedesign in the way it was proposed sat poorly with one-off manufacture. While this was happening in Australia elsewhere in countries such as Japan ecodesign became a subject within mechanical engineering as a specialization and big industry began to build ecodesign as a component of best practices.

I therefore summarize this background as a proposition that the project of design's engagement with sustainability over the past two decades has been fraught; one, the discourse has been about consumption and western lifestyles, and two, the construction of the practice of sustainability has been reactive. For a long time design positioned itself as a profession that would react to design briefs set by a client and this directly created a format for design for sustainability as an activity of redesign. When engineering adapted methodologies of manufacturing practice, such as Total Quality Management and value engineering, to include issues of pollution they created new specializations of engineering that could handle incremental transformation of product manufacturing towards more environmentally appropriate practice. The fact that big industry would not be needing designers to work of the eco-redesign of their products did not dawn on the profession of design and even less on design academies. This fact of being repeatedly rendered irrelevant in the discourse of sustainability is the essential character of design's engagement with sustainability over the past two decades. However this fact is not acknowledged and quite effectively hidden as the profusion of published outcomes allows design to talk within its community of practitioners without needing to seek acknowledgement from the wider world. As a marginal discourse sustainability is high profile and very visible in exhibitions, websites and books. Queried as a valid practice with examples of best practice design has little to show.

While eco-redesign is no more, a larger take on sustainability is a strong suit of RMIT Industrial Design. A walk through the end of semester exhibitions in the Industrial Design department will show many examples of sustainability projects looking at issues such as mobility, leisure and work. Many of the projects have external partners and are collaborative projects that produce visions, artifacts and drawings. EcoRedesign is absent and so is any other take on a technical and material approach to sustainability. What is more visible is a social science and political take on sustainability as a way of thinking for social and societal change. Often such projects look like system design projects of old and others like design for development projects focusing upon an altruistic agenda. These are projects on service design and social

innovation. The risk in such projects is that the environmental agenda is diluted and the promise of pure contribution to climate change is not met. These are fairly complex projects with really inspiring outcomes but it is their very complexity that keeps environmental thinking out.

This then is the still point where we can pause and ask if the new fascination with service design and social innovation is valid in its claim to be the new face of design for sustainability. For it is clear that a manufacturing base in reaction to which eco-redesign was constructed cannot be taken for granted. New forms of design practice have emerged and while old forms continue they are significantly diminished or transformed. Sustainability method and theory construction thus has new challenges and chief among those challenges is the apprehension of what constitutes contemporary design practice in locales like Melbourne. Then will come the task of abstracting a discourse that sets an environmental agenda.

Post-Professional Design Studio Practice

Design education the world over is characterized by a reliance upon projects as the main medium of education. Additionally a significant number of design schools bring in practitioners in the field to run these projects. From the perspective of theory this kind of education is referred to as being practice orientated and the mode of delivery is referred to as being studio based. RMIT Industrial Design too practices a form of studio based practice orientated design education. Which means designers based in Melbourne come in to teach courses as a part time activity. These designers are sometimes from small design consultancies and more often they are individual designers who either freelance or have a small design orientated enterprise. More and more designers from consultancy practices in product design are hard to come by and bring on board to teach part time in studio courses. This culture of circulating part time and sometimes itinerant teachers makes the curriculum on the ground very porous, freely allowing outside agendas to come into the program to influence the curricular content, and immediately reflective of the real world of design practice in Melbourne.

Now Design practice in Melbourne is potentially in a post professional era. There are two meanings of the term Post-Professional that are of significance here. One refers to a course that is taken by mature practitioners of a craft such as Architecture after working for a few years. The term post-professional here is an appellation used by many to denote 'after practicing as a professional for a bit'. Another meaning that is of real interest is the way Atkinson (2010, 137-155) and Stairs (2008) use it – to refer to new practices that have emerged from the ashes of a particular kind of design practice that was quite canonical and prescriptive. The professional was one who practiced a shared method of work, belonged to a guild and advanced that particular grouping of practitioners. This meaning refers to Industrial Designers and organizations that protected their sector and developed it as a specific construct of work. Ecodesign fitted within this structured universe by proposing a structured way of achieving incremental improvements to industrial products. Now post professional within this construct is a period where design is an activity not necessarily done by designers. In artefact creation, in the examples cited by Atkinson, this refers to the ability of anyone, not just trained designers, to make things using software and rapid prototyping apparatus. So the post-professional era killed of ecodesign!

However to develop a take on future sustainability practices in design we need a larger frame of reckoning, one in which key emerging forms of contemporary design practice are included. For the moment I see the design scene in Melbourne as revealing a frame that is constituted of four key trajectories: one, is the emergence of the new craftsperson which I label as *Industries of One*, two the resurgence of idealism which I label as *Hypersocial Activism*, three an interest in practice locales overseas which I label *Public Altruism* and four practices of futuristic thinking which I label *Heterocosmicas*. While design for mass manufacture is noticeable absent, the four categories amplify key aspects of the practice of design in Melbourne.

Industries of One

Outside the cafeteria in the city campus of RMIT one can often find a small stall manned by students, selling jewellery. What they are selling is laser cut brooches made in the student workshop laser cutter

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probably after midnight when the machine was less used. This is the unorganized face of a really large movement in the design community – where laser cutters, CNC machines and 3 D printers are routinely used to produce objects to be sold directly by the designer. I use the phrase *Industry of One* to describe this movement of self-manufacture that many designers have taken to (Campbell, 2006-2007). In the future there will be continuing focus upon self-manufacture in the urban and developed country contexts. The lack of access to manufacturing, and so stable jobs in large organizations, will define the nature of artefact practice, which will be a new kind of localization, and we are looking at a design practitioner who is the new artist-craftsperson. While in time more avenues for practice and new modes of income and survival in this sector will open up existing technologies such as 3D printing, laser, and micro manufacturing will become more common.

