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Climate Change. Design Teaching for a New Reality

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Abstract: In October 2015, students from Kingston University, London designed and delivered 'Climate Customs', an open pop-up studio during London's Inside Out festival. Conceived and developed in association with Helen Storey Foundation, the studio aimed to test ways of capturing public responses to climate change and sustainability. Tasked with developing methods of public engagement, students devised a journey of participation to highlight the global implications of climate change – how it is likely to affect each and every one of us, albeit in different ways and at different rates in different parts of the world. Drawing on the results and outputs from the pop-up studio – including visitor, student, project initiator, and tutor perspectives – our paper considers questions of design for sustainability, design for engagement, and studio culture. It presents and reflects on the format and programme that the students devised, and considers implications of incorporating such approaches into wider design teaching practice.

Keywords: Design, Sustainability, Education, Engagement, Studio

1. Introduction: Design and the challenge of sustainability

Conventional design teaching transmits knowledge encouraging students to produce more consumer objects. This is unsustainable when faced with the practical and ethical challenges of climate change. By responding primarily to market signals and serving the diminishing needs of over-satiated consumers, mainstream professional design practice is complicit in our current paradigm of unsustainability. Design education directed at feeding this profession is equally complicit. Much so-called sustainable design practice is simply tokenism or greenwash, as we strive for eco-efficiency within an eco-modernist mind-set. We are surrounded by unsustainability, mostly invisible to our immediate gaze. Unsustainability is embedded in the Anthropocene era's way of life. If unsustainability underlies all that we do, including designing, how can design address these structural challenges from within?

A premise of the MA Sustainable Design course is that meaningful sustainable design practice embodies sustainability-led thinking. Sustainable design education therefore focuses on sustainability literacy informing design practice. The basis of sustainable design practice is understanding the complexities of sustainability itself. Until we have a notion of sustainability, we cannot respond effectively. The course aims to produce sustainability-literate designers.

To effectively facilitate sustainability-oriented learning, teaching requires a transformative rather than merely transmissive model of education. Sustainable education challenges the hierarchies and assumptions of educational institutions increasingly defined by a mechanistic approach to learning and a managerialist culture. (Sterling, 2001, pp. 58-59) There is therefore potential synergy between the inherent nature of sustainable education and the ethos and context of the art school.

Rogoff argues that art schools should focus on "potentiality, actualization, access and contemporaneity" (Rogoff, 2011, p.132) leading to teaching where "the possibilities of not doing, not making, not bringing into being [are] at the very centre of acts of thinking, making and doing" (Rogoff, 2011, p.133). Thackara advocates a "less stuff, more people" mode of designing (Thackara, 2005, p.4) which downplays the traditional role of physical making in design practice in favour of an approach to innovation which is more social in its means and ends. Such immaterialised creative response is key to design teaching which is relevant for a new reality.

2. Design education spaces

Traditional Higher Education design teaching spaces are also threatened. UK design education retains aspects of Bauhaus studio practices adopted through the 1950s Basic Design movement. (Crippa & Williamson, 2013) This design pedagogy lacks the fluidity to address emergent issues around changing global climate – notably its individualistic image of studio practice is increasingly problematic in the networked 'born digital' era, or simply unavailable to new generations of designers who lack studio space. The contemporary role of the studio as a site of design practice is under close scrutiny. (Farías & Wilkie, 2015) Specifically, non-material modes of designing such as social innovation and service design take place amongst target audiences for a design project. Two pivotal questions are "How does studio support these new kinds of processes? How can we contextualise and understand novel instantiations of studio?" (Julier, 2016) A conventional studio is an owned space, with access limited to students and tutors on an identified course. This is increasingly superseded by a 'base room' model, where working space is pooled. Design students thus become more nomadic, using varied spaces to practice. Whilst often regarded negatively by students, who want a 'home' in the University, there are virtues to this itinerant way of working, especially engendering flexibility and resilience. A design studio is a design tool, perhaps the most important one. The space where design occurs, its facilities and the activities that it affords, shapes both process and outcome. Leurs et al (2013) discuss the role of physical space in delivering a digital design programme. Their insights relate directly to our sustainable design course.

