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Tilting T&L – awakening responsible design practices via the senses

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Abstract: This case study outlines the experience of engaging postgraduate design students in activities exploring sensorial modalities in relation to their creative processes. Situated within wider research trialling a set of teaching interventions that positively disrupt the curriculum as a mechanism for awakening learning around responsible design – this case study sets out the process and some early discoveries concerning a pair of workshops that utilise the senses as a tool for enquiry, imagination, and connection. It offers insights and reflection on methods for 'tilting' perspectives and practices regarding human and more-than-human awareness within design education.

Keywords: design education; sensorial learning; reimagining; responsible design practice; more-than-human

Introduction

This case study seeks to explain and reflect upon our experience of engaging postgraduate design students in two *Tilt* workshops exploring sensorial modalities in relation to their creative processes. These activities sit within a wider action research project, entitled *Disrupting Design Attitudes* [DDA]. This wider research study interrogates a system of teaching interventions integrated into the student experience and aimed at building eco-socially aware practices and nurturing responsible attitudes. By investigating this system, the research project aims to contribute to an essential and far-reaching imperative for design education to reorientate and support practices that "… commit to harnessing the tools of our industry to reimagine, rebuild and heal our world" (Design Declares, 2022). We also aim to align with our institution's commitment to becoming a Social Purpose University and its Climate Action Plan to "equip our students with the education and creative agency to further climate and environmental justice" (UAL, 2022). In pedagogical terms, the DDA research is concerned with building and testing a sustained and responsive approach to teaching *responsible design* i.e. creative practice that is engaged in a process of "interrogating and improving the way we design" and/or is committed to the purpose of "investigating and targeting the positive impact of design" (Hanrahan & Temple, 2017, p. 5). Our underpinning objective is to explore how design education can go beyond the development of responsible outputs (which are project or discipline-bound) to nurturing transdisciplinary skills and mindsets that recognise "...the need for holistic views and a spirit of inquiry from designers, where action is supported by systemic thinking, [and where] designers guide their design process with ethics and are transformative with their ethical actions (Salamanca, Briggs & Mercer, 2019, p. 10). Our motivation is the development of a teaching and learning (T&L) delivery model that might:

1. Evolve and improve design attitudes;
2. Enhance the student experience;

3. Enable and innovate responsible practices;
4. Demonstrate curriculum design that aligns with (and inspires) eco-social purpose; and
5. Inform the development of future design education tools.

To meet the objectives of the DDA research project, we have adopted an action research methodology, combining an investigation into a T&L approach with a reflection on its effectiveness in prompting students to develop responsible design awareness and practices. Here we draw on Stringer's (2014) definition of action research as a methodology implemented to solve an immediate problem, or as a reflective process of progressive problem-solving to address a wider human-centred issue. Cunningham (2008) states that "… action research gives us an iterative, systematic, analytic way to reflect on what we are doing in class, to evaluate our success at achieving our classroom goals, and to chart the direction of future classroom strategies based on what we have learned" (p. 1). The implementation of planning, acting, observing, and reflecting stages within our research, enabled us to design and implement T&L interventions that would complement and support the curriculum. Whilst our ongoing reflection on individual sessions informs our actions in crafting the DDA system as a whole experience. The reflective nature of this methodology also ensures that we include an emancipatory opportunity for the students, by utilising the disruptive experiences of our interventions to create moments for questioning, and possibilities for students to evolve their practice.

The data has been drawn from collaboration with the MA Design for Art Direction 2021/22 student cohort and teaching team at the London College of Communication (LCC), University of the Arts London (UAL). We chose to work with an MA cohort as postgraduate students entering LCC might not have benefitted from prior learning in this area and will have less time to gain exposure to the institution's environmental and socially responsible design commitments and to build demonstrable knowledge. The design for art direction focus of the course has enabled us to work with a student cohort engaged in a wide range of creative and design practices, providing an opportunity for our research to be tested within a multidisciplinary teaching and learning context. All 54 students participated in the DDA sessions, with 23 students from within this cohort consenting to participate in the DDA research study. The data collected from them to inform the study included: a Padlet (an online post-it wall) of reflections, a collective Miro board (an online whiteboard) of resources; two recorded group feedback discussions, two questionnaires (completed either in person or online), Final Major Project submissions and creative exhibits.

