

What does it mean to be a "materially attuned" practitioner?

Maiko TSUTSUMI*

Camberwell College of Arts, University of the Arts London

Abstract: This paper reports on research in progress that explores the potential role the materiality of things plays as a tool for the critical understanding of the human relationship with man-made objects. The paper argues that many designers habitually engage with production and consumption of meanings more through the materiality of things than words and symbols. It proposes a hypothesis that materiality is a key to understanding the context, knowledge and information the man-made objects may "embody". Through the case study of an exhibition, the paper examines the ways in which this embodiment may be facilitated. Referring to Heidegger's notion of "thingness", it further explores the origin of the mediating, and the "engaging capacity" of objects. The paper draws on the more established analysis of the origin and the experience of the work of art, in its examination of the role that materiality plays in the production and consumption of meaning and in facilitating the experience through objects. While exploring the potential advantage of an anthropological approach to design, the paper suggests that an attunement to materiality and an active reflection on their observations enable the designers to have better insights into the workings of the human-object relationship.

Keywords: Materiality, experiential knowledge, tacit knowledge, knowledge in design practice

^{*} Maiko Tsutsumi: Camberwell College of Arts | University of the Arts London | United Kingdom | e-mail: m.tsutsumi@arts.ac.uk

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INTRODUCTION

This paper presents findings from on-going research, which investigates the role that the materiality of things plays in the production and consumption of objects in contemporary society, with a particular focus on design and applied art practices. Framing the theme in the context of design, the paper discusses the potential role the materiality of things plays as a tool for a critical investigation of our relationship with the man-made environment.

It has been observed that design practitioners typically, though not exclusively, work with information and knowledge that are manifested in material form. It can be said that this particular awareness of the material aspect of their surroundings permits designers and makers an insight into the meaning and the knowledge that the material things may embody. The research suggests that this awareness, a sensibility, potentially plays a key role in creating an engaging quality in the objects they design/make. Relating this "engaging quality of things" to Martin Heidegger's notion of *thingness*, the paper further explores the relationship between the *origin* of the object and the engaging capacity of the resulting work.

The paper explores the nature and the potential of an anthropological approach to design in an attempt to find the way to bring together the materiality and the meaning of things. It also examines the engaging capacity of material objects and how the act of making may contribute to its formation. Viewing design and applied art objects as "concrete expressions of material culture" (Boradkar 2010, p. 8), the research investigates how designers and makers alike essentially engage with the world, as well as facilitate experiences for their audience through materiality.

It has been observed that designers and applied artists who have a heightened awareness about "how things work" in material term interpret and deal with the agenda of contemporary culture and society in a way that is grounded in the lived experiences of material things. Jane Fulton Suri (2011) wrote, in her case studies of how designers reflect on and apply their observations of the everyday experience in the design process, the following:

Whether creating products, apparel, services, or spaces, these designers display a particular sensitivity to the physical, metaphorical,

and cultural values inherent in context, forms, and materials and how these are experienced. (2011, p. 31)

This sensibility constitutes reflective insights into the principles of things, material characteristics, etc., which are based on their experiential knowledge. It can be said that the designers who are equipped with such an attribute – an attunement to materiality – tacitly understand the principles of nature and human behaviours from the material aspect of their environment.

The paper proposes that the materiality of things is key to understanding the nature of tacit and experiential knowledge and how they manifest in material form. It includes an analysis of an exhibition *Thingness* (Richmond & Tsutsumi 2011), which was curated as an attempt to "unfold" the processes of production – of the meaning and experience – of design and applied art objects. Applied art objects and the makers of objects are also examined in this paper, as the paper considers how the familiarity to materials and making processes also affect the designer's understanding of "how things work". Through its exhibits and dialogues with the participating artists/designers, the exhibition became a tool for reflection, and demonstrated to its audience how the experience of the designers and makers could be conveyed through the experience of the resulting objects.