> "A space, or better to say a place, is an invaluable tool that can help in facilitating meaningful collaborations and peer learning in education, work, and life. … The physical space is in fact a knowledge management system, a brainstorm tool and a sensemaking instrument. It stimulates students to immerse themselves in a project and to challenge themselves." (Leurs et al, 2013, p.5)

Design education spaces should reflect proliferating design studio cultures and environments. Emerging modes of design practice such as social design require, and are products of, spaces other than the traditional design studio. A manual for this flexible approach to using a space for design

education is provided by Doorley & Witthoft (2012), based on their experiences at Stanford University's d.school. The new reality of design teaching moves beyond conventional studios and interacts directly with people where they are. This is a second changing climate for design practice.

3. Climate Customs pop-up studio

3.1 Overview

Sustainable design is speculative. Designers addressing sustainability must create new visions of how we might live. Sustainable design practice therefore takes designers into new territories, asking them to write new stories challenging the unsustainable present. With this in mind, we tested an alternate model of design pedagogy via a pilot pop-up studio with project-oriented syllabus co-authored by students from MA Sustainable Design. They followed a project brief devised in partnership with social artist and designer Helen Storey, and devised and delivered a programme of prepared and improvised participatory activities that engaged public perceptions of climate change and facilitated public debate. Sited on London's South Bank, the pop-up studio enacted design for engagement, whilst exploring open approaches to studio culture and alternate spaces for audience-centred design practice. The concept developed by the group for the open studio was 'Climate Customs'.

3.2 Launch

Helen Storey Foundation is a London-based, project funded not for profit arts organisation that specifically focuses on sustainability, using dress, textiles and fashion design. Helen Storey launched the studio by talking to the students about sustainability, climate change and environmental custodianship, and experimenting with original thinking in response to any creative project. Storey's *Dress For Our Time*, made from a decommissioned UN refugee tent that once housed families in a refugee camp in Jordan, seeks to normalise and embed information about climate change into design approaches. Hence, her brief to the MA students encouraged the same mindset. She shared her own design approach and outputs, how she sought to create new public entry points to issues of sustainability that are cooperative rather than threatening in all her public facing work.

3.3 Orientation

The first full day of the open studio (Friday) was informational and content driven, establishing a basis for exploring complex notions of sustainability and climate. Activities featured two presentations and workshop activities on sustainability and fashion, and using collaborative online platforms for social good, and a visit from 15 international students enrolled on an English Language examination preparation course, for an exchange examining the climate of sustainability and language of climate in different parts of the world. Finally, the film 'Fibreshed for London', by recent MA graduate Jess Smulders Cohen (2015) was screened, followed by discussion with the filmmaker.

3.4 'Climate Customs: Nothing to declare?'

All activities on this second full day (Saturday) related to travel, involving experiential roleplay by Climate Customs 'staff' (students) and visitors. Visitors moved through three phases - arrival, during your stay, departure – each with its associated activities:

- Arrival: (1) Climate Customs Declaration Card, (2) Climate Customs Passport
- During your stay: (3) Climate Change Postcards, (4) Climate Customs Contraband
- Departure: (5) Climate Customs Trail

