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Enriching Place-Experience Through Materiality:
An exploration into architecturally-designed ceramics to facilitate engagement and a sense of place in our cities

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Abstract: The paper highlights the importance of designing public realm materiality to enhance sensual involvement and the experience of place. Exploring the neurological mechanisms for perception and engagement creates a theoretical basis upon which the momentary relationship experienced between a passer-by and the materiality can be analysed. The issue is further examined using two case studies. It is contended that materiality can facilitate a heightened sensual relationship with place by expressing qualities of legibility, compatibility and unfamiliarity, enabing a haptic relationship (more impacting than that of vision) to develop. The active sensing of the environment as well as the place being legible are both vital for engagement, meaning that the holistic processes and material qualities that facilitate this condition are vital to urban design. The design of everyday surfaces is suggested to be equally important to art and sculpture, due to its effect on the inhabitants and its role in place-making and distant engagement. The role of materiality in the creation and vibrancy of a place is crucial and easily achieved, although often undervalued.

Engagement: Feeling connected; either a sensual connection with surrounding environment; or a cognitively one (with thoughts), reducing bodily engagement.

Perception: The cognitive processing of external stimuli once sensed by the body (involves legibility and compatibility).

Experience: Derived from perception, the brain's representation of external reality, depends on the body's level of sensory stimulation, introducing the idea of an engagement threshold and the role of materiality in engaging attention.

Dissolution: An intimate connection to the place, enabled by some phenomena, suggesting the possibility for materials to heighten a sense of place.

Continuous Derive: A psycho-geographical term, describing unplanned everyday experiences through sensual engagement with the urban fabric, enabling a sense of place. The paper aims to achieve this state through the careful design of the materiality of the urban realm.

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1. INTRODUCTION

Written in response to the idea of urban distancing (Schwarzer, 2004) and ocular-centrism (Pallasmaa, 2005), the paper aims to understand how the public realm can be designed to sensually engage its inhabitants. As our experiences become more global and the locale gets left behind, the question arises: Can aspects of the everyday urban experience be designed to facilitate engagement to contribute to the locality of place, which in turn affects human well-being and sustainability? (Fig. 1)

The argument is based on the phenomenological reality, concerned with how the world is immediately experienced through our senses. In his writings of the city and its problems, Rykwert (2000) was surprised at how little the physical characteristics of the city occupy people's attention. In order to understand how the physical urban fabric is inhabited, the paper makes reference to philosophy, the foundation of phenomenology, and neurology, to explain these everyday experiences.

The paper focuses on understanding how sensitised consciousness can enable architecture to excite day-to-day experiences. A complete experience combines a range of elements, which can be disassembled and studied individually, but merge and overlap to create an 'experiential continuum of enmeshed space' (Holl, Pallasmaa, Perez-Gomez, 2007). Materiality plays a crucial part in the experience of architecture by mediating built forms and people (Hegger, 2006:16). The idea that materials can evoke sensual feelings, connecting people to place, is authenticated by Peter Hayes' emotive ceramic sculpture. Thus, the paper seeks to understand how materials of the everyday urban fabric can be more appropriately designed to generate a sense of place.

The scope is broadened by the psycho-geographical desire to transform human relationships with the urban environment to revive the city through re-engagement with its inhabitants (Coverley, 2010). David Dernie's current research, 'Material Imagination', promotes a creative use of materials to encourage the physicality of architecture, recognising the need to design for enhanced human embodiment. However, it is significant to also understand the presence of materials from a neurological point of view in order to enhance the suitability of everyday spaces.

1.1 Statement of Intent

This paper finds its originality in understanding the psychological effects of materials, taking existing material investigations further by combining phenomenology, philosophy and neurology. It builds upon an appreciation of sculpture and art and seeks to incorporate their intriguing presence into everyday experiences. Characteristics that facilitate engagement with materials

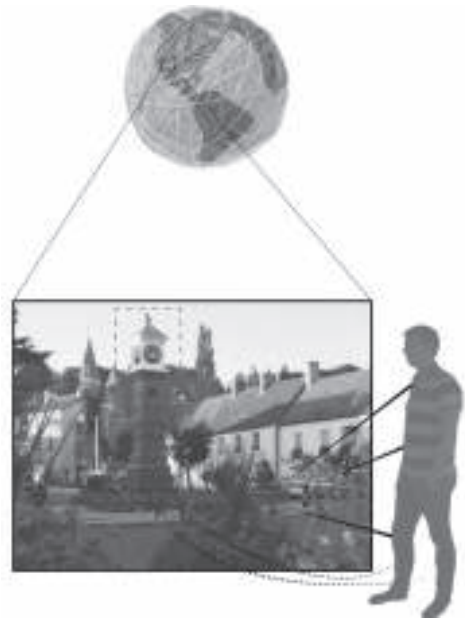

Figure 1: Illustrating the necessity for a sense of place, created through engagement with the local uniqueness. Human well-being is enhanced through rootedness, which in turn initiates care and contributes to sustainability. [Source: Illustration by the author]

are explored through the study of a modern ceramic façade in London. Future forms of material expression are sought with reference to the ceramic artist Peter Hayes, in understanding how the essence of place is conveyed.

