

## **Material Resonance and Site Specificity: An Interdisciplinary Approach**

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As a practicing ceramic artist I have spent the last few years working with unique clay from a unique site. I have worked primarily with archaeologists and ethnoarchaeologists to inform my practice-based research. This semi permeable interdisciplinary approach has been both exciting and illuminating. My experience of being a maker is potentially in no way different from those that have gone before me; I look to understand my world in myriad ways. To a great extent it is advisable to question what has gone before, but as Jarred Diamond points out,

*'We shouldn't be so naive as to think that study of the past will yield simple solutions, directly transferable to our societies today.'*

I live and work in an outstandingly beautiful part of the UK. Cornwall covers an area of 3,563 km<sup>2</sup>, in other words you can drive from the top to the tip in 2 hours and from the right to the left in much less time. It is a special place, largely untouched over centuries; this ancient landscape is littered with burial chambers, settlements, stone circles and monuments. Cornwall is also a distinct place for British studio ceramics thanks to the arrival of potter Bernard Leach in the 1920's. The museum in St.Ives is a thriving heritage site and a pilgrimage for the lover of the brown pot. Home of the Tate St.Ives and the Barbara Hepworth Museum we are fortunate to be able to live and work in a richly creative landscape. However, rather than focus on Bernard or the lives of the St.Ives group of artists I look at materiality and site specificity, specifically Cornwall. I hope to take you much further back in time. The Cornish geology is quite unique. Students come from all over the world to learn mining and geology at Camborne School of Mines, an institution founded off the back of a once thriving industry. Tin mining in Cornwall dates

back 4000 years, many of the wonderful Bronze finds from Scandinavia contain Tin from Cornwall. Found in abundance in Devon & Cornwall and essential in the making of bronze, seafaring boats took this exceptionally valuable commodity far and wide. The magnificence of Cornish geology can be illuminated through its diversity of material. Copper, arsenic, lead, zinc, silver, slate, granite, feldspar haematite, tourmaline, to name but a few. In the North East of the county there are huge China Clay deposits.

It was during the 1700's that a chemist called William Cookworthy began to research the porcelain-making process. He found a particularly rare type of decomposed granite, naturally occurring and finer than any talc. He went on to form the Plymouth Porcelain Factory, sourcing all of his china clay from St. Austell. These clay pits still export china clay around the globe.

Goonhilly Downs is on the Lizard Peninsula, the southern tip of Cornwall. It was Archaeologist Professor David Peacock, whose research during the 60's, first confirmed that that iron rich Gabbroic clay found only on this site was used in the production of pottery in Cornwall from the Neolithic period and continued for approximately 5000 years. This clay was formed from accumulations of wind blown clay dust from a time when the current seabed was dry land due to glaciation. This clay covers an area of approximately 1.5 square miles and lies mostly at a varying depth of eight to eighteen inches below the surface. The main compositions of these clays are Feldspars, olivines (magnesium iron silicate) and mineral augites.

My interest in this clay began with my first ever visit to the Royal Cornwall Museum more than 20 years ago, where I was able to handle some of the pots and Funery urns. In my early years as a ceramics tutor we ran a reconstruction project. We took students to dig clay, we processed it, made replicas and finally we would visit a Cornish Celtic Village, a Bronze Age settlement reconstruction. The work would then be fired in pit or bonfire. This wonderfully versatile material dug straight from Goonhilly Downs, can be worked immediately and easily modelled into vessel form. Dried out, and in its raw state, this

clay survives firings to 1280°. I knew this was special and my engagement with this material began.

In terms of a technical exploration, I produced clay tests using combinations of Gabbroic clay with a variety of inclusions. The results of these tests ascertain workability, plasticity and temperature range as well as establishing colour and texture. The tests on the far right are gabbroic clay mixed with 40% porcelain made from Cornish China Clay.