Whilst the wider DDA research study consisted of eight sequential curriculum interventions, in this case study we focus on the two *Tilt* interventions, as these sessions and their activities were the most referenced in the questionnaire feedback provided by student participants. Therefore, the data analysed in this case study comes from two feedback opportunities – one taking place at month eight (the project mid-way point in June 2022) and one at month 14 (the project endpoint in December 2022) (See Figure 1.). Of the 23 students who consented to participate in the research, we received 17 responses to our questionnaires (11 in June and 6 in December). 13 of those responses were completed in person following group discussion sessions and four were completed online. We have chosen to focus on the questionnaire data for this case study due to its consistency and comparability, but also because it is accessible to us during this early stage in our synthesis of the DDA research data.

The following sections offer an analysis of the *TIlt* activities and interactions, to investigate the role they play in positively disrupting the curriculum, as a means to awaken (either through catalysing or reinforcing) learning around design action and ecological and social consequences. The narrative commences with an overview of the DDA system to contextualise the positioning and role the *Tilt* workshops play. This is followed by a thematic analysis of the questionnaire responses that explicitly referenced the Tilt activities and our reflections on the impact of the *Tilt* workshops. The narrative concludes with a consideration of the insights gained and opportunities they propose for the future development of design education.

Tilt workshops: enabling students to reimagine their practice through sensorial approaches

The Disrupting Design Attitudes System

The components of the DDA T&L System are tasked with being *positively disruptive* i.e. we intend for them to create experiences where participation in learning and/or epistemologies are challenged by the unexpected or unfamiliar "… to educate the designer towards an attitude in questioning rules, methods, procedures and boundaries and in deliberately controverting to explore them" (Celasch, Formi & Lupo, 2013, p. 8). Rooted in eco-social imperatives, the DDA interventions are intended to surface and support questioning, but not to derail students from their course objectives. This balance was essential to our defining of the DDA components; thus we drew on recognisable teaching approaches (such as co-created resources, dynamic workshops and inspirational presentations/discussions), whilst

ensuring that sessions were distinctive and bold in their content and activities. Such an approach also made them easily identifiable for research purposes. Delivered through a hybrid of classroom/studio and online methods the components were interspersed and integrated into the course teaching, to enable us to analyse the effectiveness of the DDA T&L System to create change from within the curriculum, not as a bolt-on.

The components of our DDA T&L System (as depicted in Figure 1.) are:

Resource: A collaborative online space exploring and collating examples of eco-social creativity and signposting current discourse and events. [1]

Tilt: Two workshops that deploy sensorial approaches to enquiry and reimagining (one in the classroom/studio and one online). [2, 5]

Converse: Three online discussion sessions with external practitioners and alumni presenting diverse perspectives on responsible creativity. [3, 6, 7]

Impact: A studio workshop interrogating systems and embracing disruption. [4]

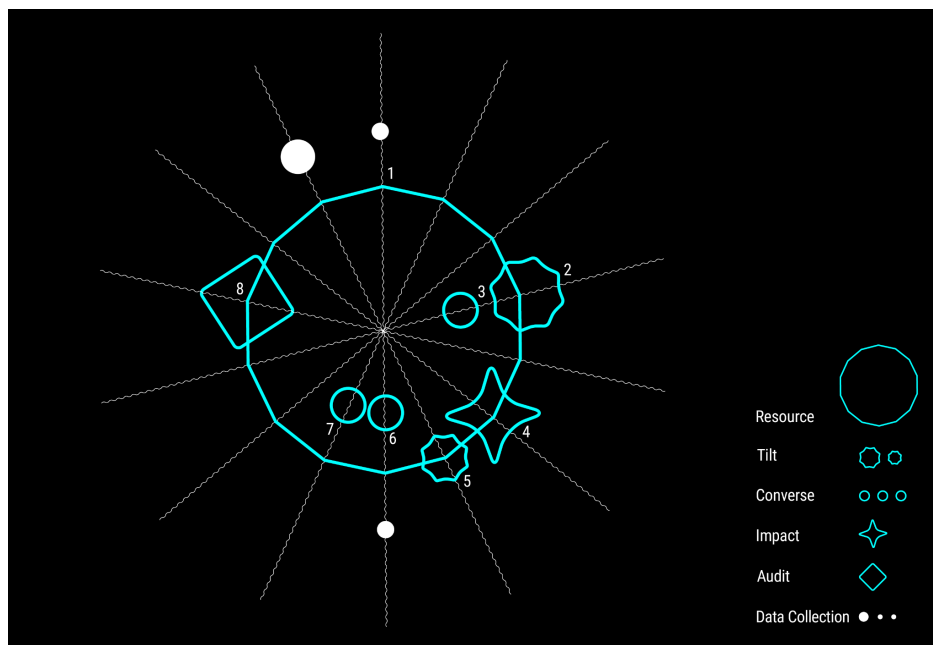**Audit:**   A studio workshop to review, reflect on, and improve design choices. [8]

Figure 1. Disrupting Design Attitudes T&L System in sequence, delivered on MA Design for Art Direction at LCC November 2021 – December 2022.

