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Design Microconference

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Design Microconference
5-7 Sept 2018, Design School Kolding, Denmark.

Design Microconference
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Co-chaired with: Richard Herriott

Addressing designed form - demarcating design.

The conference´s aim is to draw the attention of design research towards the form of designed objects by exploring the boundaries of design.

Design processes can be described (the technical, procedural aspects) and design aims explained (Inclusive Design, Sustainable Design). This is the stock of much design research. However, the core of design which is the visual is seemingly neglected other than in terms of the stimulus for a consumer response. The preferred natural science formats in design research writing tend to underplay the qualitative. Consider the structuring formula of background, literature review, hypothesis, methods, data and analysis. If the difference between design and engineering is the subjective and qualitative, is this format appropriate? Designers plan but not all planners design – does the managerial approach to design miss something critical? People solve problems through processes but sometimes the solution is just a sandwich. Is that design?

The seminar seeks to focus on the essential in design, that which makes it distinct from other disciplines. There is considerable latitude in this call for papers for a wide variety of views, those that emphasise ethical concerns, procedure and inclusive approaches to creativity. Such wide ranging views span from Herbert Simon (1996) to the work of David Pye (1964).

The output should be essays that can inform those researching and practicing design. They should also be useful to those learning the discipline and who wish to have a conceptual framework for form-giving and its meanings.

Note that the question is not "what is design" but rather how can we address research on design that acknowledges its special aesthetic quality, the “wow/yuk” factor. Buchanan´s (2001) definition: "Design is the human power of conceiving, planning and making products that serve human beings in the accomplishment of their individual and collective purposes". Is that not leaving something out? Hillier (1998) wondered if it was possible at all to address the intuitive in design (which must refer in some sense to the aesthetic/subjective). Buchanan's definition

conceivably involves objects and indeed services with no obvious aesthetic quality.
Much design research seems to involve this kind of product or else pays scant regard to the "wow" in design. Hillier´s question challenges those who might try to address the Wow. Would such design research become a form of art history? Would that be a problem? If it isn´t a form of art history, what would it be? Contributors will be asked to present their paper and to provide detailed commentary on the work of one other participant. As such the micro-conference will be an opportunity for wide ranging and considered discussion.
A selection of papers will be published in a peer-reviewed design journal.

Keynote:

Peter is Programme leader for MA Design within the school of ADA (Art, Design & Architecture) and Design Cultures Leader for BA undergraduates design programmes. Within the school he is interested in the development of Academic Excellence, including Co-curriculum & Sustainable Growth, Reputation Building, including collaboration and promotion of knowledge transfer, he works between academia and stake holders in the creative industries and the public services. He is interested in educating artists and designers that are ready for the complexities of the modern world. Peter is an advocate of employability enhancing opportunities for collaborations with external organisations, that help students in the workplace and internationalisation. He leads a group of internationally acclaimed practitioners who teach systemic design thinking, inventing sustainably, designing aesthetically, creating useful and beautiful products, using digital manufacturing and fabrication, while developing new processes relevant to the 21st century.

With an extensive career working in Art and Design Higher Education, Peter's experience covers the delivery, development, validation and examination of courses with students at local, national and international level, through to research activity. Within the School of ADA Peter coordinates the Design Knowledge Research area with Message and iDAT.

'boundaries>encounters>processes>ideas>materials >surfaces – can the processes of 3Dprinting create a new aesthetic for design?

'Europe looked in the mirror and saw the world. Beyond that lay nothing.' This quote, is from a short story 'Euroeverything' and this short presentation draws upon the thoughts expressed in the story to underline the colonial aesthetic that historical artefact manufacture has delivered over the centuries. This project started when the Plymouth City Museum & Art Gallery UK, who are undergoing a major redevelopment project, invited me to collaborate with them in the redevelopment process, by selecting neglected items from their collections, thinking how they might be innovatively displayed and interpreted in the new gallery spaces.

I choose to work with four objects made at the Plymouth Porcelain Factory, this set of four figurines, probably intended as decorative tableware, are supposed to represent the four continents, often called the 'Four Quarters' of the world, known to Europeans at the end of the eighteenth century. What I want to do is to give you a little bit of background about the objects themselves, thinking about the role of surfaces/or the latency of these images/objects in their historical contexts, before thinking about how I have worked with these surfaces to recontextualise these objects for a contemporary audience, redefining the look and context of the objects.

Created in Plymouth in 1768 or 1769, these figurines were the work of William Cookworthy who, having started his professional life as a chemist, made it his mission to try to create the first truly 'English' porcelain in the latter half of the eighteenth century. At this time, there was a sharp

distinction between the fine porcelain produced in China using ‘kaolin’ clay, which was called ‘hard paste’ and the imitation ‘China’, which used a different type of clay, and was worked using a ‘soft paste’ method in European centres of production. Cookworthy’s experiments, using a body of clay found in Cornwall that was similar to the kaolin used in Chinese porcelain production, resulted in a successful patent application to produce English porcelain at the founding of the Plymouth Porcelain factory in the mid-1760s.

