Conference: Making together is key: A comparative analysis of co-creation in action. Herron School of Art + Design Indianapolis, USA AIAG
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Abstract:

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.

Introduction:

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 365° 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 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.

**Hegemonic Geographies for Contemporary Tastes**

The process of copying, recopying and modification is interesting in its own right, but as Schwartz (1998) noted in his influential and wide-ranging study of copying in fine art, conscious copying is rarely done for purely formal reasons; rather, it is usually because the specific object to be copied has some wider relevance at the moment that the copy is produced. Similarly, Bennett (2010) states that the agency of things is maximised not in the effect of one individual object on an individual consumer, but in ‘assemblages … [that] conglomerate or form heterogeneous groupings’. In this case, the grouping of the four continents, themselves part of a larger grouping of images of the world in the eighteenth century, are interesting in the historical context because they represented a hierarchical world order that was very much to the taste of Cookworthy’s contemporaries, and were chosen for our contemporary study because that world order, with its undertones of imperialist colonialism and racial stereotyping, and Europe-centric world view, are particularly problematic in terms of the taste of the modern consumer.

Literature on Cookworthy likes to frame him as a revolutionary chemist, and dwells on his invention of true English porcelain, but little attention is given to his mercantile ambitions despite the fact that it was clearly his intention to make his products commercial, first at Bovey Tracey, then at Plymouth, and finally in Bristol. The prime example of this is his inclusion in Edmund de Waal’s recent book *The White Road* (2015), which is meticulous in describing the genesis of Cookworthy’s porcelain project, and in trying to recreate the mindset in which he produced, but trivialises the commercial aspects of the project, and almost cavalier in discussing its end. Whether Savage’s (1952) reading of Cookworthy as never particularly astute at business, or Adams’ (2016) more apologist approach, which attributes the decline of his works to his approaching old age in the early 1770s is true, the Plymouth Porcelain factory
was only in operation for a very short time. As Young (1999a) and Richards (1999) have both discussed, competitions between the porcelain manufactories was fierce in this period, and not only marketing techniques, and relationships with London salerooms, but also political connections, were vital to the survival of individual factories. Richards (1999), discussing Cookworthy’s successor at Bristol, Richard Champion, and his difficulties in renewing Cookworthy’s patents, links this specifically to the eighteenth-century idea of ‘Taste’, saying that:

‘No fine ceramic manufacturer could afford to neglect the forces of consumer tastes, because commercial success was dependent on meeting them ... A decision to renew Champion’s patent was in part dependent on his products meeting the ‘taste’ of the parliamentary committee’. (pp.37-42)

It is important to recognise that while ‘Taste’ can be composed of aesthetic features, ‘good taste’ also reflects social and ideological mores, and this is particularly interesting in the creation of porcelain figurines because while the display of porcelain in the home was seen as a proxy for the aesthetic taste of its owners, it also, due to its affordability, performed a secondary function as a cornerstone of a burgeoning middle-class consumer culture, hinged on the perception of respectability. While a range of consumers purchased porcelain, due to their relative simplicity of finish, Cookworthy’s figurines almost certainly belong to a non-elite form of consumption, and in discussions of porcelain more generally within eighteenth-century consumption, not only Richards (1999) and Young (1999a), but also Maxine Berg (2010) have discussed affordable porcelain objects as ones that were particularly subject to the vagaries of fashionability. It is important to recognise that, like taste, fashionability can be applied both to an aesthetic and an idea, and that porcelain patterns and figurines could therefore only be popular and, in consequence, commercially successful if they fitted seamlessly into contemporary ideas and interior spaces. Writing of Josiah Wedgwood, Forty (2005) argues that while he was technically innovative in his manufactory, his success lay in the fact that ‘antique designs clothed technical innovation, and the novelty of the product was described in publicity material in the most guarded terms’ (p.27), and an emphasis on ingenuity and invention in the material may therefore have, paradoxically, made Cookworthy’s figurines less rather than more desirable. It is therefore significant that, despite their short-lived production history (which, even taking into account Crisp’s Vauxhall figurines, lasted barely fifteen years), at least twenty-two figures of the Continents have survived in present-day museum collections. This is probably testament not only to an academic interest in their materiality, and a visual interest in their aesthetic finish, but also to their subject, as the geographical knowledge they represented was in accordance with a temporary ideological ‘Taste’, a cornerstone of middle-class education and part of a burgeoning definition of what it meant to be cultured in the eighteenth century (Brewer, 2013, pp.144-160).