On arrival at an international destination, we often complete a card declaring any items we are bringing with us. Visitors to the open studio completed a Climate Customs Declaration Card, declaring items on their person, and habitual actions, which contribute to Climate Change. They were also asked for positive declarations of things that they already do (or might consider doing – peeing in the shower to save water, eating roadkill as a neglected source of protein?) to minimise their climate impact. Completed cards were stamped with a positive or negative judgement and added to a collective Wall of Declarations. We all have something to declare at Climate Customs; the point of this exercise was to highlight good as well as bad practice.
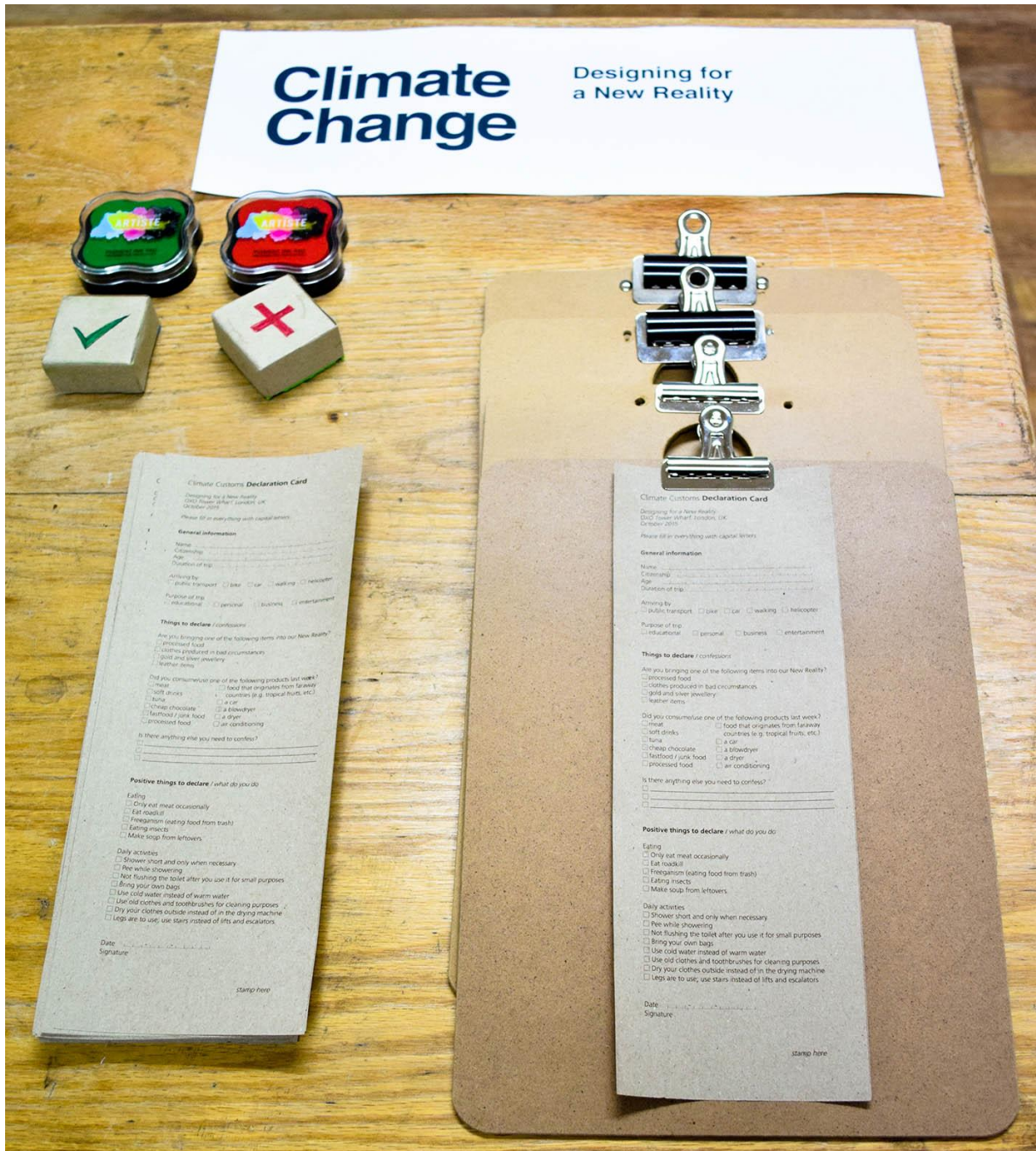

Figure 1. Climate Customs Declaration Card - we all have something to declare.