The many reference points to some of our own centuries problems are unmistakable, with trade, value and innovation, but most particularly the look, the aesthetic, the essential in design, that which makes it distinct from other disciplines, this does really change with time obviously, but can claims be made for new contextual inclusivity through different material processes?

In the late eighteenth century, the Plymouth Porcelain Factory produced sets of figures designed to represent what were then known as the four Continents: Asia, Africa, Europe and the Americas. As objects of middle-class consumption, they were designed not only to represent current ideas about the qualities of these continents, but also to allow consumers to have a relationship with places of which they had no first-hand knowledge, creating a geographical experience. Taking the historical nature of these figurines into consideration, this research considers whether it is possible to co-opt such artefacts into a twenty-first century geographical experience. Using a multi-modal, experiential approach to design research that includes not only looking at the original context of objects, but also displaying the artefacts through the lens of twenty-first century technologies such as 3-D scanning and asking individuals to respond creatively to the figurines, this paper explores how an interaction with past experiences of geography might help us to understand our current perceptions of the world, while keying into a new digital heritage.

Produced between 1769 and 1772, a series of four figurines from the Plymouth Porcelain Factory were made, run by William Cookworthy, they represented the four continents, or quarters, of the known world in the eighteenth century: Asia, Africa, Europe, and the Americas. It is possible to see how the symbolism of these geographical places has been expressed in the porcelain, from the crocodile perched at the side of Africa to the Roman armour laid at the feet of Europe. It is similarly easy to incorporate the figures into a well-established visual trend for allegory in eighteenth-century porcelain, in which sets of the Seasons, Tastes and Elements were also popular (see Bradshaw, 1981, and Savage, 1952). These particular figures are also important in a narrative of English design because of the technical experimentations that William Cookworthy was conducting at Plymouth with the aim of 'bringing … the Manufacture of Porcelain, equal to any in the world, to perfection in England (G. H., 1854, p. 207), and in this respect they feature in technical histories such as those by Adams (2016) and Bradshaw (1981). These readings can help us to understand the representational and technical characteristics of these figurines, and to establish their place in histories of eighteenth-century design.

While these quasi-archaeological approaches are useful in determining some of the facts surrounding these figures, by reducing them to their place in a series of visual trends or technical discussions they treat them as passive recipients of cultural and material developments rather than as objects of material consumption that were active participants in the experiences of their consumers and thence in their digital representations, latency. In histories of eighteenth-century porcelain more generally, this is a problem addressed by Richards (1999) and Cavanaugh & Yonan (2016), who argue for the analysis of porcelain products as imbued with 'conceptual and metaphorical values' beyond technical or visual analysis (Cavanaugh & Yonan, 2016, p. 6). One of these values is the idea of global geographies, represented literally by the figurines but also metaphorically by the story of porcelain, and of Cookworthy himself, whose story was framed by travelling, a metaphor explored most recently by Edmund de Waal in *The White Road* (2015). By teasing out the cultural life of Cookworthy's continents, it is possible to think about how the production of these figurines might have tied into a hegemonic understanding of geography, and how the experience of viewing and handling them might have actively played a part in shaping the geographical understanding of their original consumers.

The historical context is critical to these figures, and they cannot be separated from it, but as Susan Pearce (1994), amongst others, has argued, treating an object as an

active constituent of the consumer's experience implies that its importance is not limited to its moment of conception, but that their function can be re-framed as they continue to act upon consumers in the context of a collection. In *Vibrant Matter,* Bennett (2010) takes this a step further, arguing that objects, by acting upon consumers, and in concert with one another, gain a social and psychological power that transcends their physical forms. This means that these figures, and the geographical metaphors they represent, are constantly being re-experienced in a global context that is very different to their original setting, and that they can effect a change in the mind of the contemporary consumer. The second part of this research therefore focuses on using these four figures, created in eighteenth century Plymouth, as an active part of the contemporary design process. It thinks about whether it is possible to use these figures to explore our own inherited proclivities, prejudices and yearning by asking how, if we use these figures as a means of asking or posing questions instead of answering them, we can create something convergent and different, a catalyst for a contemporary debate about imperialism and colonialism in the context of this century, and of taste and trend. Given current debates about the presence in public spaces of cultural objects that represent colonialist geographies, this research, which seeks to deconstruct the modern viewer's reaction to historic geographical metaphors, seems particularly timely. At its best, design is a powerful catalyst for changing perceptions; its process can stabilize flux and the most interesting work can emerge from difficult conceptual and cultural contexts, such as the imagined geographies of these bodies, commodified as items of both historical and contemporary consumption.
These two approaches, the socio-historical and contemporary, are directly relevant to the actual work of investigating material culture but, as they are usually defined, neither is adequate to fully describe the cultural context of artefacts; it is in a synthesis of
rigorous cultural-historical investigation, and a creative re-interpretation of the objects that their true complexity and social relevance can be determined. This has been useful in understanding why we need to rethink how objects are formed, who they are for, and what role they play in the wider cultural field. Reconsidering the role history and theory play as autonomous and interdependent fields, the object analysis elucidated in this paper progresses through three stages, each of which contains a historical and a re-interpretative component. The analysis proceeds from description, recording the internal evidence of the object itself, to deduction, interpreting the interaction between the object and the perceiver, and finally to speculation, framing hypotheses and questions which lead out from the object to external evidence for testing, resolution and ultimately reinterpretation while considering both the state of existing but not yet being developed or manifest and concealed and in a digital sense delaying a transfer of data following an instruction for its transfer.