2. RELATIONSHIP BETWEEN PEOPLE AND PLACE

2.1 A Sense of Place

The notion of place, referred to by Lynch, Auge and Norberg-Schulz in light of modern anonymity, gives value to sensory engagement for its enhancement of the interconnected relationship between man and his environment. Deleuze and Guattari describe the connection between the body's interior and exterior as indistinguishable, demonstrating the condition of dissolution where people are in a continuous relationship with their surroundings (Ballantyne, 2007: 34).

A sense of place is formed in the mind of the beholder through conscious bodily engagement with a location's specific conditions (Menin, 2003). These distinctive characteristics are known as the genius loci, a Roman concept describing the narrative essence of place (Norberg-Schulz, 1980: 18). Here place is viewed as an archive of life, a source of information and knowledge to be discovered. Although as a concept, the genius loci is highly theoretical and driven by ancient spiritual beliefs, there is something unambiguously real to which it refers (Menin, 2003: 68).

Place is dependent on the participation of people through their relationship with the genius loci: 'the environment suggests distinctions and relations, and the observer…selects, organizes, and endows with meaning what he sees' (Lynch, 1960: 6). In Auge's comparison of place, where the genius loci is accessible, and non-place, undifferentiated space; 'the first is never completely erased, the second is never totally completed' (Auge, 2009: 64), proposing that place is continually in a state of flux and can be manipulated. (Fig. 2)

Therefore, the paper hypothesises that the relationship between person and place is a two way process, the person actively sensing the place and the place being made apparent to the person: 'the making of place is simultaneously a material construct and a construct of the mind' (Menin, 2003: 1).

2.2 Perception, the brain interpreting sensory stimulation

As the locus of perception, the body plays a focal role in experience. A key mechanism in the process of experience and therefore place-making is the brain, introduced by Blakemore (1977: 85) as the interpreter of sensory information. Sensory interpretation of the physical reality is the process of perception. The senses interact at a variety of scales and levels of efficiency in collecting information: taste, touch and smell being intimate senses; hearing and sight being distant senses (Holloway, Hubbard, 2001: 40). Perception is a synesthetic process, meaning that the senses become interlinked when interpreted by the brain. Malnar and Vodvarka (2004: 44-51) compare three main theories of perception, between which it becomes clear that perception is a processed sensation. (Fig. 3)

Experience, derived from perception, is therefore a representation by the brain of the external reality, dependent on the level of sensory stimulation the body receives from the environment. Deleuze and Guattari refer to the engaged human as a 'body without organs' where preconditions are set aside (Ballantyne, 2007: 34), a meditative state of mind momentarily achieved. The resultant 'plane of consistency' allows the actual to emerge: engagement enables the place to be revealed.

Urban settings put a large strain on cognitive processing resources (Ulrich, 1991: 201-230). This is due to both cognitive over-stimulation, from a continuous stream of neurological information, as well as sensory under-stimulation, due to the often un-relatable nature of modern materials, for example polycarbonate reinforced timber laminates. Heidegger, like Pallasmaa, strongly believes that in this way, through science and technology, the contemporary city affects involvement with the world. (Fig. 4)

Mallgrave (2011: 167) proposes the concept of an engagement threshold, where a particular level of sensory stimulation enables perception. When faced

Figure 2: Two-way relationship between person and place; both active sensing and the expression of place need to occur for a sense of place to develop. [a] expression of city memory as the essence of place, [b] active sensing of a person's surroundings by the brain and sensory organs, [c] results in dwelling in place through engagement with genius loci. [Source: Illustration by the author]

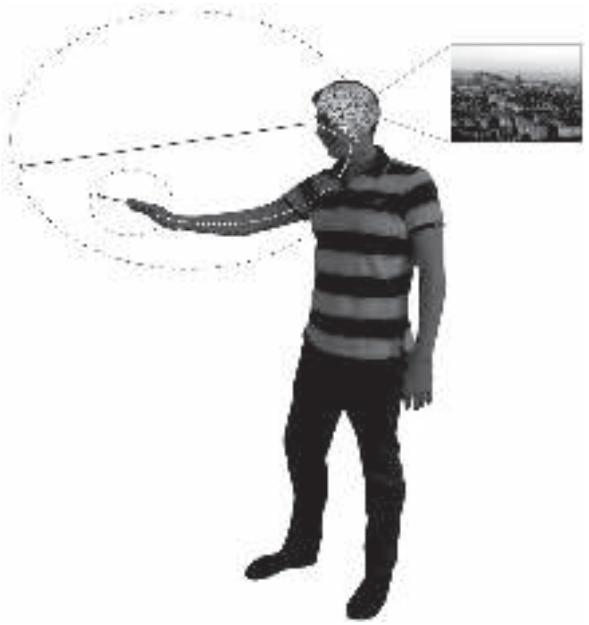

Figure 3: Active sensing enables engagement between person and place. The senses vary in their range of efficiency, vision being the most distant and touch the most intimate. Perception, a cognitive process, is dependent on the level of sensory stimulation to enable the sensory organs to collect information. Engagement enables perception, leading to a mental image and sense of place. [Source: Illustration by the author]