I have long been using elements of this clay in my ceramic work; in terms of the resonance of this specific material, I reference and emphasise the uniqueness of place through the archaeological and geological history of Cornwall. Archaeologist Dr Imogen Wood writes,

*‘Gabbroic clay had a totemic meaning within society: its source became a node in the socialized landscape; and its repeated extraction and distribution maintained not only society but also regional kinship networks and their identities.’*

Wood, I (2011)

To claim that material resonates is to embrace the notion that matter communicates. We understand through the study of semiotics and material culture that personal resonances may be idiosyncratic but that many of our responses are actually activated culturally and historically.

Choice of material and its significance, resonance, tone or frequency, silently assists in the communication of a personal visual language. The true nature of my creative journey is illustrated through the marriage of concept, context as well as technical investigation. For me, part of the emergence of narrative can be located through practical engagement with and observations of material and location.

In 2013 I become part of an international, interdisciplinary research project called Creativity in the Bronze Age, this major HERA funded project offered six contemporary

makers the means to engage with and reinterpret materials and objects from the very origins of craft production. This project was led by Dr Jo Sofaer at the University of Southampton and was partnered by Cambridge University, Norwegian University of Science and Technology, The Archaeological Museum in Croatia, The National Museum of Denmark, The Natural History Museum in Vienna and Land of Legends Archaeological Park (Denmark)

This interdisciplinary engagement was fascinating, it became evident that there was a distinct difference in the way objects and materials were being analysed and evaluated by some archaeologists. I had to learn fast, I had no idea that the foundation stone for archaeological inquiry had a distinctly cultural historical bias; archaeologists believed that much of the information artefacts contained about past people and past ways of life was lost once the items became included in the archaeological record. So these objects were simply catalogued and described. Later emerged a 'processual approach,' claiming that with scientific method it was now possible to get past the limits of the archaeological record and learn something about how the people who used artifacts lived. This became the study of past ways of thought, as gleaned from surviving material remains. Processual exploration in archaeology assumes that clay choice was simple and motivated purely by technological properties, linked to the local geology, transportation availability, its intended use and how it forms. We now acknowledge this to be the case, however this doesn't acknowledge the potential social choices involved in production.

Ethnoarchaeological studies seem to be changing this perception; it is now presumed that the production of clay objects was informed by the producing society and that every step of the process was embedded in its social context. A post processual or interpretive agenda places materials and material culture as fully sensory, Cartesian dualities are utterly inappropriate in this analysis, as the object, mind and body are seen as interacting in complex ways. This approach now straddles archaeology, ethnography and anthropology.

*‘The materiality of objects, and the phenomenology of social landscapes, is well established in archaeology and anthropology. Materials, landscapes and culture are not separate but inextricably entwined and dependent upon one another.’*

Tim Ingold (2014)

A post-processual approach is concerned with the world view of early communities: their belief system, myth, the way they express rank, status and group identity. This develops an understanding of how objects are intertwined and inseparable from our daily action in the world. This really does at last acknowledge what makers already understand. That we think through our whole body, a focus on hands, body, material, tools and brain. In the world of the ethnoarchaeologist the social and economic context is now evaluated in the analysis of pottery and its production. In her chapter ‘The texture of things: objects, people and social spaces,’ Marisa Lazzari states that

*‘Materiality is a recursive relationship between people and things; a spiraling series of continual reflection, opposition, affirmation, similarity and difference between the way people make things and the way things make people.’*

(Marisa Lazzari: 2005)

Ethnoarchaeological and anthropological interpretation is relevant reading for the contemporary craft student; we increasingly find the books of Tim Ingold and Daniel Miller filtering through to dissertation bibliographies.