The *Tilt* Workshops

Figure 1. illustrates how the five aforementioned components of the DDA T&L System were applied across eight interventions dispersed over the 14-months course delivery. Activities within the system are designed to be cumulative and to respond to students' prior engagement. The two *Tilt* workshops examined in this case study were positioned 2nd and 5th within the sequence, and follow this approach – where interventions build on and interact with both previous and planned experiences.

The *Tilt* workshops utilise the senses as a tool for enquiry and imagination to *tilt* perspectives and practices. Exploring sensorial modalities within the workshops involves engaging in how our bodies, through our senses, respond to stimuli (light, mechanical, thermal, chemical or nociceptive [pain]) when we engage with a material or object i.e. investigating "[t]he visual impression (colour, gloss, pattern), tactual feeling (warmth, texture, weight), the sound (acoustical properties), smell and – when relevant – taste…" (Schifferstein & Wastiels, 2014). The rationale for including this approach in the DDA T&L System is informed by an awareness that "sensory explorations shift the power from our conventional ways of knowing" (Fletcher, 2022). This is something we have experienced first-hand through facilitating conference workshops in this area (UAL and LearnxDesign, 2021). These have also demonstrated how the *shift*

Fletcher (2022) describes, surfaces natural (human and environmental) considerations, simply because "[s]ensory design rubs up against the living-thingness of the world" (Lupton & Lipps, 2018, p. 19). These considerations can then be probed i.e "… teaching and learning that explores diverse projects to rethink the dominant assumptions influencing how we, as humans, construct meaning and thus learn to relate to each other and the more-than-human world" (Edwards-Schuth & Lupinacci, 2021).

Each *Tilt* session has a particular slant on responsible practice:

Tilt Session 01: Collaborative, imaginative, human…

A three-hour in-person workshop using the senses to provide alternative project perspectives and opportunities. Located within the Collaborative Unit, where students were working in groups on a *client* brief and were part way along their project. Activities involved: sensorial exploration of group objects; utilising real and fictional sensorial modalities to ideate, reimagine and humanise design thinking. Outputs included: sensory mapping in the form of group notes and sketches; 'how might we (through the senses)?' ideas and extrapolations in the form of collective notes, images and references. Whilst outputs were generated on large sheets of paper within the classroom/studio they were also captured digitally and collated for future reference and sharing.

Tilt Session 02: Connected, practices, more-than-human...

A two-hour online workshop using the senses to experience and question materiality. Located within the Specialist Practices in Art Direction Unit, where students were working individually, engaging in *making*, and were midway through their project. Activities involved: sensory and sensoaesthetic substrate enquiry (with their own materials); experimenting with paper (as a group); considering matter (living/non-living, pure/impure) and initiating investigations into material provenance and life cycles. Outputs included: individual digital boards with material enquiry notes and visuals; an image collection of paper creations; individual material life cycle considerations and early ideas on designing for circularity. Usefully, this workshop was able to build on and reinforce the preceding in-person *Impact* workshop which explored systems thinking.

Understanding the *Tilt* Experiences

We have reviewed the *Tilt* experiences to formulate an understanding around the perspectives of:

1. The participating students and their learning,
2. Ourselves (as the workshop facilitators/researchers) and our reflections on the teaching environment.

To map the student perspectives, we reviewed and codified how students participating in our research described their learning experiences during the *Tilt* activities. Thematic analysis of the questionnaire responses revealed some common student perspectives on the *Tilt* sessions.

Figure 2. Key words from the Tilt experiences. Source: DDA questionnaires June & December 2022.

Repeated topics (as exemplified in Figure 2.) and recurring responses within the participant data informed our interpretation, leading to the identification of three common 'learning' themes: 1) enabling creative exploration, 2) developing deeper perspectives, and 3) connecting with material responsibility.