Figure 4 (Left): Monotonous blank wall on Blackfriars Street in the centre of Manchester, illustrating an unintentional condition where a state of low environmental proximity is likely to occur. [Source: Photograph by the author]

Figure 5 (Right): Lack of engagement due to cognitive overload weakens the relationship between person and place. [a] sensory under-stimulation, [b] cognitive over-stimulation, [c] brain less able to process incoming stimuli, [d] weaker mental image and therefore sense of place. [Source: Illustration by the author]

Figure 6 (Left): Textural red brick archways suggest Manchester's industrial heritage, a visible expression of the genius loci connecting today's experience of the city to its memory. [Source: Photograph by the author]

with habituation, the threshold rises because the brain requires highly varied environments. The brain perceives less resulting in disconnection; a state of low environmental proximity; 'the observer becomes detached from an incarnate relation with the environment through the suppression of the senses' (Pallasmaa, 2005: 27). (Fig. 5)

Parallels can be observed between Blakemore's description of brain injuries and modern urbanity's inefficient perception: 'They have eyes that function but they themselves are unaware of the things that their eyes can see' (Blakemore, 1977: 61). The modern, digital age leads also to a reduced desire to interact sensually with the physical world (Malnar, Vodvarka, 2004: 273). It becomes easy to overlook interesting aspects of the surroundings due to the busy nature of modern places and minds which raise the engagement threshold.

Unless materials grab the attention of passers-by, the resultant space, failing to be engaging, becomes a space of transition. People pass through rather than dwell. The direction for architecture begins to be dictated by developing existential roots in the everyday, 'bringing us back to things' (Norberg-Schulz, 1980: 201) through heightened sensory perception of the locale.

2.3 Materials as a bridge to dwell

Heidegger's notion of dwelling embodies more than simply a physical presence in space (Heidegger, 1975). It involves being in a close relationship with place which opposes the idea of transition. Environmental conditions, such as the genius loci, provide organising principles for people to relate to, therefore enabling dwelling in the spaces around them. (Fig. 6)

'If the purpose of architecture is to create meaningful spaces, then it should be concerned with transforming space into place so that one might 'dwell' in the sense that Heidegger truly meant' (Menin, 2003: 152). Originally meaning to linger or remain, Heidegger linked 'dwelling' with 'peace', the feeling of belonging in a place, and with 'habitat', the correspondence between man and his environment. In relation to a sense of place becoming a vector for care, Heidegger writes that by dwelling, harmony exists with one's surroundings, allowing them to continue unexploited. Therefore, engagement enables simultaneous sustainability of place and environment. 'We do not dwell because we have built, but we build and have built because we dwell' (Heidegger, 1975: 146), suggesting that the aim of building is enabling dwelling.

The German word 'bauen', meaning building, is a version of 'bin', 'I am', which relates the everyday inhabitation of place to 'being' rather than 'doing'. 'Being' in the world is important for human experience, existing physically through sensory experience, as opposed to cognitive engagement, reflecting,

which detracts from physicality. It is this relational encounter that brings us into nearness, an intimate relation with phenomena. (Fig. 7). The feeling of nearness contributes to a sense of place. The term is a function of immediacy; a person becomes near to what is perceived to be immediate, regardless of distance (Sharr, 2007: 35). Thus, dwelling must be achieved through relation to the surroundings by a factor of the mind, not by physical contact alone.

Heidegger uses the metaphor of a 'bridge' to describe that which allows people to negotiate their relationship to the world, facilitating a sense of nearness. 'A location comes into existence only by virtue of the bridge' (Heidegger, 1975: 152), stating that it guides, gathers and leads to a connection with phenomena and place. If attention and value are present, meaning is associated to anywhere, enabling dwelling and sense of place (Bartlett, 2005); a 'cool and invigorating shadow under a tree, or the caressing sphere of warmth in a spot of sun, turn into experience of … place' (Pallasmaa, 2005: 58).

With this in mind, the paper hypothesises that materiality can become a bridge to place by 'emphasising the richness and specificity of the direct, sensual experience of architecture, offer[ing] a potent way of countering the all-pervasive anonymity of non-places' (Weston, 2003: 194).

Figure 7: Place made apparent through the expression of the genius loci by material 'bridges'. Red brick materiality bridges the city experienced now and its memory as an industrial centre. A feeling of nearness is created, regardless of the physical proximity, due to legible perception of the genius loci. [Source: Illustration by the author]

3. IDENTIFICATION WITH MATERIAL ESSENCE

Case Study: Ceramic façade of Savile Row / Conduit Street, London

'Places are specific, but their elements are general; we comprehend places through sensory data; our understanding of place is filtered through memory; and our delight in place is enhanced by a degree of mystery' (Malnar, Vodvarka, 2004: 233). The question arises of how future architecture can be designed to encourage dwelling through engaged inhabitation. EPR Architects, in close collaboration with ceramicist Kate Malone, designed the highly engaging façade of the corner building where Savile Row and Conduit Street in London meet. (Fig. 8)

In order to understand the material's characteristic qualities that heighten engagement it is necessary to explore the feeling of engagement. This is examined with reference to phenomenologists such as Zumthor and Holl and furthered with neurological explanations from environmental psychologists, Kaplan and Ulrich.