The author's ongoing research is concerned with the particular sensibility to the material aspect of the world – and its "thingly" nature as Heidegger (1978) put it – that designers and makers of objects are often observed to possess. It can be said that they are particularly attuned to the material aspect of the cultures around us. Nigel Cross wrote that:

Designers are immersed in this material culture, and draw upon it as the primary source of their thinking. Designers have the ability both to 'read' and 'write' in this culture: they understand what messages objects communicate, and they can create new objects which embody new messages. (2006, p. 26)

The paper argues that this particular way of understanding the culture around us is potentially advantageous for design practitioners whose responsibility to understand and respond to the real-world agenda has become ever more critically important. In particular, the paper explores the methodology in which the two key themes — an attunement to materiality and the nature of the *thingness* — may be brought together. Although the ongoing research looks at the role of

materiality in both design and applied art practices, this paper focuses more on its implications for the design practice.

The culture of design practice

If you were a practicing designer, it is likely that you would already "know" that the tools with which you deal with knowledge and information in your practice are not limited to a few types of media, such as materials, texts and images. It can be said that designers, to a considerable extent, engage with the "communicative property" of objects (McCracken 1988) in their practice. By observing the details of products, designers understand the maker/designer's intention, such as reconciliations between structure and cost, or the reason behind a particular feature the designer tried to emphasise, be it the process, technique or characteristics of the material used. In other words, most designers are able to read principles, in addition to technical and historical knowledge embodied in the objects, by observing their physical features. Dillon and Howe (2003) wrote of the notion of the "design object as narrative" and argued that the stories "enfolded" in the realization of design object are also the means of "unfolding" its full significance. As it has been observed in the studies of design practices, designers define their problems by trying to solve it (Cross 2007; Schön 1991; Lawson 2006). This process is all but linear as Jane Fulton Suri wrote in her documentation on how designers utilise their observational skills in the design process:

Design and innovation are creative endeavors that defy entirely rational and linear processes. Human intelligence, skill, and leaps of imagination are required to grapple with multiple variables and uncertainties. (2011, p. 17)

As Cross (2006) argued, designers have a high level of cognitive abilities, which can respond to undefined issues and to a dynamic between people and things, and this dynamic between people and things, as Prasad Boradkar wrote, "configure each other" (2003, p. 9). To achieve coherence in the objects they produce, the designer needs to apply a principle, such as a narrative or geometry, to determine the perspective from which the designer comes to frame the formerly undefined design problems. Fulton Suri wrote:

Perhaps, as makers themselves, they have a heightened appreciation for the kind of elements in the environment that they can manipulate and control: formal relationships between sensory qualities such as color, mass, layout, and texture, and dynamic qualities of feedback, rhythm, sequence, layering and logic. This reflects awareness of both *that* things are made and of *how* things are made, and of the choices and artistry that has gone into that making. (2011, p. 31)

It is possible to hypothesise here that many designers experience and interpret the world in a "materially attuned" way and recognise patterns that are manifested materially in the world around us. These observations suggest an interesting prospect that tacit and experiential knowledge are transmitted in a way that is particular to the design practice. It can be said that through materiality, designers are able to "unfold" the stories and conditions with which the objects came into their existence.

Objects mediate

In his *The Origin of the Works of Art*, Martin Heidegger questioned how materiality affords lived experience within objects: "How do matters stand with the work's thingly feature that is to guarantee its immediate actuality?" (1978, p. 125). This notion – an experience of a thing in an immediate and intuitive sense – which is variously named as the *presence*, *essence* (Heidegger 1967; 1978) and *aura* (Benjamin 1999), could be interpreted as the engaging quality of objects. As an experience, our encounter with material objects feels very immediate. As Bill Brown wrote in his essay "Thing Theory", "things seem to assert their presence and power" (2009, p. 140). What may be felt in this experience of the "encounter" is difficult to pin down, as Daniel Miller wrote that material objects escape intellectual scrutiny because the object

...tends towards presentational form, which cannot be broken up as thought into grammatical sub-units, and as such they appear to have a particularly close relation to emotions, feelings and basic orientations to the world. (Miller 1987, p. 107)

In philosophy and other studies of material culture, it has been well articulated that material things (artefacts) mediate human psyche and the external world (Miller 1987; Verbeek 2010; McCracken 1988). *Things* mediate the relation between human beings and the *external* world in a material way, fulfilling their functions as material objects, and by this functioning shape human actions and experiences (Verbeek 2000, p. 11). Their transcendent capacity is manifested in "how everyday people use everyday objects to transcend their everyday experience and to connect

and mediate... universal human experiences" (Geismar 2011, p. 213). Miller also wrote of the bridging roles material objects play on multiple levels for humans in perceiving the world:

The artefact may perhaps best be understood as playing a series of bridging roles. It does not lend itself to the...analysis of symbolism which identified distinct abstract signifiers and concrete signifieds, since it simultaneously operates at both levels. (Miller 1987, p. 33)

To understand the design objects as cultural artefacts, it is necessary to extend the exploration into wider academic contexts. As Boradkar wrote:

Design studies, which have traditionally regarded objects in formal rather than social terms, can benefit by expanding their discourse to include a more socially and culturally rooted understanding of objects. (2003, p. 3)

Although different disciplines employ their own subject-specific vocabulary, the existing studies on the nature of our experience with material things explored in other disciplines greatly benefit the study of design.

Design anthropology

So how useful is it for designers to be more attuned to the materiality of things in the context of design practice today? In recent years, there has been increasing interest in the process and the material aspects of the design practice. What has triggered this growing interest, and is there an advantage in better understanding these aspects? How important is it to cultivate such sensitivity to the materiality of things discussed above in the context of design and design education? The designer Sam Hecht (of Industrial Facility) spoke of the importance of knowing "how things work" in order for a designer to be critical of their subject:

Many young designers have lost the ability to understand – or perhaps are not taught – why things are the way they are; but this ability to dismantle and analyse the parts of something is crucial. (Campbell 2010, p. 7)

The role and the meaning of design practice in society have evolved since the early 20th century, and today alternative roles and possibilities of design in society are sought and debated more actively than ever

before. Designers' social responsibility and their awareness of it have become ever more critically important and relevant in today's context. Although the dominant idea of design as a vehicle for economic growth has always been questioned by some, propositions for change were not put into practice or seriously considered as real options until relatively recently. Doubts on the production-focused model were expressed in the example of Victor Papanek's *Design for the Real World*, which was written in the 1960s. Papanek observed:

In this age of mass production when everything must be planned and designed, design has become the most powerful tool with which man shapes his tools and environments. ... This demands greater understanding of the people by those who practice design and more insight into the design process by the public. (Papanek 1984, p. ix-x)

According to Papanek, at the time when the book was written, there was no single publication about the social responsibility of design practice. In the current design community, increased awareness of sustainability and ethical design is evident (Braungart & McDonough 2008; Fry 2009, 2011; Margolin 2002; Hinte 1997, 2004). However, the production-focused idea of design is still strong in the industry today. Historically, design thinking tends to separate the pragmatic and cultural problems as Victor Margolin (2002) reflected in his overview of the design culture in *The Politics of the Artificial*. He wrote that the design thinking at the end of the 20th century was only "grappling with ways to integrate pragmatic or operative concerns with semantic or symbolic ones" (Margolin 2002, p. 24).

Design as a discipline needs a more "anthropological" and context-based approach to facilitate the real needs-centred design solutions. In this model, the designer is to be more observant and responsive to what is going on around them such as the habits and customs of people, their cultures and environment. It demands more empathetic understanding of the people in context as well as the insight into the process of production and consumption. Fulton Suri observed that:

...successful designer are keenly sensitive to particular aspects of what's going on around them, and these observations inform and inspire their work, often in subtle ways. ... As businesses and organizations increasingly embrace design thinking and human-centered approaches, it feels important to understand more about how observation really works in design. (2011, p. 17)

A more sociological approach in which design practices are seen as observers of our cultures and societies has been advocated in the design culture today, evident in the publications such as *Design Anthropology* (Clarke 2011) and *Design Futures* (Fry 2009). Tony Fry wrote in *Design Futures* that design has to be "understood anthropologically. It names our ability to prefigure what we create before the act of creation, and as such, it defines one of the fundamental characteristics that makes us human" (Fry 2009, p. 2).

Design thinking is understood to be solution-focused, because often design problems are ill-defined and designers tend to define problems by trying to solve it (Cross 2007). This brings our attention closer to their thinking processes, where the practitioner's tacit and experiential knowledge manifests in their actions. It can be said that this process of framing an initially ill-defined problem is where the designer's observation and insights into "how things work" inform their decision-making. In this way, in the formulation of the "framing" element, the contextual knowledge and information may play a key role.