Enabling creative exploration

Students were able to express insights into the role the *Tilt* workshops provided in supporting their creative exploration and there is a recognition that it *evolved* and *enriched* their collaboration and ideation processes.

It would seem that the experiential and "alternate approaches" of the sensory-based interventions contributed to a sense of discovery, as they "jump[ed] out of the safety zone" of familiar design processes: "The sensing… workshop…contributed a lot to the project... pushing the boundaries of senses sounds absurd, but it evolved the outcome" (June 2022).

Encouragingly, they referenced how the experiences had shifted their "[t]hinking about the creative thinking process as a way of exploration" (June 2022) and mentioned how this experimental approach has been "taken forward" into their future art direction practice (December 2022).

Developing deeper perspectives

Student responses suggest that the *Tilt* experiences have prompted deeper interrogation of their processes and reflection on the impact of their design outcomes: "The DDA sessions helped me look at my designs differently, and truly understand what I am creating and why. Specifically, when thinking about the senses, and how the design I'm creating is contextualised. Asking deeper questions and how what I am creating supports this new approach" (June 2022).

We noted that by inviting students to experience alternative approaches, meanings or actions, *Tilt* created an opportunity not only for them to develop their projects in surprising ways, but to evolve their own understanding of what it is that they can achieve and where they can have agency, through their practice: "[d]oing group sessions aided in evolving my understanding of how people approach design. For example, taking a piece of paper and changing it completely... being able to see the different responses enabled me to identify the impact and also, that people can have many different reactions to the work I produce..." (June 2022).

In developing a deeper understanding of their practice, we also see references to doing so in ways that are more *thoughtful* and *focused*: "[s]ensory activities have helped me to look deeper into the actual meaning of my projects and how they can be better evolved" (June 2022).

Connecting with material responsibility

The sensorial approaches utilised within the *Tilt* workshops have enabled students to focus on and extrapolate the tacit elements of the designs they are working on: "I really enjoyed the use of paper, thinking about senses, materiality/tangibility" (December 2022).

Though the initial exploration of substrates within *Tilt* is haptic, this swiftly moves through the other senses, to thinking more broadly about their relationship to matter; to "[m]aking sense of materials and their life cycle" (June 2022) and "thinking through what happens to an object after we use it" (June 2022) to "think[ing] critically about my work and why I was making it" (June 2022).

Student responses show that their insights go beyond a binary view of swapping in sustainable materials, to a more critical understanding of the complexity of systems and the impact of the designer within that. They reference how this perspective has informed a more responsible approach to their art direction practice: "[u]nderstanding multiple elements of sustainability and thinking about the full life cycle of a project/product was one of the most important things… and I've tried to apply it to my projects" (June 2022).

Reflecting on the learning environment and probing further into the participant data, the *Tilt* experiences have also surfaced three 'teaching' themes: 1) creating space for change, 2) the importance of presence and physicality, and 3) the impact of timing. As one would expect, these teaching themes connect with the identified learning themes. Figure 3. demonstrates the T&L intersections and dependencies within the *Tilt* experiences.
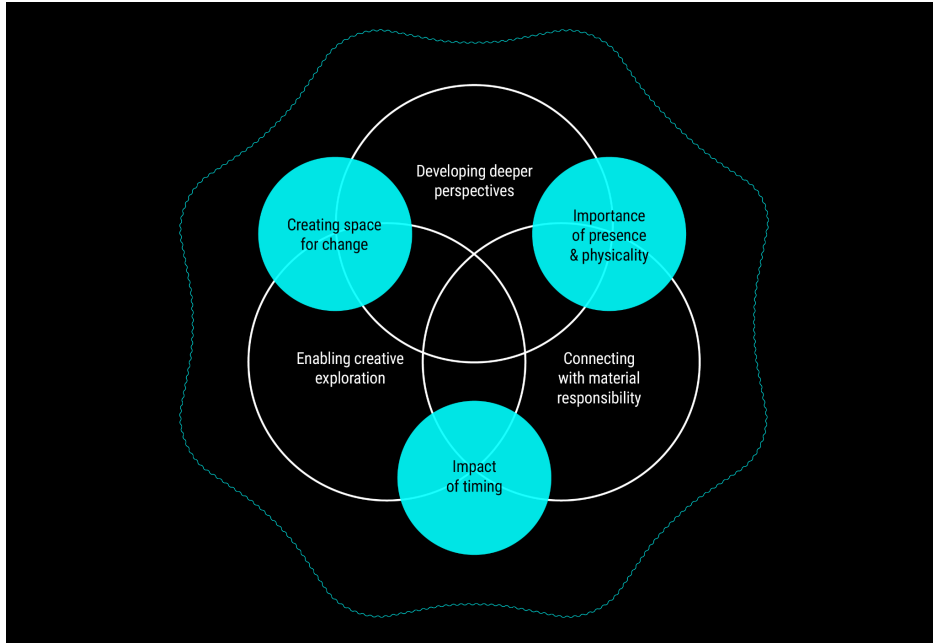
Figure 3. T&L themes from the Tilt experiences. Source: DDA questionnaires June & December 2022.