Hypersocial Activism

Writing about ICSID 2009 Bruce Nussbaum (2009) speaks of a western versus Asian design standoff in one session where the western designer dominated podium speaks for a post-consumerist practice of responsible design and the voice from the audience asks if it is wrong to design objects for wealthy classes in Asia. This dichotomy exists, but on the internet it is another story where a third dimension has emerged and this one is location, profession and age independent. The *like* button in Facebook gives instant access and linkages to social formations of many different ideologies. In design the term social has come to denote a particular specialization where design is more people centric. Separated from the world of manufacture and commerce this specialization has been fuelled by a greater licence to campaign views and opinions through social media, text-blogging, and self propagation. The area of online activism is a dynamic and exciting one, and when referred to as the Hypersocial it carries with it a resonance similar to Gossieaux and Moran's (2010) exhortations to business to use social media for economic purposes. Online activism is a growing field that includes many forms of political, environmental and social activism that takes place via the world wide web. This trajectory speaks in terms of social change through work in sustainability, service design, and social innovation. What is often mystifying to me is the way this economy is constructed and in local clusters in Melbourne I realize it is often not about money at all.

Public Altruism

The Cooper-Hewitt Museum Exhibition and subsequent book titled *Design for the other 90%* (Cynthia, 2007) sent the message of designing for the less privileged far and wide. Coming almost half a century after Papanek's *Design for the Real World* (1985) the exhibition exposed a movement, underway in design schools and communities, that focused upon giving back to the world or upon working for the less fortunate. Exhibitions and websites are the public face of what may be fairly ineffectual interventions on the ground – but their effectiveness is not in contention usually. What is significant here is the availability of grants and public funds for projects that have first got to spend time and energy publicizing the projects locally, and often a much reduced fund is available for actually doing the project on the ground. This is Public Altruism where the focus is upon locations overseas. The focus upon “peripheries” is seen to contribute value to society and manifest ethical projects. For a design economy struggling for projects the route of grants and the availability of funds to high profile projects is welcome relief.

Heterocosmics

A regular feature of most academic design projects these days are depictions of altered contexts and possible worlds. Often labelled scenarios these possible worlds bear a strong resemblance to current reality altered by an overlay of ethical or responsible behaviour. I borrow Dolezel's notion of *Heterocosmica* (1998) to describe this trajectory, which is a theoretical discourse on the notion of the narrative world and contains an analytical framework for possible worlds. Significantly applied to story telling heterocosmica here can stand for a particular kind of design practice that engages with projects that work as campaigns to broaden notions of possible futures.

The key question now is what form does sustainability take in these trajectories. While ecodesign was a flat material discourse of the environment and when combined with life cycle thinking afforded quantitative analysis, these forms of design practice are more impenetrable to pure material reduction exercises.

While it is true that some of these practices often are driven by designers with an ethical premise of their practice the impact of such activities are not necessarily targeted to bring any direct change to the environment. And herein lies a big question and a potential intellectual project for the near future – what manner of design for sustainability is appropriate for the kind of design practices that are to be seen in cities like Melbourne?

Conclusion

The paper was written with a desire to raise the issue of the loss of ‘environment’ from contemporary design education and practice in Australia. People who did eco-redesign projects in academia have moved on to other things and now the very complexity of a service or social innovation project keeps them preoccupied and the environment is neglected. On the other side the loss of manufacturing has effectively destroyed any prestige or relevance for working on eco-redesign for mass manufacture. In this climate there can emerge a new movement from within and in line with current preoccupations of design practitioners. While in one way this would be the greening of the new practices of design its ability to transfer real planet benefits is yet to be explored. While the possibility of design to once again be marginalized will be ever present at least at the theoretical level there is a potential for new ways and new theories of practice to be constructed with an eye on sustainability.

Bibliography

- Atkinson, Paul. "Boundaries? What Boundaries? The Crisis of Design in a Post Professional Era." *The Design Journal* 13, no. 2 (2010): 137-55.
- Campbell, Emily, and Andree Cooke. "My World: New Subjectivity in Design." British Council, <http://www.britishcouncil.org/arts-aad-design-crafts-and-applied-art-my-world.htm>.
- Dolezel, Lubomír. *Heterocosmica : Fiction and Possible Worlds*. Baltimore: Johns Hopkins University Press, 1998.
- Gossieaux, Francois, and Ed Moran. *The Hyper-Social Organization: Eclipse Your Competition by Leveraging Social Media*. New York: McGraw Hill, 2010.
- Obama, Barack. "Address to Joint Session of Congress." In *Remarks of President Barack Obama – As Prepared for Delivery*, edited by The White House. Washington, 2009.
- Papanek, V. *Design for the Real World*. London: Thames and Hudson, 1985.
- "Postprofessional." *Design Altruism Project* (2008).
- Ramirez, Mariano. "Sustainability in the Education of Industrial Designers: The Case for Australia." *International Journal of Sustainability in Higher Education* 7, no. 2 (2006): 189 - 202.
- Ryan, Chris. "Learning from a Decade (or So) of Eco-Design Experience, Part I." *Journal of Industrial Ecology* 7, no. 2 (2003): 10-12.
- Smith, E. Cynthia. *Design for the Other 90%: Editions Assoulin*, 2007.

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