Resonance: The ability to evoke or suggest images, memories and emotions; an enriched significance or profundity, especially in evoking an association or strong emotion. I believe that each material resonates, speaks, holds meaning and has its own unique significance. It can assist in the locating of a sense of place. Whilst these concerns may alter according to culture and history and from one individual to another, we achieve myriad visual and symbolic communications. Throughout history the use and of course ownership of specific materials made into objects has indicated power, status, wealth,

and gender and is the foundation of economy. Within the world of ceramics at least, Porcelain has long symbolised purity, translucent sophistication, glamour and high status. Porcelain figurines and decorated plates adorn the fireplaces and cabinets of countless homes; they remain in some people's eyes, symbols of the notion of high status and finery. I would also argue a broader cultural and historical resonance for most materials.

A particularly poignant example is that of the controversial piece *Equivalent VIII*, usually referred to as "The Bricks", by sculptor Carl Andre. The work comprises one-hundred-and-twenty firebricks, arranged in two layers, in a six-by-ten rectangle. Not only are each of these bricks of equivalent shape, size and volume to each other but they also reference a commonplace building material. This choice of material is in stark contrast to the high status materials such as marble, alabaster or bronze, more traditionally used in sculpture. The firebricks resonate with cultural familiarity, their origin, their purpose (in kiln construction) and the northern home of the clay body from where the bricks originate. In addition they speak of their manufacture and monumentality as well as the process of mass production for construction, industrialization and the working class. How ironic that the humble brick, as a statement of class equality in art, drew much criticism particularly enraging the tabloid press whose perception was that of taxpayers' money being spent on a collection of bricks. Inciting one protestor to vandalise the work.

Joseph Beuys produced many works that embodied this notion of resonance. Beuys incorporated materials from the outside world into his multiples, and installations. His selections, however, were not random and the materials were never neutral. Rather, Beuys viewed certain materials as having important associations with his past, and through repeated use they attained a personal symbolism.

Material significance may well alter from person to person and frequently these responses are culturally and historically denoted. It is of course important in

archaeological terms at least, to always try to consider the *'lens that we see things through.'*

The significance of crafted material possessions marks the ways in which people carve meaning from their domestic environment. It is possible that objects valued for action and those valued for contemplation were of equal importance. In the case of the ceremonial axe heads found in rivers and bogs throughout the world, we can see that the representation of this functional tool held a symbolic significance beyond our immediate comprehension. If we are a reflection of the things with which we interact, then surely we are reflected in the things we make. It is perhaps in the process of making and in the use of material that we truly encounter, relate and communicate a degree of shared experience and understanding.

There are three persistent themes within my work, these signpost our fundamental drives and needs; reproduction, consumption and protection. The changing balance of these preoccupations continues to concern us all greatly. I find that through archaeological enquiry I increasingly turn my focus upon the domestic, the repetition of use, the wonder and beauty of a vital tool, the meditation in the everyday task and the rhythm of doing. We should not underestimate the importance of the 'small stuff.' The 'social landscape,' is an environment generally shaped by continued human action, and these are the places we sometimes call 'home.'

Many things contributed towards the work I made for the maker's engagement project. Some of my influences were taken from Bronze Age objects; however, it is inevitable that as part of this journey other influences crept into the mix. I reinterpret and translate what I consider to be significant; I often produce things alluding to function; purposefully fraudulent. This might imply a practical function, however in reality the composition means that they cannot ever be effective for a domestic task. In terms of ceramic resonance, these porcelain and gabbroic clay pieces span several thousand years of local ceramic history and economy in just 25cm.



Shaken, Strained & Measured (2013)

In addition to the unique resonance of this beautiful Gabbroic clay, I have been looking more closely at the meaning of place in the landscape. I have been concerned with the special significance of two important sites. The site where Falmouth University now sits, known as Tremough, (literally translates as Pig enclosure) is on top of a very large hill overlooking miles and miles of land and sea.

It is not difficult to understand why this site of Tremough, might have been considered a good place to be. Archaeological digs have unearthed 4000-year-old postholes from dwellings and evidence of a forge alongside many pots and shards. This site has continued to be fairly consistently inhabited ever since.