The following reflections provide further context on the identified teaching themes.

Creating space for change

From reviewing student engagement with the workshops and their commentary, it is interesting to note that the *Tilt* interventions emerge as a learning environment where change can take place. By utilising sensory reimagining, ideation, and experimentation processes there is an openness and freedom that comes from unexpected yet innate activities. Leveraging sensory methods to connect design thinking to our physicality likely helps support this more responsive environment because in this space students can "understand the world through the processing of [their] minds and bodies" (St. Pierre, 2019, p. 103). In this space, the design process stops being about refining an identified idea through inputs acquired from learning and becomes an environment that invites change and validates the outcomes of that change. The exploratory activities within the *Tilt* workshops become a bona fide toolkit through which students feel they can engage with the uncertainty that change introduces because they recognise the benefits it can bring to their practice: "I used to start a project with an idea, move to research, then design. But now, I will spend more time 'feeling'..." (June 2022).

Importance of presence and physicality

Both *Tilt* workshops were synchronous, however, they were delivered via differing modes – one in-person and the other online. When commenting on their learning experience of the DDA sessions more broadly, students regularly highlighted that real-world engagement in the classroom/studio was preferred and participants noted that the *connection* and *exchange*, *interaction* and *sharing*, with others were more *thought-provoking*, *productive* and *useful* in shaping their projects: "I really enjoyed the writing/answering questions in class and the exchange with others. This was useful, to share with others – you'll know the logic, but others may not. It's important to share and talk about it with others for their view" (December 2022).

Being present in the room and the associated tangibility of that, seemed to amplify the level of engagement students felt they had with the DDA interventions. Interacting in person also appeared to enhance the qualities previously mentioned, such as deeper perspectives on the creative process (enhanced by different views) and its potential for reimagining alternative outcomes. Students also enjoyed the physical use of pen and paper as a way to capture and share: "[t]apping into all the senses has definitely helped me with my projects – 'writing them down', putting thoughts into words brings more intention and allows me more space to focus, question and understand all at the same time" (June 2022).

Interestingly, regarding the *Tilt* online workshop, students still spoke about its value to their projects very much in terms of their exchanges with others, interactions with things and the ways in which this enabled and enhanced their learning around design choices and materiality. On reflection, we wonder if this was due to the sensory and tactile

activities within the *Tilt* intervention, enabling the session to heighten real-world experiences and relatedness, despite students not being physically situated together.

Impact of timing

From earlier research, we have learnt that the timing of an intervention impacts how students engage with activities that are designed to positively disrupt their creative process (Sadowska & Hanrahan, 2019). The positioning of both our *Tilt* workshops was mid-way through their curriculum projects. The advantage of this timing is that students had already begun responding to project briefs and had developed their ideas sufficiently enough to be able to react to the disruption and to know enough about their area of design enquiry to embrace reimagining it or probing into its making and materiality. They also benefited from not being too locked to decisions incumbent on later design stages and were, therefore, able to consider and implement the outcomes of the human and more-than-human perspectives gained through the *Tilt* experiences.

Upon reflection, the *Tilt* interventions are most effective in learning moments where projects are in development and have some anchors that can act as jumping-off points for experimentation and critical thinking.