Looking at the Continents:

Despite the fact that William Cookworthy's Plymouth Porcelain factory was only in operation for five to ten years in the third quarter of the eighteenth century (c.1768-1773), his work has been consistently included alongside that of the more prominent porcelain manufactories such as those at Bow, Derby, and Chelsea in histories of English Porcelain in the eighteenth century (Church, 1911; Savage, 1952; Cushion,

1974; Bradshaw, 1981; Young, 1999a) because of his experiments with the manufacture of porcelain using a Cornish equivalent of kaolin ('china clay'), as opposed to the imitation porcelain ('soft paste') used by other English producers. As a result, Cookworthy porcelain is often examined purely on its material and technical merits, and contextualised in terms of manufacturing processes. In this respect, it is easy to attribute and date the figurines shown in Figs. 1 to 4 to the Plymouth Porcelain Factory, probably between the years 1769, when an enameller was first employed at Plymouth (Adams, 2016) and 1772, when the Plymouth factory closed, and to establish them as 'Cookworthy' figurines, as opposed to those of any other workshop in this period. However, although the materiality of and technique for producing these figures is important, it is a shame that few authors have considered the design of individual figurines in any detail (the exception to this is Bradshaw, 1981, which considers some individual motifs in detail, although his analysis is still primarily technical), and how they might be read in terms of wider contextual narratives beyond the material used in their production. From this perspective, it is actually a misnomer to call them 'Cookworthy's' Continents as they are, literally and figuratively, a production not only of Cookworthy’s factory, but of a synthesis of cultural trends and hegemonic ideas that governed porcelain production in general, and particularly images of the four continents.

Literally, although these particular figurines were produced at the Plymouth Porcelain Factory, the master models for the moulds were not designed for William Cookworthy, but rather for Nicholas Crisp, who was the head of the Vauxhall pottery in the late 1750s and early 1760s; Cookworthy himself probably first encountered them when Crisp moved his manufacturing to Bovey Tracey in the 1760s, and Adams (2016) even
suggests that although he may have seen the moulds before acquiring them for Plymouth, Cookworthy may have mistaken them for those of the Four Seasons (Adams, 2016, p. 181). This is not the only instance of Cookworthy acquiring moulds from other factories; Cushion (1974) includes some Plymouth figurines that had come from Longton Hall models in a similar way. In the case of the continents, these same models
then subsequently had a life after Plymouth, as they were transferred to Bristol when the Plymouth Company moved there in 1772, and continued to be used by Richard Champion after he had taken over the works there. As a result, one of several sets of figures from the same moulds that survive today; versions of these figures from the Vauxhall pottery are in the collections of the V&A, and the City of Plymouth Museum and Art Gallery, together with individual figurines from Europe that were made at Bovey Tracey by Crisp, and other versions made by the Plymouth Company, and later Bristol figurines, are all still extant.

The differences between these sets of figures are discussed towards the end of this paper, but it is important to register that these versions of 'The Four Quarters of the Globe' were by no means developed by Crisp’s modeller (possibly Thomas Hammersley) in isolation. Similar series of figures were produced at Bow, Chelsea, Derby, and Longton Hall factories both before and after the brief lifespan of Plymouth Porcelain, and continued, at least at Derby, well into the nineteenth century, and it is likely that the models for some of these series are not even original to English porcelain, but based on originals modelled by Friedrich Elias Meyer and F. Eberlein from the Meissen workshops in Germany (Bradshaw, 1981). *Europe,* one of the Derby figurines

of the Four Quarters, based on the Meyer models, and made by William Duesbury & Co. c.1785. Although this series, along with several others, depicted the continents as children rather than adults, there are obvious examples of cross-referencing between the models in terms of the allegorical attributes given to the geographical regions. In the armour, the horse and the artist's palette, symbols of civilization and power, are all similar to those laid at the feet of Europe in the Cookworthy figurine. In other figures from the Derby factories, the feathered headdress and quiver also worn by Cookworthy's America are recurring features, as are the perfume censer carried by Asia and the lion at the feet of Africa.