Rightness

Designers often mention that they make an intuitive judgement about an object, whether or not it feels "right", often without knowing explicitly the reasons for such judgements. This illustrates the notion of "design intuition" that Fulton Suri (2011) has proposed in her observation of how designers utilise their observational skills in the design process. The designer Michael Marriott wrote in the exhibition catalogue of the *Raw Craft* exhibition that – to him – *rightness* is:

Something which is usually felt, rather than understood. It is something that might grow to be understood though, by relentlessly looking hard at objects, turning or rolling them over and taking them to pieces in reality, or in the mind. (Scholze et al. 2011, p. 6)

In his book *Thinking Architecture*, the Swiss architect Peter Zumthor explored the feeling of the *rightness* in the context of architecture. In his analysis of *rightness*, Zumthor attempted to figure out its origin, as well as what constitutes the particular atmosphere of a particular architectural space (2006a; 2006b). His observation covers a wide range of elements that make up our surroundings such as materials, sound, temperature, people, and compositions of all these put together. Zumthor wrote of the effect of combining the complex layers and web of

elements listed above in the manner that he applies to his practice, in a pursuit of the *rightness*:

I love placing materials, surfaces, and edges, shiny and mat, in the light of the sun, and generating deep solids and gradations of shading and darkness for the magic of light falling on things. Until everything is right. (Zumthor 2006b, p. 87)

He claims that humans are capable of making an intuitive judgement of a place very quickly:

We perceive atmosphere through our emotional sensibility – a form of perception that works incredibly quickly, and which we humans evidently need to help us survive. ... Something inside us tells us an enormous amount straight away. We are capable of immediate appreciation, of a spontaneous emotional response, of rejecting things in a flash. (Zumthor 2006a, p. 13)

The designer Jasper Morrison also observed how objects seemingly affect the atmosphere of the space around it: "it seemed to me that the change in atmosphere of a room when an object is added might be hard to measure, but that in some way it represented an invisible quality of the objects." He further noted that "an awareness of this might be an important factor in designing things" (Morrison 2002, p. 14).

Humans are by nature designed to constantly assess their immediate surroundings (Kahneman 2011). It can be said that some designers and artists possess a particular sensibility – naturally or cultivated – to their environment as Zumthor observed, and are highly capable of pattern recognition through the perception of material things.

The Thingness exhibition

In recent years, there has been increasing interest in the roles that the act of making and learning of skills play in our understanding of the world (Sennett 2009; Crawford 2011; Frayling 2011). Matthew Crawford, a philosopher and a motorcycle mechanic, wrote in *The Case for Working with your Hands* that he finds "manual work more engaging intellectually" (2010, p. 5). The way makers and designers engage with their surrounding culture through materiality – when combined with their skills or sensitivity to the physical/material world – enables them to produce objects of the familiar; a potential for bringing the world closer towards us.

In the above context, the *Thingness* exhibition seemed to be a timely theme. The exhibition was curated by two tutors who have been

teaching on interdisciplinary design and applied art courses at undergraduate and postgraduate levels at Camberwell College of Arts in London. Their own interdisciplinary and intercultural background in craft, sculpture, product and furniture design led to an ongoing conversation between them on varying views on the relationship between ideas and material things in contemporary art and design practices. The idea for the exhibition came about when the two were discussing how best they could demonstrate to their students what they observed: the key role the materiality of things play in the transmission of embedded meanings and narratives in man-made objects; and how this transmission of meanings may differ from more typical symbol-based communication.

The curators observed that the learning of making skills plays a vital role in developing sensitivity to materiality. It appears to be the case that through acquiring the skill by doing, the maker becomes more aware of the "external physical world which is nevertheless in a more immediate relationship with the unconscious than the world of articulate symbolism" (Miller 1987, p. 103). They took particular note of learning and becoming accustomed to making skills often feel as if one were "living the knowledge", as Peter Dormer (1994) put it. This sense of "living the knowledge" is characteristic of experiential and tacit knowledge – the knowledge acquired by doing – and the "knowledge of familiarity" (Janik 1988). When the maker becomes at ease with his or her own skills, his/her mind focuses more on the act of making itself than the tool that is enabling it (Polanyi 2009), whereas the knowledge of familiarity is gained through senses that are grounded in experiencing sensations (Dormer 1994, p. 21).