This geographical knowledge, as represents by the ‘assemblage’ of the continents, consisted of a world view, probably familiar to the eighteenth-century consumer, that was less concerned with realistic representation that with a hierarchical idea of world order. In this respect, the iconography of these figures is less important than the fact that, as Ashton (1978) says of Tiepolo, their creators "had no apparent interest in ethnographic accuracy" (p.112), and therefore these continents were never intended to be realistic representations of individuals from those regions, but those of a culturally-constructed, Europe-centric view of global geography. In Inventing Exoticism, Schmidt (2015) describes the crossover between images of the continents and material goods in the Early Modern period, saying that these images were designed to both distinguish geographical regions and conflate them on the basis of three themes; religion, natural histories, and the production of material goods. While religion is
not a feature of the porcelain figurines, both natural histories and the material goods that these continents provide are present in Figs. 1, 2 and 4. Writing of China, Jenkins (2013) makes a similar argument about the conflation of the country with the material goods that it provided in this period, and in the Cookworthy figurines, this materialism is most evident in the figure of Asia with her flowing robe and perfume censer, as Ripa (1709) writes:

_The Garland signifies that Asia produces delightful Things necessary for human Life; her Garment, the great Plenty of those rich Materials ... the Censor shows the odoriferous Gums, and Spices it produces._ (p.52)

While this model, of three quarters of the globe as producers, and Europe as a consumer, has been recently challenged in the works of historians such as Baird & Ionescu (2013), and Gerritsen & Riello (2016), who have argued that global networks of object exchange functioned in a more complex way in this period, there is little doubt that the primary rhetoric of contemporary European geography framed Europe as an apex of the world, which absorbed goods and information from everywhere else, and stood as a bastion of civilization. A separation of Europe (which can be seen as a proxy for home) from the other three quarters (a proxy for abroad) can be seen as an early form of orientalism, and is reflected in the fact that, in all of the sets of ceramic figurines, Europe is the figures whose attributes vary the most; in Fig. 5 Europe holds an orb and wears a crown in contrast with Fig. 3's laurels, and mathematical instruments, books, scrolls, cornucopias, and various different forms of armour all appear in different versions of the figure, with one set of Bow figurines even showing Europe dressed in armour as a version of Britannia (Bradshaw, 1981, p.166).

As mentioned above, one of the reasons for choosing Cookworthy's 'four continents' as a basis for this study of re-interpreting and experiencing historic objects was that the hegemonic geographical view represented by these figures, is deemed particularly problematic, both politically and culturally, for the 'Taste' of the contemporary viewer. This is something that Childs (2016) has recognised in her study of Blackamoor porcelain figures from this period, and Barringer & Flynn (1998) have argued persuasively that objects in museum collections, such as the Cookworthy figurines, provide a unique opportunity to investigate, tease out, and reassess historic colonialism for the contemporary viewer. Similarly, Karp & Kratz (2000) stress the authoritative voice of the museum as important in the dynamic of displaying, and countering, historic narratives of otherness for a consuming public. However, the display of objects such as these continents is not a simple matter of rejecting the colonialist attitudes of the past, but of recognising that this historic geographical hegemony is also an 'other' against which we contrast ourselves, and that our geographical viewpoint is similarly hegemonic, although we now think of it under the terms of globalisation. We therefore decided to recontextualise these objects not only in terms of the hegemonic geographical model of their making, but also by deducing a contemporary hegemonic geography, changing the function of the work within the gallery space from one of representing the historic other to reflecting our own cultural standpoint. So, while looking at digitized representations of Cookworthy's continents, the audience listened to music that was being live sourced through a custom-built machine learning algorithm designed to learn what results were returned most frequently through specific search terms. In this particular instance, it was programmed to seek out music, without discrimination, and in an international frame, that responded to the search terms, Asia, Europe, Africa, and the Americas, a proxy that identified the most common, and by inference, the most popular pieces of music, a way of sampling contemporary 'Taste'. This was played through four separate sets of headphones, in front of the digitized images.