Figure 2. Wall of Declarations - how would you *score?*

At customs we must show a valid passport for entry. Our studio allocated visitors a Climate Customs Passport representing a diverse group of fictitious individuals already experiencing the effects of climate change. Visitors used the passport in an activity requiring consideration of climate change from the perspective of their given persona. Informed by data from Unicef, Climate Central and WWF, the eight personas were from Sudan, Kenya, Indonesia, Tuvalu, the United States, Mongolia, the Netherlands, and the UK.

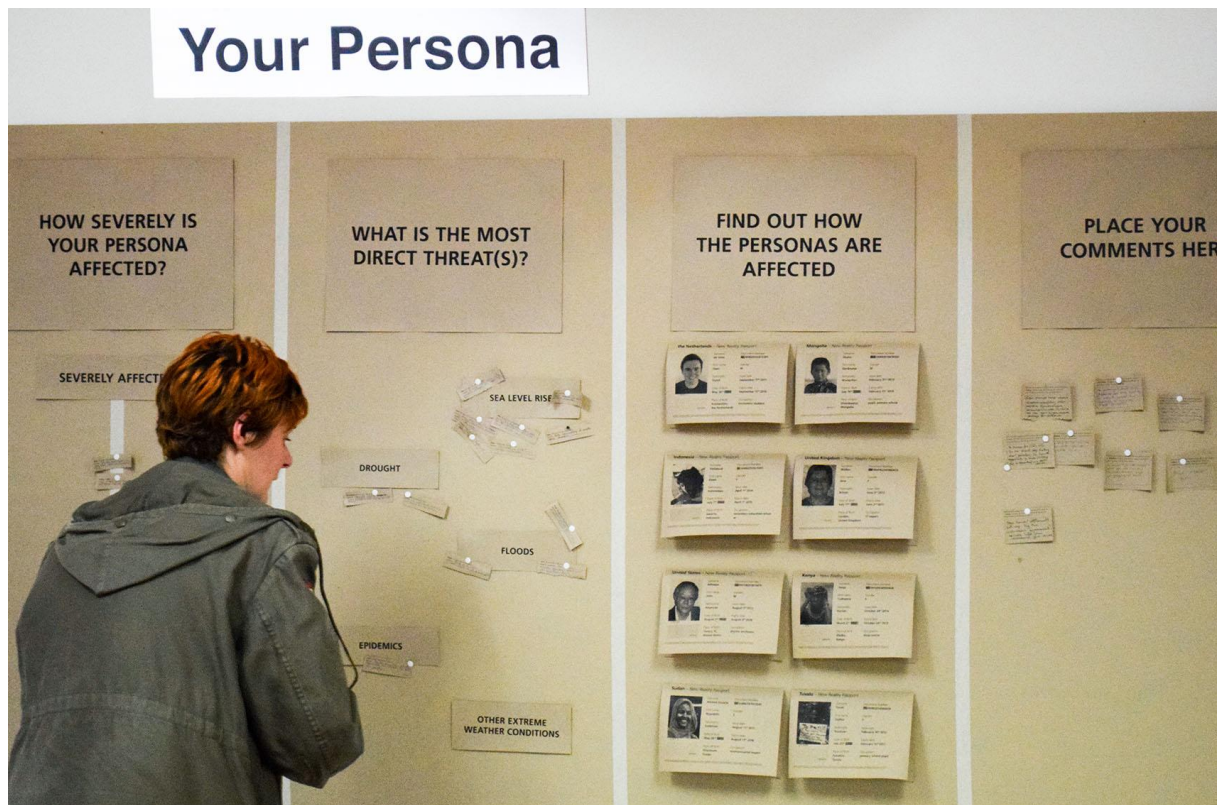*Figure 3. Climate Customs Passport - meet your persona.*

Figure 4. Climate Customs Passport activity - how badly is your persona affected?

We send postcards to loved ones from destinations we visit. What if we were to write postcards to ourselves from destinations that either (i) we will be unable to visit due to the current and future effects of climate change, or (ii) we have visited but will be unable to return to due to climate change? In the third activity, visitors selected from a set of Climate Change Postcards, representing a location affected by rising sea levels caused by climate change. Visitors were invited to select, read information from, and complete a postcard before adding it to a world map.

