
This is an electronic reprint of the original article.
This reprint may differ from the original in pagination and typographic detail.

Holland, Dónal; Maze, Ramia; Milton, Alex; Mulder, Ingrid; Storni, Cristiano
Design Education as a Catalyst for Change

Published in:
Book of DRS 2018 Conversations

Published: 01/01/2018

Document Version
Publisher's PDF, also known as Version of record

Published under the following license:
CC BY-NC-SA

Please cite the original version:
Holland, D., Maze, R., Milton, A., Mulder, I., & Storni, C. (2018). Design Education as a Catalyst for Change. In S. Prendeville, A. Durrant, N. O' Murchú, & K. Leahy (Eds.), *Book of DRS 2018 Conversations: Catalyst* (pp. 111-117). Design Research Society.

This material is protected by copyright and other intellectual property rights, and duplication or sale of all or part of any of the repository collections is not permitted, except that material may be duplicated by you for your research use or educational purposes in electronic or print form. You must obtain permission for any other use. Electronic or print copies may not be offered, whether for sale or otherwise to anyone who is not an authorised user.

Design Education as a Catalyst for Change

HOLLAND Donál^{a*}; MAZÉ Ramia^b; MILTON Alex^c; MULDER Ingrid^{d*} and STORNI Cristiano^e

^a University College Dublin, Dublin, Ireland

^b Aalto University, Finland

^c National College of Art and Design, Ireland

^d Delft University of Technology, Delft, The Netherlands

^e University of Limerick, Limerick, Ireland

*Corresponding author e-mail: donal.holland@ucd.ie

doi:10.21606/dma.2018.773



Figure 1 Design Education as a catalyst for change

This Conversation aims to explore the relationships between design education, design practice, and social change. To achieve this aim, the Conversation will bring educators and researchers from a variety of disciplines together to foster new exchanges and collaborations, allowing us to better explore questions about what it is that we learn when we learn to design, why that is, and what impact that has on our societies. During the Conversation, audience members will work in groups to create “prototype” research articles responding to themes and provocations proposed by the convenors.

Keywords: Design education; social change; design profession; hegemony

1 Context of Conversation Topic

Taking a lead from the overall conference theme (Design as a Catalyst for Change), this Conversation session focused on the role that design education can play in achieving social change. A starting point for the Conversation was thinking of designers in terms of Gramsci's definition of *intellectuals*: the people who organise society and define or reinforce the cultural hegemony of the dominant class (Gramsci, 1989). If designers fit this definition, then what role does education play in instilling hegemonic values in designers? And could changes in design education help to foster counter-hegemonies? Put differently, if designers really do shape the world, and if education shapes designers, then could design education serve as a "leverage point" for achieving broad social change? Scholarship in the field of science and technology studies (STS) tells us that the relationship between technology and society is not a simple one: neither pure technological determinism (the idea that technology shapes society) nor pure social constructivism (the idea that society shapes technology) is accurate. Rather, technology and society "co-produce" each other (e.g. Bijker et al., 2012, p. x). It seems reasonable to expect that a similar model of co-production could be used to understand the relationships between design education, design practice, and social changes. Two examples illustrate the point:

1. In the US during the late 19th Century, engineering education began to be taught in universities alongside the emergence of engineering as a profession and the rise of corporate capitalism. The struggle for the "useful arts" to be accepted as an academic discipline drew strength from, and in turn strengthened, the consolidation of corporate power in society (Noble, 1979). From the beginning, the curricula of the new American engineering schools emphasised a design education focused only on narrow problems of technical performance and cost, thereby producing disciplined design employees for the emerging corporations (Schmidt, 2001; Noble, 1979).
2. In the 2000s, a particular brand of "design thinking" (DT) attracted the attention of the management world (Dorst, 2011). Ostensibly drawing on ideas from design education, DT promised a method of solving almost any business problem, from corporate governance to accounting (e.g. Berger, 2009). It also happened to reinforce hegemonic (neoliberal) values of entrepreneurialism and market-based solutions by framing all problems in terms of consultants and clients (Vinsel, 2017). While some have claimed that DT was a management fad whose time has passed (e.g. Nussbaum, 2011), it seems to have had a significant and potentially lasting impact on education (Miller, 2017). Ironically, it has also exerted an influence on design education itself.

Both examples demonstrate relationships of co-production between design education, design practice, and society, and both are examples of changes in design education reinforcing broader hegemonic projects. Of course, many attempts have also been made to challenge rather than reinforce the current hegemony by introducing new perspectives on design to the undergraduate curriculum. From the appropriate technology movement to feminist technoscience to Transition Design, the adoption of these philosophies in education has been less uniform than in the examples listed above, ranging from isolated efforts by individual instructors to wholesale curriculum redesign by entire design schools (e.g. Irwin et al., 2015). Obstacles are to be expected in any efforts to challenge the social status quo, but how could an understanding of these obstacles strengthen efforts to contribute to social change through design education? What can we learn from historical examples of the co-production of designers and society? What design experiments could we perform to yield new insights on this topic?