Figure 8: Ceramic façade of the corner building joining Savile Row and Conduit Street, designed by EPR Architects in close collaboration with Kate Malone. [Source: Pey (2011)]

3.1 Engagement

Engagement, the active sensing that enables perception of place, is a feeling that lies between pleasant and excitement. Intense engagement is similar to being lost in the moment, which Zumthor compares to experiencing a deeply moving piece of art; being 'utterly enchanted with everything … the intensity of a brief experience: absorbed and immersed, filled with wonder, feeling the vibrations, effortlessly excited and calm as well, enthralled…[creating] the feeling of being utterly suspended in time, beyond past and future' (Zumthor, 2010: 72-84). To explain this phenomenological way of 'being', between thinking and feeling, Kaplan (2001: 480-506) refers to the state of mind termed 'soft fascination'. Here, interesting stimuli are engrossing enough to involuntarily hold attention for a moment. The cognitive processing of subsequent stimuli is not prevented, enabling the senses and body to be simultaneously involved with place. A state of embodied engagement is facilitated.

Bodily engagement can be related to the impact of shadows in art and architecture which 'give shape and life to the object in light' (Pallasmaa, 2005: 47). In this way, sensual engagement creates a momentary escape from cognitive engagement, allowing the mind to regain its capacity to focus, often without the participant's awareness (Kaplan, 2001). In a survey by the British Mental Health Foundation over 80% agreed that people would be happier and healthier by slowing down and living in the moment. Kaplan's theory of cognitive restoration suggests that engagement may be restored within minutes through interaction with interesting things. It can therefore be proposed that intriguing and relatable materials are extremely important in an everyday context for a sense of place to develop. (Fig. 9)

The scientists Kaplan and Ulrich principally investigated engagement through nature's inherently engaging properties which suggest design principles for new materials. Mallgrave and Malnar discuss how interesting stimuli promote engagement from an architectural and neurological point of view in their texts, 'The Architect's Brain' and 'Sensory Design' respectively. From this research the paper proposes that the characteristics of materials that facilitate engagement fall into three main categories: legibility, compatibility and unfamiliarity, which will be explored in relation to the ceramic façade.

3.2 Legibility

Legibility is the process by which the body reaches a sense of nearness, understanding what is being sensed. The façade of Savile Row is a rain-screen system, composed of individually crafted ceramic tiles hung on a steel frame. It is interesting to note that the authentic legibility of this system is

Figure 9: As explored by Kaplan and Ulrich, the intriguing qualities that make nature engaging can be understood and applied to designed materials: 'A walk through a forest is invigorating and healing due to constant interaction of all sense modalities' (Pallasmaa, 2005:41). [Source: Photograph by the author]

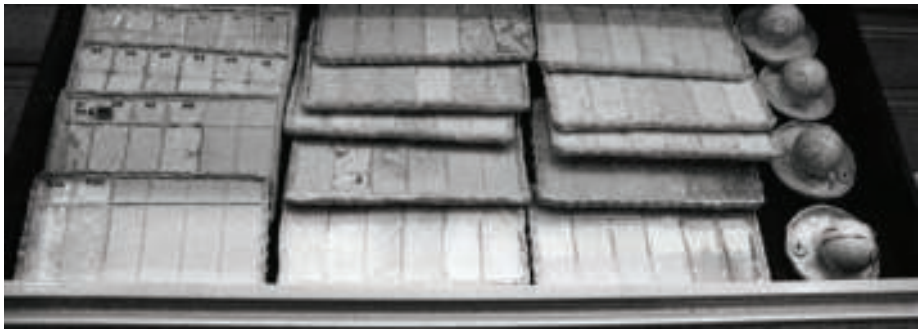

Figure 10: Several of Malone's test glazes, demonstrating the benefits of working with a specialist who can contribute years of practical experience and knowledge. [Source: Photograph by the author]

questionable as the tiles could be wrongly perceived as structural elements. However, Weston (2003) argues that a rain-screen system allows permanent structural interiors and enlivened exteriors in the specific nature of materials, in which case the materiality becomes legible.

Understanding materials is an initial condition for architectural design (Weston, 2003: 198), relating to a time when building methods were based in traditional craft, details being designed by those with long-standing specialist material knowledge; 'let a material speak for itself; let it step undisguised in the shape and proportions found most suitable by experience and science' (Weston, 2003: 60). By collaborating with Malone, a ceramic specialist, early in the design process, the tile system was designed largely through ceramic exploration, giving the essence of glazed clay prominence in the final building. Therefore, the source and rawness of the clay are expressed in the finished tile, facilitating engagement with the overall surface. (Fig. 10)

3.3 Compatibility

Compatibility, the fit between an individual's inclinations and the environment, is vital to enable perception above the engagement threshold (Ulrich, 1991: 201-230). Deleuze and Guattari describe the need to establish a 'house', meaning a platform from which the outside world can be engaged with (Ballantyne, 2007: 49). As subjects of attention vary between people (Mallgrave, 2011: 155), many conditions are not compatible to all. Differences in compatibility result from the brain's composition of neural circuits created over a lifetime's experiences and encounters. However some conditions are universally compatible due to the way humans developed. This is due to biophilia, the innate affiliation for nature, originating from human evolution over millions of years in natural environments. It instils high compatibility with materials of a natural expression where 'the beauty of nature touches us as something great that goes beyond us' (Zumthor, 2010: 73).