Collectively, the exhibited objects in *Thingness* presented people's experiences, their histories, their connections to and interactions with the material world. In the exhibition, the objects were given a central role, which as a result enabled the audience to access to a certain degree the "humility of objects" (Miller 1987). In the *Thingness* book that accompanied the exhibition, the two authors questioned:

Studies on what man-made objects do to humans have been conducted in many different academic subjects...What is evident in these studies is that, despite its seemingly definitive character, the very essence of objects evades linguistic articulation. How then can the "material articulation" work? (Richmond & Tsutsumi 2011, p. 3)

What does it mean to be a "materially attuned" practitioner?



Figure 1 Michael Marriott "Mies Meets Marx" Thingness version (2011)



Figure 2 Neil Brownsword "SY series" (2001)



Figure 3 David Clarke "One Day My Plinth Will Come" (2009)



Figure 4 Still shot from Jasper Morrison "World Without Words" slide show



Figure 5 Gareth Neal "Block 2: Side Table" (2007)

The themes highlighted in the *Thingness* exhibition were informed by the curators' interest in some of the designers' notable *sensibility* to the materiality of things. Richmond and Tsutsumi observed that in the culture of designers and makers, "there appears to be a cyclical nature in this producing, and receiving from things" (Richmond & Tsutsumi 2011, p. 3).

The exhibition included the works of five artists/designers: Neil Brownsword (Figure 1); David Clarke (Figure 2); Michael Marriott (Figure 3); Jasper Morrison (Figure 4) and Gareth Neal (Figure 5). The works, in a variety of media (an installation of design objects of various origin; furniture; a group of small sculptural metal work; an installation of ceramics objects and a slideshow) were chosen for the characteristics and themes they appeared to share, enabling them to "speak" of the way the designers/makers engage with their cultures and environments through material characteristics of things. The exhibitors were also asked to answer this question: What makes your objects speak? The metal work artist David Clarke replied:

For me the objects speak when we have a familiarity with them, we recognise them; my objects all have an element from the everyday.

They trigger old stories, experiences and situations. For me there has to have an 'entry point' or a way to access the object visually something we can connect to... it reminds of something or other. Now we are talking! (Richmond & Tsutsumi 2011, p. 7)

For the *Thingness* exhibition, the designer Michael Marriott reproduced an edited version of his installation *Mies Meets Marx / MMM*, which was first held at The Geffrye Museum, London in 2002. The work consists of objects Marriott has designed, made, borrowed, bought and collected, all of which, as a collection, speak of Marriott's view and experience of what modern design is about, through their material presence supplemented by the anecdotes that accompanied each exhibited object. Marriott wrote:

If my objects speak, I think it is more likely a whisper or a hum. I aspire to make objects that have a feeling of familiarity, and are therefore quiet. On the whole I'm not so interested in objects that shout, it seems like there's too much shouting going on in this world. (Richmond & Tsutsumi 2011, p. 11)

Clarke and Marriott's commentaries suggest that the "sense of familiarity" – mentioned by both of them – plays a key role in evoking or facilitating the "unfolding" of the stories the objects potentially embody in the minds of the viewers. In the works of Gareth Neal and Neil Brownsword, the makers' "closeness" to the materials and processes used in the creation of their objects is reminiscent of the strong allure of their works. The strong physical presence of Neal's "Block 2: Side Table" derives from the characteristics of the timber (oak) that is visible in its volume and its crumbling edges, along with a physical trace of the labour - a repetitive action of the cutting of grooves. It was a result of the spontaneous idea that Neal had when he saw beauty in the pile of push sticks that was lying about in his workshop. He appropriately spotted the appealing quality in the now useless pile of push sticks that later formed the basis of the identity for the Block series. Neil Brownsword's SY series holds another layer: the history of a place, which is synonymous to the now declining ceramics industry in Stoke-on-Trent where the artist grew up and trained. The work SY series is an installation of a collection of ceramic pieces consisting of remnants of ceramics factory debris the artist had found and altered. The pieces in the installation are mostly abstract in form; however, all seem strangely familiar, as they still possess the charm of the objects that were once produced in those

factories that decorated and served functions in many homes. David Whiting wrote of Brownsword's work:

Rarely has the oozing, coagulating, brittle detritus of clay, re-formed and re-fired into another state of permanence, been so intelligently and eloquently expressed. Nor has the history of ceramic manufacture in one place been so elegiacally and poignantly recorded. (2008)