This Conversation aimed to explore the relationships between design education, design practice, and social change. To achieve this aim, the Conversation brought educators and researchers from a variety of design disciplines together with experts from a range of other humanities and social science disciplines. Much of the current educational research within design disciplines draws

primarily on methods and theories from psychology and focuses on understanding how students learn to do design. The Conversation aimed to foster new exchanges and collaborations that could expand the scope of research on design education, allowing us to better explore questions about what it is that we learn when we learn to design, why that is, and what impact that has on our societies.

2 Organising questions

How does design education relate to broader social, economic, and political change?

Sub-questions: How have design education and social changes shaped each other in the past? What might design education for beneficial social change look like? What research methods are appropriate for studying this topic?

3 The online discussion

In advance of the conference, the five convenors along with four invited participants used an email listserv to discuss the topic of design education as a catalyst for change. The online participants were:

- Amy Bix, History Department, Iowa State University
- Eddie Conlon, Faculty of Engineering, Dublin Institute of Technology
- Cameron Tonkinwise, School of Design, University of Technology Sydney
- Kari Zacharias, Department of Engineering in Society, Concordia University

The discussion began with participants describing their research interests and their perspectives on the Conversation topic. As participants responded to each other and shared relevant literature, five themes emerged. The lead convenor compiled these themes, along with related questions, provocations, and reading material, to guide the Conversation session at DRS2018.

4 The DRS2018 Conversation session

At the beginning of the two-hour session at DRS2018, the convenors gave a general introduction to the topic, explained the online discussion that had taken place, and discussed the five emergent themes and related provocations and literature. The Conversation attendees then broke into groups – one for each theme. The attendees were asked to discuss their chosen theme and to plan a research project they could undertake on that topic. A brief think-pair-share activity was used to initiate the breakout conversations. Handouts summarising the themes and a template paper outline, intended as conversation aids, were provided and participants were asked to prototype an outline of the paper that would result from their planned study. After an hour of small-group discussion, each group gave a verbal summary of their conversation and the session ended with a large-group discussion. Attendees were encouraged to exchange contact information with other members of their group to facilitate collaborative projects that might emerge from the session. Attendees were also invited to sign up for a mailing list to continue the Conversation online. The following sections summarise the themes and resulting discussions from the session.

4.1 Theme 1: Co-evolution of design education, design practice, and society

This theme focused on understanding how design education, design practice, and society shape and are shaped by each other. The online discussion highlighted the potential of learning from historical changes in design education and practice, such as the push for diversity in higher education and in the professions, as well as the involvement of designers and related professionals in movements for social change. The growing Transition Design movement was identified as an ongoing case study in co-evolution, and the potential of design as a vehicle to restructure the broader university was

highlighted. Relevant literature identified during the online discussion included Bix (2014), Zacharias (in press) Irwin et al. (2015), and Mazé (2014).

During the session at DRS2018, the breakout group selected 'the rise of service design in the Finnish public sector in the past 10 years' as a case study of the co-evolution of education, practice, and society. The participants, all early-stage researchers, sketched a plan for a study that would use semi-structured interviews to collect data on the growth of service design in Finland. Snowball sampling was proposed as a method of recruiting subjects, and the participants discussed using a grounded theory approach.

4.2 Theme 2: Participation and power

This theme focused on the "participatory turn" in design, and in particular on questions of power related to that turn. Previous scholarship on this topic, in particular work from feminist and postcolonial perspectives, was raised during the online discussion (e.g. Keshavarz and Mazé, 2013). This led to questions about power imbalances present in efforts to bring participatory design into the classroom. For example, if a more just form of design would include the perspectives of marginalised communities (e.g. homeless people, asylum seekers, etcetera) then including such communities in student projects seems desirable. However, treating such communities as an educational resource (by asking them to participate in student projects for presumably minimal compensation, if any) raises serious ethical questions. This discussion also raised questions about the role of designer and the role of design, touching on the crisis of expertise and debates about design as future-making. Relevant literature included Stembert and Mulder (2013) and Storni (2015a).

During the session at DRS2018, the breakout group discussed a study on 'social contracts and engagement in cooperative/participatory design'. They proposed identifying existing social contracts and expectations in groups and communities, existing relevant cases of cooperative or participatory design, and relevant pedagogical techniques. This scoping activity would be followed by new case studies of participatory design projects in educational contexts, during which the researchers would collect data on social contracts and individual experiences in the projects. Data sources would include students' reflections during the projects, and the researchers would map the relations and tensions within the groups. The aim of the study would be to produce a typology of relations for these types of design projects, guidelines for practice, and new or improved courses and projects.