Figure 5. Climate Change Postcards - wish we could go there?

Many believe that we will devise technologies and invent products to resolve climate change issues. Such artefacts are products of ecomodernism, and represent the application of the dominant industrial-productionist capitalist economic model to an issue that it in large part caused. Such products were therefore considered contraband in Climate Customs, their seizure representing abandonment of techno-fix approaches in favour of responses to climate change focused on changing values, attitudes and behaviours. Climate Contraband products were presented at the studio for visitors to handle and inspect before being confiscated. Each displayed object was identified by a luggage tag, with a more sustainable alternative or consideration suggested on the reverse:

Contraband item: 'Carbon Capturing Nets' / Alternative: 'Protect our forests! Trees already capture carbon dioxide. End deforestation!'

Contraband: 'Climate Denial Eyewear. Deliberately distorting your view of the world is not an option. We can't hide from the truth!' / Alternative: 'Accept the problems that will be affecting everybody and begin to make more positive lifestyle changes.'

Figure 6. Climate Contraband – what would you *have confiscated?*

Figure 7. Climate Contraband – a human baby represents anthropogenic climate change.

On departing Climate Customs, visitors were given a printed map showing routes to nearby transport hubs. The Trail also showed local features and attractions, real and imaginary, supporting a pro-sustainability mind-set. It highlighted *Empty Lot* at Tate Modern, comprising soil from London parks

nurtured to cultivate existing organic matter, controversial plans for a garden bridge and tidal energy farm, and issues of food production and transportation via the nearby Borough market.

Figure 8. Climate Customs Trail: What will be your next steps?

Further context for the studio activities was provided by panels from the *Whole Earth?* exhibition, presenting global impacts of climate change and their human causes using photography and written commentary. This display framed the debates that took place in Climate Customs, supporting consideration of our impacts on a collective planetary scale.

The pop-up studio itself sought to be as low impact as possible. Almost all materials used were rescued, salvaged, borrowed or donated. Skips were dived into, bins were raided, assets were stripped. Waste is always a potential resource to be reorganised and reallocated. The open studio was presented as a work-in-process, and our use of materials and the resulting aesthetic reflected this.

3.5 After the pop-up

Some of the students participated in a public art installation of Helen Storey's *Dress for Our Time* at London St Pancras station, during the Paris Climate Summit of November 2015. It allowed the students to further develop skills in public engagement, and explore the theme of climate refugees (people displaced due to the effects of climate change) raised in the pop-up studio, as part of an already established installation and format.

> "Students who worked on the St Pancras project were at an advantage as this gave them real public exposure and first-hand experience to view how an emotionally charged strong design that told a story can provide a currency or entry point to engagement." (Caroline Coates, HSF)

Dress for Our Time then went to the London Science Museum, an additional projection onto its surface highlighting the global movement of people who have been forced to flee their homes due to conflict or persecution. One student also participated in this phase of the project, capturing audience response to this more sophisticated iteration.

Figure 9. Public installation of Helen Storey's Dress for Our Time at London St Pancras station – capturing public responses to refugees.

4 Evaluation

4.1 Visitors

62 visitors completed declaration cards throughout the pop-up studio (34 passed, 25 failed, 3 were unprocessed). From the very first question, many of the options presented to visitors were facetious or fanciful – yet still gained a tick.

Table 1. Arriving by

Public transport	53
Car	0
Helicopter	2
Bike	1
Walking	16
Van	1

Table 2. Eating

Only eat meat occasionally	38
Eat roadkill	2
Freeganism	5

Eating insects	6
Make soup from leftovers	25

This was not intended to be reliable or even useful data. The goal was to engage people in a surprising, even provoking manner. Use of humour was a deliberate ploy, one sorely missing from conventional communication and discourses around environmental attitudes and behaviour. We aimed to address serious topics by non-serious means. Sober reflection can follow amusement. Inspiration for the tone of Climate Customs came from stand-ups and the animated film *Wall-E*, as much as texts by authoritative environmentalist voices like George Monbiot and James Lovelock.