The designer Jasper Morrison often writes reflective and observant commentaries about everyday objects that embody his design principles and inspirations (Morrison 2006; Fukasawa & Morrison 2008). Morrison's slideshow *A World Without Words*, which was shown in the exhibition, consisted of collected images that, according to Morrison, "made an impression" (Morrison 2002, p. 74). The slideshow, Morrison has put together as an alternative to a lecture, consisted of a mixture of images that in a way *spoke* of principles in nature and the man-made world, as well as humour that "celebrates human inventiveness with materials and structures resulting in the utility of things" (Richmond & Tsutsumi 2011, p. 3).

The collection of works in the *Thingness* exhibition revealed a pattern, which is a combination between nature's principles that are manifested in the ways materials and structures work, and the variety of narratives that are communicated through them. As both Marriott and Morrison have explained, the kinds of objects they tend to respond to – which to some extent forms their design ideals – are "quiet" but have a lot to offer in a subtle but profound manner. Their observation suggests the characteristics of objects at work relating to Miller's observation of the quiet but striking capacities that engage with our psyche:

That objects are important, not because they are evident and physically constrain or enable, but quite the opposite. It is often precisely because we do not see them. The less we are aware of them, the more powerfully they can determine our expectations, by setting the scene and ensuring appropriate behaviour. ... They determine what takes place to the extent that we are unconscious of their capacity to do so. (Miller 2010, p. 50)

The exhibition *Thingness* presented different methods of telling the narrative, while demonstrating the exhibited works' striking capacity to engage with its viewers. Identifying this engaging capacity of material things with Heidegger's notion of *thingness*, as well as the origin of work of art, the paper further explores its source and workings.

Heidegger's thingness

The title of the exhibition *Thingness* refers to the term Heidegger used in his speculation on the nature of the thing in his book What is a Thing? (1967). Heidegger described thingness as "what makes the thing a thing ... what conditions the thing" (1967, p. 8-9). It resonated with the Thingness exhibition curators' view on the mediating role that materiality plays in the human perception of the world, in the context of making and experiencing the world of man-made objects. The Thingness exhibition, and the dialogues with the participating designers/makers, explored and reflected on "how the making of an object affords it 'a voice" (Richmond & Tsutsumi 2011, p. 3). The works in the Thingness presented the potential role that the "materiality" of objects plays in the experience of the maker of objects. How then can we talk about thingness in our own terms in the context of design? If we were to identify this "voice", or the "engaging capacity" of objects as it is interpreted in this paper, with the notions of the "essence" or the "presence" of things, we could then refer to many of the attempts that have been made to explicate the "essence" of art objects, in an effort to reveal its origin and the making as well as the workings of its effect, such as Benjamin's "aura" (1999), Heidegger's "thingness", the "essence" and "the actuality of the work" (1967; 1978).

The author's ongoing research focuses on the nature of this *engaging capacity* of things in relation to the objects' material being, in the hope of encouraging design practitioners to actively reflect on the production and consumption of the "essence" of things that are firmly anchored in the materiality of the objects they produce. The research suggests that the further understanding of how designers could possibly bring closer together the material aspect of the object they produce and its meaning is crucial to the development of works that facilitate a stronger bond between the object and the user. Verbeek and Kockelkoren advocated in *Eternally Yours: Visions on product endurance* for product longevity: "things should direct attention towards themselves instead of just being a material embodiment of meaning" (1997, p. 105). Their remarks resonate in the question Heidegger posed about the origin of "the self-evident" essence of the artwork in *The Origin of the Work of Art*:

...even the much-vaunted aesthetic experience cannot get around the thingly aspect of the artwork. There is something stony in a work of architecture, wooden in a carving, colored in a painting, spoken in a linguistic work, sonorous in a musical composition. The thingly element is so irremovably present in the artwork that we are

compelled rather to say conversely that the architectural work is in stone, the carving is in wood, the paining in color, the linguistic work in speech, the musical composition is in sound. ...what is this self-evident thingly element in the work of art? (Heidegger 1978, p. 91)

This "self-evident thingly element" in the work of art, Heidegger proposed, is not just a list of material characteristics of object:

...artwork is something else over and above the thingly element. This something else in the work constitutes its artistic nature. The artwork is, to be sure, a thing that is made, but it says something other than what the mere thing itself is... (Heidegger 1978, p. 91)

Zumthor also wrote of the "self-evident" qualities in buildings in relation to the beauty of things, as well as identified it with the origin of the presence of things:

As long as I can remember, I have always experienced the beauty of an artifact, an object created by man as a special presence of form, a self-evident and self-confident hereness that is intrinsic to the object. (2006b, p. 75)

In *Thing Theory*, Bill Brown also discussed the nature of *thingness* and how things assert their presence in a very physical manner only when we encounter them in a bodily way, by quoting Leo Stein's words that "things are what we encounter, ideas are what we project" (Brown 2009, p. 140). Here another question arises: does Heidegger's speculation on *thingness* suggest a solution to reconcile the gap between the actual experience of things and their meaning? Is this a question that concerns the design practice? For us makers and designers, it is something we tacitly "know" – that this reconciliation is possible – from our experience in working with the very physicality of things while simultaneously working with more abstract thoughts, visions and principles.

Objects as Experience

The research points to the importance of the ability to attune to the material aspect of the work as physical manifestations of actions – the making and thinking of the designer/maker. In this way, the objects are not simply representative of something else. In contrast, John Dewey observed, in what he calls expressive objects, that:

There are other meanings that present themselves directly as possessions of objects which are experienced. Here there is no need

for a code or convention of interpretation; the meaning is as inherent in immediate experience... (Dewey 2005, p. 87)

These meanings, which make the experience of things appear so immediate, are perhaps close to Heidegger's notion of thingness. Here it can be suggested that the materiality of things affords the object to act as an agent that facilitates such an immediate and engaging experience. Heidegger argued that the origin of the artwork is the artist himself. In this way, material things could embody meanings and experiential knowledge, which can then be unfolded in the mind of the viewer. Heidegger wrote "...the work essentially unfolds as something in which truth is at work and because truth essentially unfolds only by installing itself within a particular being" (1978, p. 125).

This work-in-progress research suggests that there is an inherent link between the designer's intuitive understanding of the world – a cognitive ability – through the materiality of things, and the experience of objects. It also points towards the need for further investigation into how principles and meanings could manifest in material objects, and how such a manifestation is linked with the act of thinking and making. Andrew Harrison, in his book *Making and Thinking*, advocated that human intellect and rationality can be witnessed as much in the human's trait as a tool-maker, as in the practice of speaking or writing: "the idea of a maker of things, a tool-user, plays at least as central a role as the idea of a talker or writer" (Harrison 1978, p. 3). As Heidegger (1976) wrote that thinking is *handiwork* "something like building a cabinet" and that it is as tactile as the actual work made, then can the opposite be said about making insofar that it plays a similar role in the act of thinking?

Conclusion

Heidegger argued that the origin of the artwork is the artist himself (1978). In this way, material things can embody meanings and experiential knowledge, which can be unfolded in the mind of the viewer. As Heidegger wrote, "...the work essentially unfolds as something in which truth is at work and because truth essentially unfolds only by installing itself within a particular being" (Heidegger 1978, p. 125).

This paper proposes that being "materially attuned" enables the designer to access tacit and experiential knowledge that is embodied and manifested in material things that afford the work a voice; an engaging quality. The sensitivity to the manifestations of the rules and

actions in the man-made world is a vital trait for design practitioners; as it is often how the real problems and issues around the production and consumption of objects manifest in our lived environment.

Materiality tells us of the contexts of how things come into being, and lets us experience that context in a more immediate sense. With the aid of objects and contextual understanding of how things come to embody meanings and experiences – a theory of things – it may help us provide better insight into the nature of the human relationship to material things. The paper proposed that materiality beyond the terms of form, aesthetics and functionality must be taken into account in the context of design in order to have a better insight into contextual understanding of the subject as well as the human-object relationship. Boradkar wrote that "in order to design products that are meaningful to people it is pertinent to see them as culturally produced items rather than as expressions of form and function" (2006, p. 12). If we look at man-made objects as a material manifestation of culture and human conditions, an unfolding of the "making of" could become a vital learning tool. From this perspective, paying close attention to the materiality of things has the potential to facilitate context-based learning.

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