The façade of Savile Row initially presents itself as a glossy modern material but a second glance reveals its soft earthy nature. This is due to the composition of the surface, described as the connection between structure and skin (Leatherbarrow, Mostafavi, 2005: 8), which demonstrates a strong relationship between the underlying ceramic form (structure) and glaze (skin). It is the compatibility with such natural materials that allows 'vision to penetrate their surfaces' (Pallasmaa, 2005: 31).

3.4 Body Memory: For Legibility and Compatibility

Body memory is integral to the processes of legibility and compatibility by involving the brain in recollecting, remembering and comparing previous experiences. 'What is completely new remains inaccessible' (Norberg-Schulz, 1968: 15). Zumthor (2010) describes memory as the deepest architectural experience which makes body memory, the feeling of memories, a vivid element of an engaged experience. Deleuze and Guattarri introduce 'the machine' concept, which suggests that effects depend on what has previously happened. When related to the experience of phenomena, feelings are evoked in relation to what has already been encountered. This is because the process of remembering activates the same neural pathways as the lived experience (Mallgrave, 2011). Biophilia, instinctive affiliation with nature, gives reason for the power of innate body memory in evoking strong feelings from natural materials.

Hence, there is enormous possibility to enhance engagement to the urban fabric using body memory to relate the dominant sense, vision, to the intimate sense, touch. It should be noted that Descartes saw vision as the most universal

and noble sense, although not separate from touch (Pallasmaa, 2005: 19). Crossovers exist in the brain between the realms of vision and touch. Hapticity can therefore be experienced from coherent visual stimuli, by a series of tactile associations in the body's memory (Mallgrave, 2011: 202-204). The ceramic façade's legibility and compatibility enable comprehensive visual perception which prompts a strong sense of engagement. Through innate body memory the brain processes the soft feel of clay, even though it has been altered into a solid form through firing (Rasmussen, 1962). Touch becomes an intimate and distant sense through its ability to be stimulated by vision. In this way the material becomes evident and the sensory experience is intensified, identifying that sensory engagement can be strengthened through a natural material palette. (Fig. 11)

This is vital at a time when 'the only sense that is fast enough to keep pace with the astounding increase of speed in the technological world is sight' (Pallasmaa, 2005: 21). Since 90% of information perceived is based on sight (Hegger, 2006: 12-13), the ability to engage at a distance provides opportunity for a sense of place to be achieved in spaces of visual dominance, without literal contact.

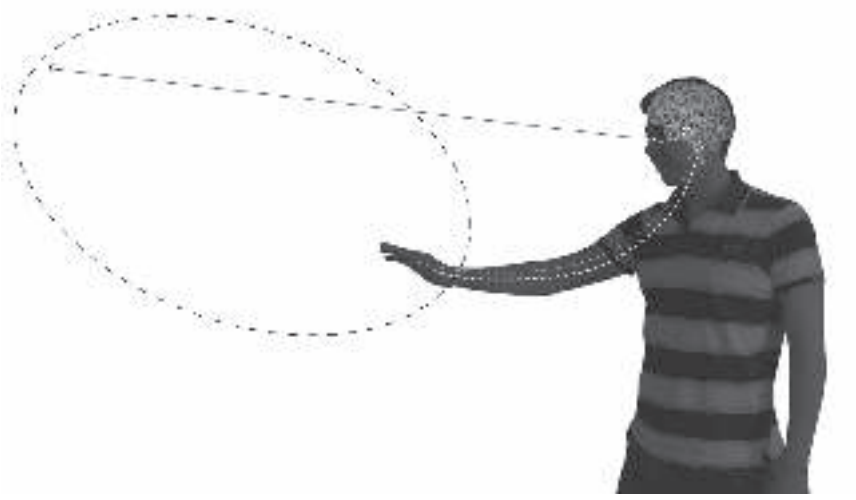

Figure 11: The fusion of vision and touch resulting in deep engagement through vision alone. Heightened engagement is enabled from a distance which is especially important in the modern 'occularcentric' world. [a] distant image is perceived legibly, [b] memory of related tactile sensation is activated, [c] mental image is strengthened through combination of touch with visual image, [d] vision becomes an intimate sense from a distance. [Source: Illustration by the author]

3.5 Unfamiliarity

Unfamiliarity is not essential for engagement. However, it enhances experience by allowing cognitive links to develop between different experiences, expanding body memory. The senses need to be stimulated by recognisable although not ordinary situations as they are 'aggressively seeking mechanisms' (Pallasmaa, 2005: 42) not passive receivers. Hence, seeking, the pursuit of novelty, is vital because the chemicals it stimulates generate animated feelings of engaged aliveness (Mallgrave, 2011: 191-193).