4.3 Theme 3: Time, maintenance, and repair

This theme was concerned with changing the way that student projects are framed. The online discussion raised the issue that social change must take the form of phased change over time, whereas student projects are typically geared towards the "serial monogamy" of short, well-bounded design tasks (Tonkinwise, 2014). The need for students to experience tentative, exploratory design and the potential for multi-year student projects were highlighted. Donna Haraway's (2016) exhortation to 'stay with the trouble' was identified as relevant to an improved approach to design education. In addition, the potential for maintenance and repair, rather than innovation, to serve as a frame for design was raised (Russell and Vinsel, 2016).

During the session at DRS2018, the breakout group discussed a study on long-term, multifaceted class projects that would allow students to tackle wicked problems while developing the mindset and skills required to pursue this type of work in their professional practices. Participants proposed using an action research methodology for the study, with the aim of yielding improved guidelines for educational practice alongside improved learning outcomes for students.

4.4 Theme 4: Instilling values

This theme focused on the values guiding designers and on the role of education in instilling these values, including through the hidden curriculum (Giroux & Purpel, 1983). The frequent use of competition in design projects (from head-to-head robotics competitions to pitches for investment) was identified as an example of the hidden curriculum in design. Projects and assessments that focus

on cooperation rather than competition were proposed as a means of changing the implicit values of design education. Including discussions and assignments on ethics in student design projects was discussed as a way to question and make explicit the values of both individual students and the design profession. Participants in the online discussion argued that the values of individual designers are not sufficient to change industry practices, as designers are usually employees with limited autonomy, i.e. they do not control the types of problems and projects they work on. Thus, the broader context and social relations of design employment itself, as well as whatever problem designers happen to be working on, must be taken into account. Relevant literature included Gramsci (1989), Schmidt (2001), and Verbeek (2008).

During the session at DRS2018, the breakout group proposed a study titled 'Whose values? Minding the gap between design educators and students'. They proposed conducting interviews with both educators and students, aimed at understanding the values of each group and their thoughts on how these values related to the curriculum and teaching methods. The Conversation participants suggested that this could be supplemented with a co-design project, in which students would write their own project brief by drawing explicitly on their own values.

4.5 Theme 5: Evaluation, assessment, and measurement

A recurring theme throughout the online discussion was the problem of measurement. On the one hand, participants rejected positivism and the neoliberal turn in education, which focuses on quantitative metrics over critical thought and speculation. On the other hand, a concern with change (in education, design practice, and society at large) must rely to some extent on measurement to understand both the current situation and the effect of attempts at changing that situation. The online discussion covered relevant literature including Collini (2017), Graeber (2018), and Storni (2015).

During the session at DRS2018, the breakout group proposed a longitudinal study aimed at identifying and evaluating design that is good (in the moral or ethical sense). They suggested tracking the employment journey of design graduates over 5-10 years, combined with a historical study of data on other designers' careers. They hoped that the study would yield insights on what good design looks like, on whether careers guided by a strong ethical commitment are sustainable, and on the impact (if any) that a good designer can have, especially at the early stages of their career.

5 Conclusions and Reflections

The Conversation was well-attended; places were fully booked in advance and the room was full throughout the session. At the end of the session, 16 participants signed up for the mailing list to continue the Conversation. The themes that arose in the online discussion seemed to overlap well with some of the other Workshops, Conversations, and Technical Sessions at the conference, and some of the one-to-one conversations that began during the session continued over the subsequent days.

The convenors decided to use an email listserv, rather than the forum provided on the conference website, as the medium for the pre-conference online discussion. This decision was partly based on the convenience of keeping the Conversation thread within one's email inbox, rather than having to visit another website. The use of email offered other advantages, such as being more conducive to longer posts, allowing attachment of relevant files, and allowing the Conversation to be split into multiple separate threads. It also brought disadvantages, most notably the fact that the Conversation remained private and could not be viewed or joined by other conference attendees in advance. Overall, the main challenge with organising an online discussion in May and June is that many academics are busy with grading, graduation shows, thesis deadlines, and travel to other conferences. Given this, keeping the Conversation in email may have helped to remind people about it and increase their level of participation.

The convenors are in discussion about producing a position paper based on the Conversation. Informally, session participants have told convenors that they have stayed in contact with fellow participants and continued discussions that began during the session. As the primary aim of this Conversation was to encourage new research collaborations focused on design education as a catalyst for change, the convenors consider these ongoing discussions to be an indication of success.