The globally diverse group of English Language students who visited the studio were studying for IELTS in order to enter further study at UK universities. The IELTS examination includes 'environment' as a topic, so the studio helped generate their interest in the subject whilst also developing language skills.

> "The workshop proved valuable in helping the students relate the human impact on the environment to the effect of climate change and finding solutions. What I think the students enjoyed the most about the visit was the discussion with Kingston MA Sustainable Design students around the table where they analysed the issue in more depth and had a chance to compare how different countries approach the problem." (Nadia Sucha, English Language tutor)

4.2 Students

Participating students presented work on the pop-up studio for assessment, in an individual research project folder both documenting and reflecting on their experience of the project and their contribution to it.

The brief was challenging for this small group of students commencing their course, in terms of both the topic – communicating climate change - and the requirement to develop and deliver a public-facing pop-up studio. "I personally found this a rather overwhelming problem, the more you research the bigger the problem becomes." (Mathew)

Several emphasised that human stories are more effective than scientific stories in communicating intractable issues such as climate change. There is clear evidence that the conventional catastrophic tone of climate communications doesn't effectively engage people – if anything, it deters them. Therefore, early in planning it was decided that the pop-up studio should be welcoming and fun, rather than doom-laden and despairing.

The students collectively advocated a strategy identifying visitors' current engagement with climate change as a starting point for developing deeper engagement that may lead to action. This informed a central theme of reflecting on current behaviour, with a view to better understanding the individual and collective potential scope for change within the activities. Students emphasized the value of an affirmative approach to engaging people.

> "It is very important for people to understand what they can personally do to prevent and distinguish climate change. Instead of just telling people how severe the situation is we should show people what they can do. Easy things they can implement in their everyday life, including humouristic things such as peeing while showering." (Cindy – referring to an item in the Declaration card)

The success of the activities was ascribed to being relatable to visitors' experiences.

> "One of the notes on the postcards we produced was recalling a couple's visit to Miami, a place where they spent their honeymoon and very special to them, and another one was talking about Rotterdam, a place where he/she knew very well. This was a sign that people mostly feel empathetic towards places they have a personal engagement with. This observation resonates with what I've read during my research and an important lesson to learn for me for these types of social engagement activities - always try to come up with facts and messages where visitors can easily internalise." (Burcu)

There was honest reflection on the success of the studio in reaching people on the issue of climate.

> "The two days spent discussing with people were very insightful. I was surprised at the number of people aware of the problems, but even more surprised on the way they deal with it. Getting in people to talk about climate change is little hard and the idea of it does scare of people. I guess we have a long way ahead in changing people's behavior without taking away elements from their comfort zone." (Shinny)

The collective use of 'experiential design' incorporating public participation was new for all the students, on this scale.

4.3 Helen Storey Foundation

Helen Storey Foundation initiated the project, setting the brief to which the students responded. Their involvement expanded a collaborative research relationship established by the co-organiser of the pop-up studio and co-author of this paper, Robert Knifton. Whereas previously this relationship had been confined to historic archival materials, Climate Customs made it live, contingent and public-facing. The reflections of HSF consolidate the perspectives of visitors and students.

> "By choosing to emulate an almost universal experience (passports, borders, identity, fear, boredom etc.) this was edgy enough but also light touch enough too to get audiences interested playfully. The low-tech approach – the power of communication person-to-person impact was also strong. The playfulness that belied a serious subject. The use of space to build on ideas." (Caroline Coates, HSF)

Continuation of student involvement with HSF, in the presentation of *Dress For Our Time* at St Pancras station and the Science Museum, attests to the positive impression given by Climate Customs.