As a tiled surface, the façade has a repetitive pattern, suggesting reproduction which appears to deny uniqueness and unfamiliarity (Leatherbarrow, Mostafavi, 2005). However, it is the fabrication process that creates uniqueness. As hand-crafted pieces, none are exact replicas, resulting in distinctive individuality and unfamiliarity. In this way, the ceramic system uniquely heightens the expression of clay, a humble material, in comparison with a new modern material. A renewed reality can be achieved through use of an ordinary material in an unfamiliar manner to 'reveal the secret life which lies latent within' (Caruso, 2009: 78). The glaze has a crystalline appearance, developed by Malone in response to the particular clay form. Where the clay surface curves or bulges due to its handmade nature, the crystals develop differently, relating the tile surface intimately to its form. (Fig. 12)

The resulting three-dimensional nature of the surface means that the façade appears to move and shimmer in the light. These subtle differences, sense of uniqueness and surprise embodied in the façade sharpen the use of vision, empowering tactile involvement, and generating a cognitive state of soft fascination (Kaplan, 2001: 480-506). Therefore, the unfamiliarity of the façade heightens perception, increasing the desire to explore and thereby enhancing sensual engagement.

3.6 Resultant Sense of Place

Although the façade is highly engaging, a sense of place does not follow closely in this case study. (Fig. 13) Designed to be a landmark, the façade is referred to as a 'corner jewel' (Pey, 2011: 23). Engaging surfaces enable way-finding, resulting in a strengthened mental image of the city (Lynch, 1960). However, a sense of place lies deeper than simply recognising and comprehending direction. It incorporates a feeling of rootedness derived from sensing the essential qualities that make a place unique. (Fig. 14)

The façade was developed in response to the social and physical context. However, the fact that a rich palette of texture and colour was deemed important by EPR Architects to encapsulate the character (Pey, 2011) is not obviously

Figure 12: Sample glazes developed by Malone where crystalline patterns develop due to the combination of high firing and cooling temperatures, combining the glassy materials with the ceramic form. A curved test form explores the way the glaze changes in expression depending on the shape of the clay surface. [Source: Photograph by the author]

Figure 13: Image of the corner building, appearing as a landmark although lacking a sense of place. [Source: Pey (2011)]

Figure 14: Contextual palette of texture and colour creates an atmosphere which appears to be ignored by the new ceramic surface. [Source: Pey (2011)]

apparent, diminishing the sense of the locale. This illustrates Tzonis' concern about postmodern buildings where 'the re-introduction of historical knowledge and cultural issues was merely skin-deep' (Lefaivre, Tzonis, 2003: 10).

Day (2002) notes that as places are formed by the past, it is essential to understand the factors that make them, how people relate to them and what the underlying essence is. The genius loci is referenced by the façade objectively through facts, although it fails to materialise the essence of place atmospherically. Consequently, it does not feel specific to London, but as if it could be in almost any Western European city.

4. ORIENTATION THROUGH THE ESSENCE OF MATERIAL AND PLACE

Case Study: Peter Hayes' Ceramic Surfaces

For new materials to facilitate engagement with place, a sensual relationship must be evoked through appreciation of the genius loci. Past architectures demonstrate a sense of place through their rootedness in time, materials and skills then available. Traditionally these factors were not of concern (Hegger, 2006: 11) as styles developed in response to their particular context. Globalisation encourages materiality that is unspecific to place, which, Caruso (2009: 52) suggests, erodes that which vernacular architecture promotes in its responsiveness to the local situation. The current need to create a feeling of rootedness is often sought through recreation of past styles (Day, 2002), which built in modern materials have reduced meaning, masking authentic engagement with place. Norberg-Schulz (1980) notes that historic continuity is to be seen as a palette of place-bound characteristics, aligning with the regionalist movement prioritising particularities of a place's identity (Lefaivre, Tzonis, 2003).

Peter Hayes' sculpture is saturated with atmospheric meaning, expressing a rootedness in place through evocative resemblance of particular conditions and features accumulated over years of travel. The essence of a range of places and cultures merge to create a specific atmosphere. By working with first hand observations and existing threads, an impression of place is woven and style ceases to be a consideration. Hayes' work suggests an opportunity to reinvent a material's language, through new forms. Hayes' sculpture demonstrates that material additions to the urban fabric, derived through place-bound processes, can place us in the continuum of culture; 'finding the raw materials for architecture within the specific social and physical situation' (Caruso, 2009: 57). Through this process, an organic development of a site's narrative relates the new to the existing, evolving as part of the context.