Conclusions

In 2022, Boehnert et al critiqued the state of UK education by highlighting that "[t]he development of substantive sustainable and responsible … design education in the UK has been slow … [i]n far too many places, design education has avoided doing the work that would allow it to engage with eco-social issues in substantial ways" (pp. 22-23). We recognise that as a large arts institution, engagement with eco-social curriculum development has not been fast, but we are also keen to acknowledge that there is credible work taking place at a grassroots level seeking to address this need for deeper engagement – as our research demonstrates. Preparing students for careers in responsible design practice requires acknowledging the complexity of the challenges they face; the need to engage with systems thinking and an understanding of the impact design outputs have on the real world. Design education that meets these needs cannot espouse one dominant view or way of working to the exclusion of all others but needs to be pluriversal. Our students "... must learn about several ways of doing, understanding, and changing design…" (Noel et al, 2023, p. 194) by gaining an awareness of how to disrupt dominant attitudes and practices. As our case study illustrates, design education can play an important role in enabling students to experience and apply these disruptive approaches to their current and future practices.

We commenced this case study by acknowledging the potential value of the DDA T&L System that we have piloted (See Figure 1.) to prompt students' development of environmental and socially aware design practices and responsible attitudes in design. We are very aware that this case study explores just one component of this system, and we anticipate that it will be the DDA T&L System as a whole, that amplifies the impact of the individual learning interventions across the students' learning journey. Boehnert et al (2022) maintain that "[q]uality SRD (Sustainable and Responsible Design) education depends on advanced engagement with sustainability literacies, critical and transformative learning, transdisciplinary knowledge, and critical design thinking" (p. 24). It is the DDA T&L System that allows us to bring together all the elements that Bohnert et al (2022) identify – in a connected, relational, continuous, and adaptive manner. While each of the components within the DDA T&L System presents a set of specific learning opportunities (as exemplified by this *Tilt* case study) it is the synergy between each of the experiences that we believe will generate meaningful and applied learning. However, to understand how the complete DDA works, it is also crucial to commence by interrogating the function and impact of the individual interventions – which is where this *Tilt* case study has contributed.

We align key aspects of the *Tilt* experiences with more-than-human education ideas, recognising that learning is more relevant, responsible and creative when it "involves a shift from learning-as-cognition to a focus on connections between humans and non-human others; a move from the primacy of the written and spoken word to the re-emergence of the embodied self; and a recognition that other-than-human agents are always present in processes of learning" (Sidebottom, 2021).

Whilst we have more data to analyse and the whole DDA T&L System still to unpack, the outcomes from our pilot and this early review and reflection on the experience of the *Tilt* workshops have been illuminating and promising. Participants' feedback has demonstrated that there are learning benefits to positively disrupting the design curriculum and heightening engagement with the senses. Doing so can support creative exploration, awaken and evolve perspectives, and connect students with material responsibility (See Figure 2.).

From a pedagogical perspective, we have learnt that students saw the *Tilt* workshops as useful and relevant to their design processes and were able to express this in their reflective responses. We have also learnt that they believed the activities and strategies they undertook had made their work better and the learning experience more tangible. We note that they engaged positively with change and the resulting disruption because they could identify the benefits it generated for their design process, both in the middle of their postgraduate degree (June 2022) and at the end of their studies (December 2022). We recognise, therefore, that interventions which introduce responsible approaches as creatively, experientially rewarding, and situated in the "living-thingness of the world" (Lupton & Lipps, 2018, p. 19), can generate uptake and lasting engagement. In thinking about how our approach might translate into the development of pedagogic tools we also note:

1. The significance of classroom/studio interaction, whilst recognising the opportunities the senses can bring to making online learning more immersive, enriching and connected;
2. The locating of the intervention and how the timing of this within a curriculum project affects the impact and legacy of the disruption; (See Figure 3.)

Most of all, we are excited by how the *Tilt* activities create a learning environment where change can (and does!) take place – a space where uncertainty and flux are accepted, and more responsible outcomes are critically considered and evolved. We are keen to delve deeper into the outcomes from the entire DDA T&L System, but this case study offers hope that we might be going some way towards rousing and nurturing "ways of thinking [that] expand beyond the technical and instrumental. To imagine and realise another story of being human in a more than human world" (Till & Williams, 2022, p. 5) and lay ground for design education that "... will prepare designers to deal with pluriversality, positionality, and ontological design" (Noel, 2023, p. 194).

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Tara Hanrahan combines her responsible design practice with lecturing at UAL. She was Validation Lead for LCC's MA Design for Social Innovation and Sustainable Futures, co-creator of the School's Responsible Design Framework, and a key advisor for the new BA Design for Climate Justice. Her research exploring pedagogical strategies for nurturing citizen designers, has been shared internationally via exhibition, film, workshop, symposia, and paper.