5. Conclusion

5.1 Successes of the project

The collaboration with Helen Storey Foundation on this fast-paced and public-facing live project applied useful pressure to the students' learning experience, requiring them to relate to real people about a real world issue. Climate Customs exemplified students and staff working together to deliver a collective outcome in which it was ultimately difficult to ascribe individual authorship or ownership. As course leader, I used this project to allow the students to learn about climate change - a key element of the sustainability field through which the course requires them to navigate - via designing engagement strategies and methods for use in engaging others with the same topic. Sustainable Design is an applied practice, requiring creative response to sustainability challenges. It is therefore vital to use pedagogical strategies that allow students to actively develop their knowledge and capabilities in real-world contexts. All these students had completed design undergraduate studies, and several had practiced as professional designers. The course provides opportunities for students

to redirect their design practice towards overt sustainability agendas. Climate Customs represents a successful example of that goal in action.

The project is an example of the cooperative learning identified by Slavin (1995), and the connection between cooperation and student achievement, particularly when accompanied by individual accountability in the form of individual rather than group assessment (students submitted an individual research project folder). Climate Customs saw students assigned to task-based teams, each of which contributed a component of the collective outcome – the pop-up studio. This shared responsibility for the success of the ultimate outcome encouraged the emergence of strong motivational and social cohesion drivers, as identified by Slavin (1995).

Climate Customs also embodied a very mobile notion of the design studio. We are increasingly moving away from studio-based design education to a model of 'studio-as-base'. Design education spaces are becoming less fixed, both in configuration and location, affording a greater diversity of design practices. The pop-up studio exemplified a more distributed design practice. Preparation and planning for Climate Customs took place at various locations around the 'home' university faculty. The pop-up open studio continued this development, representing a work-in-process rather than the delivery or exhibition of pre-meditated content. The pop-up was generative, it did not simply present.

5.2 Limitations of the project

Climate Customs was a very fast project, with just under a month between first briefing and delivery. This restricted timeframe imposed limitations, dictating a rapid pace of generation, selection and development of ideas. The pop-up principle was invoked in order to remove pressure to deliver high production standards. This gave the project its energy, and was in some ways liberating. Data capture from visitors was informal rather than rigorous, with a focus on 'live' visitor experience. The studio was resolutely physically situated, with little accompanying online or social media activity. The lack of reliable internet connection in the studio space was a known constraining factor when planning the activities. Lack of digital engagement in the pop-up studio could be seen as a positive factor, in that it forced visitors to be unequivocally present in the space, free from digital distractions. The downside is a lack of digital capture of visitor data and activity, which to some extent automates what is otherwise cumbersome to achieve non-digitally. Print materials such as the Declaration cards and postcards, and photographs including those used in this paper, are the data record of the pop-up studio. What we cannot do is comment on the extent to which we may have, in the words of Caroline Coats of HSF, "changed hearts and minds beyond the visit to the project", or "brokered longer term resonance and impact."

5.3 Conclusion: A new reality of design teaching?

This paper presents and reflects on an experimental, risky, collaborative project at the very start of a one-year master's programme in sustainable design. It exemplifies the cooperative, real-world approach to learning the course aspires to. It is difficult to live up to this aspiration in every project, however. Such 'live' opportunities do not arise predictably and conveniently in relation to academic schedules and programme structures. The reflections on the project given above do however indicate the value of incorporating such approaches into design teaching practice, in this case specifically around design for sustainability. Design always has an intended audience – hence the value and importance of design for engagement. Sustainable design addresses the most intractable aspects of contemporary life – hence the need to relate directly to the disengaged majority, for whom issues such as climate change are a known but seemingly insurmountable challenge.

Traditional design studio culture is also under threat from the increasing pressures on space in universities – hence the need to find new models of mobile and dispersed studio practice. The Climate Customs project presents a response to each of these imperatives, perhaps indicating productive approaches for design teaching and learning in general.

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Paul Micklethwaite is interested in the impact of the sustainability agenda on theories and practices of design, and modes of design practice that are explicitly social in their ends or means. He is co-author of *Design for Sustainable Change* (2011).

Robert Knifton's research focuses on the sensory environment of museums; digital collecting, popular culture, museums and archiving; defining heritage within shifting cultural ecologies; and the history and heritage of art education.