Figure 15: Burnished surfaces are inspired by South African culture, expressing the locale through use of natural tools, materials and weathering and demonstrating the transient nature of Hayes' design process. [Source: Photograph by the author]

4.1 Expressing the Genius Loci

For a place to be understood it must be felt (Menin, 2003), facilitated through a sensitised relationship. 'Since our feelings are rooted in the past, our sensuous connections with a building must respect the process of remembering' (Zumthor, 2010). Here, the importance of body memory and embodied understanding are reinstated for a relationship with place and a state of nearness to be reached. Hayes creates a sense of nearness from afar firstly by enabling coherent perception, and secondly by bridging places and times separate from the present. The crafted surfaces uniquely present a 'deep sense of voicefulness [and]… admit a richness of record' (Lefaivre, Tzonis, 2003, 17), familiarising the past amidst the present. In this way the ceramic sculpture acts as a 'bridge' to a sense of place through emotive references to existing characteristics, heightening the sense of place perceived. For example, Hayes' study with the Basotho, a long-standing culture in South Africa, using basic methods and tools to create pots, inspired his technique for burnished surfaces. Hayes rubs drying clay with polished pebbles collected from the river, followed by the addition of earthy red clay slip. The resulting rich, smooth surface is physically related to the local area. (Fig. 15)

Memory and perceived order, in which time plays a structural role, are important for a sense of rootedness and engagement with place; 'as time loses its duration and its echo in the primordial past, man loses his sense of self as a historic being' (Pallasmaa, 2005: 53). Bergson (Holl, Pallasmaa, Perez-Gomez, 2007) uses the phrase 'durée real' to express lived time which is framed by traces of the everyday, relating phenomena to a particular place through its presence. Hayes exaggerates natural materials which are already inscribed with time (Weston, 2003) by enhancing the 'durée real' through the natural processes of weathering. After Hayes' porcelain and bone china clay forms have been biscuit fired, they are buried or sunk in the river Avon outside Hayes' Bath studio to age naturally. Polishing finishes the pieces, honing in on the marks nature has left. When the same technique is carried out at Hayes' Cornish studio, the salts in the sea water oxidise copper traces in the clay, leaving a green-blue hue. The surface becomes a visible product of the place.

4.2 Sensual Relationship with Place

Since a sense of place means a place sensed, the materiality must also stimulate sensual engagement to convey its expression of the genius loci. Hayes' sculpture responds to the phenomenological concept of experience, which looks to overcome the dualism of subject and object through sensual engagement. The theory deems that phenomena come into existence and begin to have a meaning through their sensory and cognitive experience. Heidegger's concept of 'techne' (1975, 156) suggests that technique enables the essence of place to come forth. Processes of fabrication, that allow the essence of the material to be sensed, drive Hayes' work. A similar technique is used for each sculpture although Hayes avoids a prescriptive method, resulting in uniqueness and, therefore, engagement. The expression of the hand through Hayes' personal crafting technique is particularly important today when individuality is often reduced to a collage of standardised parts.

Inspired by Japanese and Korean techniques, Hayes is interested in working with the clay's authenticity rather than additives, such as glazing. Delight is found in this genuine material expression, 'listen[ing] to the materials and uncover[ing] the hidden life of the amorphous' (Weston, 2003: 79). With Hayes' variation of the 'raku' technique, fire and water are dynamically combined to create a new dimension of excitement in the ceramic surfaces. Hot clay is plunged straight from the kiln into icy water and then wrapped in straw which determines the colour and texture of the surface, the result indistinguishable from the process. Joints and connections between parts are commonly seen as secondary elements, their patterns based on technical

Figure 16: Expression of time through the natural processes of weathering enables the surfaces to be more engaging and suggests a rootedness in place. A feature is made of the cracks that form at high temperatures by exploring what was initially a problem. [Source: Photograph by the author]

requirements (Hegger, 2006). However, they can instead feature dynamically to highlight a material's value and contribute to an overall, coherent image. Due to the heat of the kiln and the fragility of the clay used, Hayes' forms often crack into several pieces. As an aesthetic feature this is exaggerated with contrasting copper joints, later ground down to read as an integral part of the surface, conveying a sense of unity, separation, strength and fragility. (Fig. 16).

'We shall not reach the thing in itself until our thinking has first reached the thing as a thing' (Heidegger, 1975:165). Hayes' raw use of clay in a fairly natural state, facilitates legibility and compatibility, bringing the surfaces into cognitive comprehension. Therefore, seeing these material compositions engages the haptic realm in fusion with vision, resulting in a highly engaging and animated experience. The unfamiliarity generated by the process based method of fabrication enchants Hayes as well as the people engaging with his art. Resultant surfaces are deeply expressive, strengthening the sense of engagement through a desire to explore and probe further.

4.3 Place through Craft

Through natural processing and material expression, the surfaces are innately relatable. The resultant sense of heightened engagement is combined with the atmospheric communication of particular place-bound characteristics. In this way, Hayes' work is both engaging to the senses and contextually evocative, enabling a sense of place. Therefore, materiality can manifest the genius loci by 'gather[ing] the properties of the place and bring[ing] them close to man' (Norberg-Schulz, 1980: 23).

In connection with the bottom-up design process that drove the Critical Regionalism Movement to mediate global and local languages, it is interesting to note examples of architecture practices which base design around processes of fabrication, respecting the specialist knowledge of craftspeople. Heatherwick Studios believe that design should be governed by the physical process of making, giving responsibility to the craftspeople who have long-standing material knowledge. Herzog and de Meuron present unique essences of materials and striking combinations, although ironically demonstrate a close relationship with technology in order to engage (Leatherbarrow, Mostafavi, 2005: 214). Despite creation to improve fabrication, new building technologies often reduce the level of engagement with an experience through a lack of richness in material quality, instead focusing on their assembly.