While each set of headphones was laid out in front of a different continent, and therefore the viewer might imagine they were listening to four separate 'feeds' of music, which corresponded to the continent on view, they were in fact listening to the same live music feed split across four sets of headphones, and the content of the feed was not explained in exhibition signage. This was designed not
only to encourage viewers to engage with the objects in terms of material that represented a sampling of the contemporary world view about the continents, and therefore to question their own preconceptions about the meaning of the labels 'Asia', 'Europe', 'Africa' and 'The Americas', but also to communicate with one another after listening, and potentially to realise that the feeds they were experiencing were the same. As the aural material was continually selected and adjusted by the algorithm, and as the feed was not repeated, each viewer's experience of the exhibition, while routed in a contemporary geographic hegemony, was inevitably an individual experience.

Local Building Blocks

In the dialogue resulting from these aural feeds, which were constructed to represent contemporary social taste, we were also aware that every individual viewer would react in a slightly different way to the visual and aural stereotyping of the continents that comprised the historical and contemporary parts of this installation. The idea of the contemporary self as a fusion between individual and social experiences, constructed through constant dialogue and re-positioning of identity, is one that Hermans & Hermans-Konopka (2010) describe as key to understanding the reactions of individual to contemporary problems in a globalised world, but it is also a concept that Bennett's (2010) model recognises, of the tension between individual experiences of objects and the assemblages of object-based experiences that come together to create a politics or ethics of material things. Yet key to both of these models is a recognition that an individual interaction with objects is the building block, or localized experience, that must be understood before any kind of dialogue can be effective, an individual experience that is minimised in global discussions of 'Taste'.

It is easy to forget, particularly in the context of the eighteenth century, that the actual experience of consumption, in which the generic concept of 'Taste' was undeniably important, was made up of a series of purchases conducted by individuals, who may have been influenced by their social and cultural context, but who nevertheless make purchases on their own account. Lacking secure provenance, it is impossible to trace the exact purchasers of the Cookworthy figurines, but it seems likely that the purchasers were middle-class and, possibly, female. The gendered purchase of porcelain, and the satirical literary figure of the female china collector, is an object of some contention among historians, who acknowledge that large purchases of expensive items of porcelain for the household would probably have been undertaken by men (see Vickery & Styles, 2006; Vickery, 2009; Kowalewski-Wallace, 1997; Sloboda, 2009). As both Vickery (2009) and Jones (2013) have argued small, less expensive figurines in particular, associated with the decoration of interiors rather than with grand statements about the wealth and discernment of its occupants, appear to have been the province of feminine consumption, and Sharp (2004) has also argued that the arrangement of women's China collections 'had a significant visual impact on the presentation of the domestic interior' (p.21). The very fact that female China consumption is seen by contemporary commentators as taking place outside the bounds of formal 'Taste' (Sloboda, 2009), suggests that in the selection of specific pieces, individual preference was just important as aesthetic canons.

If this is true, then on a more theoretical level, the relationship between the eighteenth-century female consumer and figurines like the Cookworthy continents, as opposed to that between the male consumer and the porcelain of official 'Taste' could be seen as broadly analogous to the differences Susan Stewart (2007) identifies between consumers of the 'souvenir' and creators of a 'collection'. In Stewart's narrative, the interaction between consumer and souvenir is seen in emotional terms, whereas the creation of the collection is seen as a rationalising endeavour, and this difference, between emotion and rationalisation, is key to understanding the difference between Bennett's (2010)
individual 'thing power' and a political 'assemblage', and Hermans & Hermans-Konopka's (2010) globalised and localized experiences. This idea of the 'local' as an important factor in the relationship of the individual consumer to the artefact is particularly important for the Cookworthy figurines because there are significant differences between those produced at Plymouth, and those produced elsewhere. One example of this is Figure 8, which shows a version of the America figurine produced at Nicholas Crisp's Vauxhall factory, and which is finished in a distinctly different way from Fig. 1. This may have been a function of the availability of a skilled enameller, as figurines created by Nicholas Crisp at Vauxhall (Fig. 8) are consistently more elaborately decorated, with more use of gilding, than those created at Plymouth, and were presumably therefore aimed at a more affluent level of consumer. However, as different decorative features may have appealed to a variety of individuals, and as the visual surface is the first means of engaging with an object, these differences between the figurines emphasise the importance of seeing them as individual objects of consumption rather than simply representations of global concepts of geography.