The second site is that located at the Lizard Peninsula, a small site called Zoar on the Goonhilly Downs, where the gabbroic clay was extracted and used. The Lizard peninsula sustained excavation of this gabbroic material for a considerable period; even during the Bronze Age the clay was exported as far as the North East of England, Devon and Somerset and we already know many pots and fragments made from this material can be



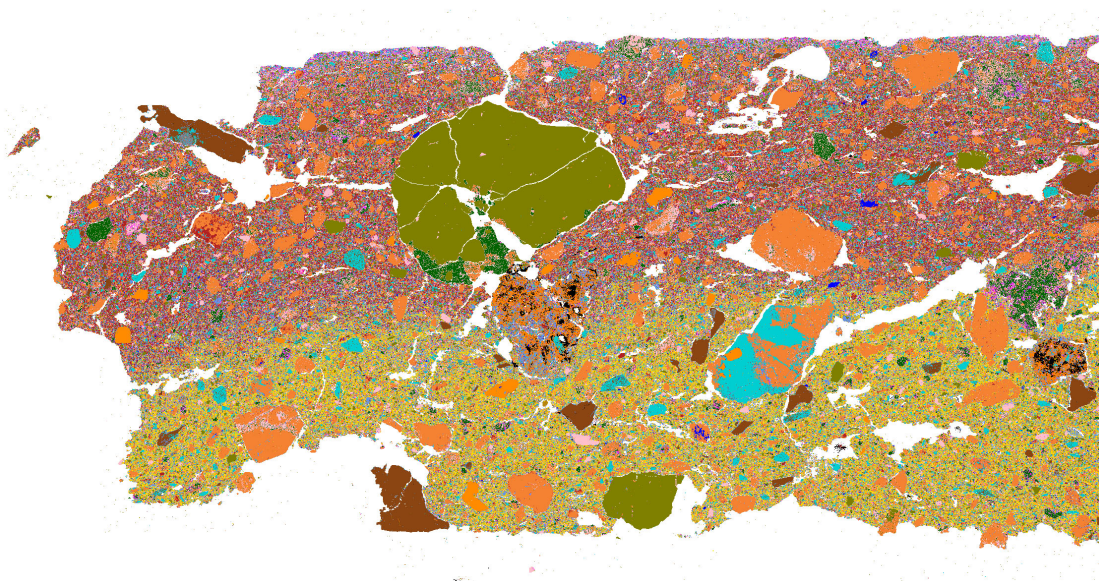
found throughout Cornwall itself. This area can be considered a social space within the landscape. Professor Tom Moore of Durham University points out that material source locations for clay, metals and salt are often in marginal or liminal places in the landscape and that extraction may have been situated in a symbolic landscape. I hope to maintain a link to this symbolic landscape by producing works directly linked to site, it is perhaps more honest to say that they are site responsive; with regard to both of these sites, I am making a direct response in terms of place over time.

There is a critical roundabout nature to this particular exploration; at the heart of this sits an exciting machine owned by Exeter University and Camborne School of Mines. A small amount of research funding enabled me to work with the geology and mineralogy team at the School of Mines using Qemscan, a sophisticated machine providing automated mineralogy and petrography.

With the assistance of local archaeologists and The Royal Cornwall Museum, I was able to source pieces of gabbroic pottery found on site from the earliest settlement at Tremough, one fine ware and one coarse ware.

These 4000-year-old gabbroic clay shards were thin sectioned, mounted in resin and scanned at the highest magnification. Just imagine this exceptionally specialised piece of equipment stands on the same site where my shards were discarded 4000 years before.

This scan gave me detailed data on the clay formation; the clay is interesting in its make up, the blend of minerals makes it a good refractory material, more suitable to withstand thermal shock, perhaps explaining the number of large scale finds.