It is possible that the similarities between the design of the models produced by these different factories are coincidental, given the prevalence of such attributes in images representing the continents across various different artistic media. For example, a similar representation of America, with feathered headdress and quiver, is seen on Giovanni Battista Tiepolo's large fresco *Allegory of the Planets and Continents* on the staircase ceiling at the Residenz in Würzburg Ashton (1978) discusses the use of emblem books such as Ripa's *Iconologia* (1709) in the development of Tiepolo's fresco, and Richards (1999) similarly acknowledges the influence of emblem books including Ripa on the design of models for porcelain figures (pp.194-204). However, looking at the subtleties of dress and appearance in the figures suggests a more close relationship between the Plymouth models and those produced by other workshops; the Chelsea-Derby child models show the fabric on the four figures caught and held in almost exactly the same ways and at the same points on the body, so that Africa wears a swathe of fabric around the waist similar to the Burnous that was to become characteristic of Moorish culture in the nineteenth century (Author, 2017), America a wrap caught at the waist, Europe a drape reminiscent of a Roman toga, and Asia a full-length garment that covers one shoulder in its entirety and drapes in both directions. This figuration of dress and nudity, which in Ripa (1709) was discussed as a proxy for levels of 'plenty' (pp.52-53), deserves further consideration elsewhere, but it is an indication that in detail as well as in attributes, modellers working on the Continents were actively looking at one another's figurines, a copying that Richards (1999a) has identified as endemic in the English porcelain industry in this period.

The first step in a re-examination of the Cookworthy figurines in a contemporary context was therefore to think about this process of perception, and how designers respond visually to the work of others. Ceramic objects form a major part of museum collections, with connections to anthropology, archaeology and other disciplines that engage with the cultural and social history of humankind and have provided the impetus for a number cutting edge examples design and artistic practice. Developed either as a response to particular collections, or as part of exhibitions, designers and artists have begun to engage with museum collections in new ways, examples of which include the *Cabinet* project at Peninsula Arts, Plymouth (Quinn Davis et al, 2011), and ceramicist Lubna Chowdury's residency at the Victoria and Albert Museum (2017). As part of our first design-led exposure to the Cookworthy porcelain sets, and as an example of what was possible, we treated them simply as forms, much as the original model makers would have done when they created the negative-form moulds that Cookworthy mistook for the Seasons. Initially, we looked at using hand-held scanners and photogrammetry to capture the figurines as a 3D scan, but these were not capturing the details of the models. Instead, therefore, we created images of each of the figurines, such as those in Figures 7a and 7b by using a 365o turntable, and AICON's fixed 3D digitization and measuring system, which is more effective at dealing with complex surface structures.

Rather than patching the reflected light in the scan, we exploited the variations in surface where the light bounced off the white porcelain to produce voids in the original scans, and then coloured and contoured the images to give them the moulded form shown in Figures 7a and 7b, which show the front and back of Cookworthy's *Asia*. These scans not only gave us a way of transforming the physical object into a digital form, but also of altering the object visually by selecting some elements and discarding others. In some way, this is similar to the work of the eighteenth-century modeller, who selected some elements of earlier models and discarded others when recreating the figurines for a new workshops, but in this case the selection has been done by the scanner; the eye of the modeller has been digitised.

Thinking about the way contemporary viewers engage with historical artefacts, Prown (2001) has written persuasively of going beyond the mind's intellectual contact with the past and engaging the senses in different ways in museum contexts, an 'affective mode' of engagement that allows the viewer, figuratively speaking, to more closely engage with those who made, used, and enjoyed these objects without the barrier imposed by historical presuppositions. Figures 7a and 7b do this visually, but Roy (2016) extends this discussion to think about affective modes in terms of museum soundscapes, and following this, the form of the figurines was further abstracted through a musicological lens, with the data points turned into sounds. To achieve this, the objects were flipped laterally so the scan data could be read from left to right. Using a high precision distance measuring laser from Micro-Epsilon, and rotating the scan, a custom-programmed translator and controller module was then used to transform the measured distance values into audible frequencies, notes and scales, with the result that the silhouettes are used to define loops, melodies and rhythms, and the resulting musical piece was transcribed for performance via *Scorecloud*. These notes, arranged into musical phrases, were assigned instruments, and layered together so that in effect the public could hear simultaneously read the objects visually and hear them as a musical score. One particularly interesting consequence of this mode of display is that it allows the contemporary viewer to perceive the object as innovative and new in much the same way that the original consumer might have viewed porcelain figurines, which in their original form now arguably look dated to the modern eye, thus recapturing an excitement at the moment of viewing.

Pete Quinn Davis 2018