6 References

- Berger, W. (2009). *Glimmer: how design can transform your life, your business, and maybe even the world*, Random House.
- Bieker, W. E., Hughers, T. P., & Pinch, T. (2012). *The Social Construction of Technological Systems*, Anniversary Edition, MIT Press.
- Bix, A. S. (2014). *Girls Coming to Tech!: A History of American Engineering Education for Women*. MIT Press.
- Collini, S. (2017). *Speaking of universities*. Verso Books.
- Dorst, K. (2011). The core of 'design thinking' and its application, *Design Studies*, 32(6), pp. 521-532.
- Giroux, H. and Purpel, D. (1983) *The Hidden Curriculum and Moral Education*. McCutchan Publishing Corporation.
- Graeber, D. (2018). *Bullshit jobs*. Simon and Schuster.
- Gramsci, A. (1989). The Intellectuals, in Gottlieb, R. S. (ed.) *An Anthology of Western Marxism: from Lukács and Gramsci to Socialist-Feminism*, Oxford University Press.
- Haraway, D. J. (2016). *Staying with the trouble: Making kin in the Chthulucene*. Duke University Press.
- Irwin, T., Kossoff, G., Tonkinwise, C., & Scupelli, P. (2015). *Transition Design 2015*, <https://tinyurl.com/y8etcgau>, p. 9, (accessed 15 February, 2018).
- Keshavarz, M., & Mazé, R. (2013). Design and dissensus: framing and staging participation in design research. *Design Philosophy Papers*, 11(1), 7-29.
- Mazé, R. (2014). Our Common Future? Political questions for designing social innovation. In *Proceedings of the Design Research Society Conference 2014*.
- Miller, P. N. (2017). Is 'Design Thinking' the New Liberal Arts?, in Marbner, P. and Araya, D. (eds.) *The Evolution of Liberal Arts in the Global Age*, Routledge, pp. 167-173.
- Noble, D. F. (1979). *America by design: Science, technology, and the rise of corporate capitalism*, Oxford University Press.
- Nussbaum, B. (2011). Design Thinking Is A Failed Experiment. So What's Next? <https://tinyurl.com/y8kreqo8> (accessed 15 February, 2018).
- Russell, A., & Vinsel, L. (2016). Hail the maintainers. *Aeon Essays*. <https://aeon.co/essays/innovation-is-overvalued-maintenance-often-matters-more> (accessed 25 June, 2018).
- Schmidt, J. (2001). *Disciplined minds: A critical look at salaried professionals and the soul-battering system that shapes their lives*, Rowman & Littlefield.
- Stembert, N., & Mulder, I. J. (2013). Love your city! An interactive platform empowering citizens to turn the public domain into a participatory domain. *International Conference Using ICT, Social Media and Mobile Technologies to Foster Self-Organisation in Urban and Neighbourhood Governance*.
- Storni, C. (2015a). A Manifesto for Epistemological Empowerment in Chronic Disease Self Care. In Bihanic, D. (ed) *Empowering Users through Design*, Springer: Cham, pp. 267-279.
- Storni, C. (2015b). Notes on ANT for designers: ontological, methodological and epistemological turn in collaborative design. *CoDesign*, 11(3-4), 166-178.
- Tonkinwise, C. (2014) *Transition Design as Postindustrial Interaction Design?* <https://medium.com/@camerontw/transition-design-as-postindustrial-interaction-design-6c8668055e8d> (accessed 25 June, 2018).
- Verbeek, PP. (2008). Morality in design: Design ethics and the morality of technological artifacts. In Kroes et al. (eds) *Philosophy and design*. Springer, Dordrecht. pp. 91-103.
- Vinsel, L. (2017) *Design Thinking is Kind of Like Syphilis — It's Contagious and Rots Your Brains*, <https://tinyurl.com/y9gnh9dg> (accessed 15 February, 2018).
- Zacharias, K. and Wisnioski, M. (in press) *Land-Grant Hybrids: From Art and Technology to SEAD*, Leonardo.

About the Convenors:

Dónal Holland is Assistant Professor in Mechanical and Materials Engineering at University College Dublin, and Associate at the Harvard School of Engineering and Applied Sciences. His research interests include engineering education and the design of robotic systems for rehabilitation.

Ramia Mazé is Professor of New Frontiers in Design at Aalto University, specialising in critical and politically-engaged design and design research practices. Recent projects include a book on feminist spatial practices and the project UTOPIA NOW HERE at the Istanbul Design Biennial.

Alex Milton is Head of the School of Design at the National College of Art and Design. His research addresses the development of design policy and strategy; he served as Programme Director of Irish Design 2015, devising and delivering a major government-backed programme.

Ingrid Mulder is Associate Professor in Industrial Design at TU Delft and an expert in transformative and social design. Her current research explores collaborative urban design, methods of empowering citizens to make meaningful use of open data, and Transition Design.

Cristiano Storni is a Lecturer and Director of the MSc/MA in Interactive Media at University of Limerick. His research explores the impact of ICT on people, organisation and society, and his expertise includes Actor Network Theory and Social Studies of Information Systems