Olive Green	Quartz
Orange	Plagioclase feldspar
Dark Brown	MG Fe silicates – Chondrodite (rare) associated with serpentine
Dark Green	K-Feldspar
Turquoise	Ca Mg Fe (Al) silicates – calcium, magnesium, iron
Black areas	Garnet

The scans also gave me vibrant imagery for digital printing onto ceramic and fabric. The work I produce is concerned with domestic universals. Over thousands of years I'm not convinced that the human condition has changed all that much, in contrast to our comprehension of the world, which has expanded exponentially. Our drives and needs remain the same, as do our most basic preoccupations, hopes and fears. From the Bronze Age version of kitchen to the 21<sup>st</sup> century kitchens we all recognise, there are actions and methods that remain the same, preparation, and cleaning, processing, roasting, boiling, sieving, blending, storage and moving hot objects. We still do them or benefit from them.



Sight over Time (2015)

Leading experimental archaeologist from Exeter University, Linda Hurcombe says

*'The objects we touch and transform have a lifecycle as much as we do. Though some objects are transient, others outlast us and stand witness to past human lives'*

Hurcombe, L (2007)

Those of us who work with clay understand that the material travels well through time and speaks of maker and of site. To work with clay is to connect through specific material choice; meaning and significance may alter according to culture and in time, and from one individual to another, but I believe we have a legacy of visual and visceral

communication. Churning around in my mix is a fascination with resonant materials, with the archaeology, tools and processes, site specificity and new technologies.

My first taste of interdisciplinarity came from close to home. The ultimate shared process came to light for me some 20 years ago, whilst traveling through Romania with my brother, sitting in the closed carriage of a train, I remember having a lengthy conversation about process. He is an engineer and I am a craftsperson, we both make stuff.

We spoke at length about the mirroring of process within our fields of work. We realised that we both present or are presented with a concept, we look to underpin this historically and culturally, we design and make, or engineer and ultimately we reflect upon our final outcome. We observed that more often his outcome provided specific function and that mine might require a somewhat different interpretation of function. Perhaps similarities in nature and also in nurture seemed to have given us more commonality than we might have predicted, but in fact I have gone on to find that there is just more general commonality in terms of process towards making.

I marvel at the perfect circularity of this ongoing investigation. I find it exciting that I am only now able to look at a shard in such microscopic detail as has ever been technologically possible. I can only wonder at the serendipity and coincidence of the placement of a machine that allows us to do this. Who would imagine when there are only 11 such machines in the world, that one of them would be situated directly on the ground where the 4000-year-old shard was dug? The beauty of these images astonishes me and I am fascinated by the differing reactions these elicit. Experts in various fields look at the same images with a different focus of interest, eventually becoming involved in a dialogue where each of the participants has something vital to pass on. It is a new way of seeing, feeling and experiencing the same material from different perspectives.

I am intrigued by the way we lived in the past and the way we live in the present. There is a paradox involved in that the similarities and differences are equally astonishing.

Science has famously changed archaeology, both challenging and informing it, I believe that something similar has happened within me. My making process is subjective, personal and poetic but in addition also rational, interdisciplinary and analytical. I continue to borrow and abstract meaning from ancient domestic and ritual objects whilst I create contemporary indicators, these objects can become a part of the proliferation of future relics and signifiers that sing about our own culture and reflect our place in time.

## Bibliography

Hansen, C (2008) Understanding materiality and human experience through creative artistic exploration. Oxbow Ltd

Harman, G (2002) Tool Being: Heidegger and the metaphysics of objects, Open court publishing

Hodder, I (1991) Material Culture and Symbolic Expression. London: Unwin Hyman Ltd

Hurcombe, L (2007) Archaeological artefacts as material culture: Routledge

Ingold, T (2013) Making: Anthropology, Archaeology, Art & Architecture. Routledge

Knappet, C (2005) Thinking through Material Culture, University of Pennsylvania Press

Marchand, T, H (2011) Making Knowledge: Explorations of the Indissoluble Relation between Mind, Body and Environment. Wiley-Blackwell

Wood I. (2011) Thesis. Changing the fabric of life in post-roman and early medieval Cornwall" An investigation into social change through petrographic analysis.