As a site of interaction between maker and consumer, surfaces are often trivialised in studies of design (a topic which Adamson & Kelly (2013) seeks to address), but as Amato (2013) argues, the surface of an object is also a place where decoration and representation come together to provide a space where 'the mind's attention and interest are won' and which humans then 'transform ... into signs, images, metaphors and symbols' (p.89). If a small moderation of the surface of the Cookworthy figurines, a change in the localized building blocks of the figures, alters the way the mind's interest is won, it may also follow that its transformation into the signs, images, metaphors and symbols of hegemonic geographies is also changed. This is perhaps most immediately evident in the variation in skin colour between Crisp's and Cookworthy's America figurines (Figs. 1 and 8), which on a global level changes the viewer's perception of America's racial identity. However, it is probable that it was originally intended as a means of reinforcing Cookworthy's technical prowess in the creation of white porcelain (skin is rarely coloured on Plymouth Porcelain figurines, see Adams (2016)). This is reinforced by the fact that the factory at Plymouth also produced a full set of continents that were not coloured at all, and Figure 10 shows an undecorated figurine of Europe, that is also present in the V&A's collection. Originally a function of the local materiality of Plymouth porcelain, in terms of the impact on the viewer, and on its position within a global understanding of the figurine's geographical identity, this difference between coloured and uncoloured porcelain is potentially disruptive; as scholars of classical sculpture have found, contemporary audiences have very different emotional reactions to the presentation of the same sculpture in its decorated and undecorated forms (Spivey, 2003).

This idea, of the local, material context of the Plymouth Porcelain figurines, to be set alongside a global reading of the figures in terms of geographical representation is one that is crucial to our re-interpretation of the artefacts. In partnership with British Clays, we are currently engaged in reconstituting the original clay body from the 1766 recipe. Using the original 3D scans, which capture the 'global' form of the continents, and the reconstituted 'local' clay as building blocks, the intention is to form an enlarged series of casts of the four continents, and to alter them to constitute a new historical narrative within the context of modern craft. Not only will this help us to investigate what role the past plays in contemporary making, but also how a historical narrative of craftsmanship can be integrated with contemporary technologies of design. Taking this further, the project will also investigate how producing other objects, some of which may be functional, from the models of figurines, and finally reframing the objects in various online formats, can help the contemporary consumer to re-integrate a problematic
historic artefact within the framework of contemporary tastes and experiences. With each subtle change, whether of scale or surface or medium, the emotional interaction of the viewer or consumer with these objects, and the conveyed understanding of a geographical model, will change, and one of the aims of this research is to use these changing understandings to speculate how the changing forms of the original objects might have impacted upon contemporary consumers.

Conclusion
In four years we will return this body of work to the Plymouth City Art Gallery and Museum for its inaugural re-fit and re-naming opening. The idea that a museum is a guardian of the past has shaped renowned institutions the world over, but whether that idea still serves us now in an era of smartphones and institutional critique is debatable. If the intersections between institutionalised geographic ideas, and individual experience and emotion is key to thinking about how these objects convey knowledge and understanding, then the contemporary individual experience of their handling, and its subsequent impact on institutionalised geographies is equally important. The museum can be a public platform for its community and a catalyst for creativity, where visitors are treated as participants and engaged in interactive experiences, and presenting our re-interpreted Cookworth figurines in this way would erode the separation between the museum’s historical artefacts and its contemporary audiences. The new museum building will be designed in a way that conditions the experience to be interactive, it would serve and frame the work in a way so that the interpretation of the figurines is enhanced by the building, and conversely the re-experiencing of these figurines enhances the status of the new museum. We hope to juxtapose seemingly unrelated things to encourage new connections; artefacts would be treated as 'dialogical prototypes that would be a trigger for future concepts and mediation.' (Hermans & Hermans-Konopka, 2010) In re-experiencing Cookworthy’s continents therefore, we can appreciate them as historical artefacts but also as a catalyst for questioning our own perceptions of objects and the world that contains them.

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