5. CONCLUSION

Sensory realism enables architecture to become re-engaging, transforming a city of alienation into a city of participation (Pallasmaa, 2005: 71). Through coherent visual perception, the paper demonstrates that the intimacy of touch can be evoked. In this way materials can engage from a distance, as exhibited by the ceramic façade of Savile Row.e', its unique essence must be sensed atmospherically, as indicated by Hayes' sculptural work.

Sculpture and art are actively experienced by the public, proving not only their importance, but also scarcity in commonplace experiences. Throughout this paper, it becomes clear that if everyday material surfaces were treated similarly, considered with care and in terms of their effects on people, inhabitants would acquire a stronger relationship with their locale. To illustrate this point, the Welsh town of Cwmbran, with its uninspiring, bleak built fabric, illustrates the way people can be negatively affected by their everyday surroundings. Despite being inhabited from Neolithic to Roman ages, the predominantly concrete materiality offers little to suggest deeper roots than the mid-twentieth century. Anti-social behaviour is rife and graffiti prevalent on these trivially valued, commonly composed materials. The power with which material can unintentionally be isolating is exposed. (Fig. 17)

There is potential to reverse this through the creation of locally specific, engaging surfaces, even when in concrete. Use of local aggregates would reveal the specificity of Cwmbran, while expressing a natural grain which promotes engagement. Crafted by local tradesmen with long-standing material knowledge, inspiration could be taken from techniques or material expressions exhibited in ages gone by. This holistic process could re-kindle engagement, a sense of place and respect for the town as an important local entity.

Figure 17: An experience of Cwmbran is fairly mundane. Surfaces are generally monotonous, appearing to have been designed with little consideration of enriching human experience. A small part of the town centre has been designed more carefully in terms of its materials and fountain feature. It is frequently inhabited and there are few signs of graffiti illustrating the importance of carefully crafted new additions, to reveal the essence of place and evoke feelings of rootedness. [Source: http://www.skyscrapercity.com/archive/index.php/t-501265-p-10.html]

In this existentialist argument for place, the public realm, the everyday urban experience is crucial in the way that it touches such a large proportion of the city's inhabitants. Through manipulation of public realm materiality, a sense of place can be conveyed on passing through the city. The journey and context take priority over the destination and any technological distractions, building on the idea of a 'continuous derive' (Coverley, 2010: 84). Dwelling in this sense of dissolution, where people pay attention to and resonate with their surroundings, results in a strong sense of place.

The phenomenological design premise researched in this paper highlights the needs of the body to be sensually stimulated and the brain to perceive phenomena as legible, compatible and unfamiliar. Often emphasis is placed on formal design elements at the expense of the sensory, providing for the needs

Figure 18: The Chapel of Reconciliation was designed with respect to the physical and historical context by Berlin Architects Reitermann and Sassenroth, and constructed by the local mud-building expert Rauch. The raw state of materials, structural and atmospheric, deeply engages inhabitants. The 30cm thick rammed earth walls visibly comprise local clay and pieces of stone and glass from the rubble of the previous church. The journey inwards is defined by materiality; the inner space between permeable timber vertices and solid earth wall is penetrated by streaks of light and a gentle breeze, creating a sense of reflection. [Source: Photograph by the author]

Figure 19: Coexistence of the local and global builds on the importance placed on the locale, meanwhile incorporating rather than disregarding the wider context. This enables people to be in connection with multiple places through communicative media, travel and thought, while maintaining a strong relationship with the present place. [Source: Illustration by the author]

of the body objectively but failing to involve it subjectively. A bond must be created with place that goes beyond the physical use of the space, offering a new approach to functionality. Materiality, through its process of production, can become a tool to awaken a sense of place, enabling experience of the genius loci in a tangible manner. This is exemplified by Berlin's Chapel of Reconciliation which commemorates its particular essence of place through site and material. Local materials in a natural state were composed by local architects and specialist builders to create a sensuous, engaging and meaningful atmosphere. (Fig. 18)

Although writers such as Pallasmaa favour the locale over the global, the concept of regionalism suggests that a sense of place should not be in isolation of the wider context. Mumford writes of the necessity for interchange between the local and wider scenes (Lefaivre, Tzonis, 2003), developing the argument for place in the modern world. Focus on the distinct identity of place must, therefore, be incorporated into the world's interconnected presence. This enables people to be connected to their locale while in technological contact with other places, for example through travel, the internet and mobile phones. The desire to enrich materiality moves away from the mutual exclusivity of the physical and technological layers of city experience, towards their coexistence. (Fig. 19)

In conclusion, this can be achieved through the holistic processes in which locally expressive and engaging materiality is created. Incorporating the essence of place into an engaging material surface is not a nostalgic attachment to the past. Rather, by ingraining a sense of rootedness in everyday experiences, the means of the place to deal with changing realities is redefined.

REFERENCES

AUGE, M. (2009) 'Non-Place: An Introduction to Supermodernity'. Verso.

BALLANTYNE, A. (2007) 'Deleuze and Guattari for architects'. Routledge.

BARTLETT, P. F. (2005) 'Urban Place: Reconnecting with the Natural World'. The MIT Press.

BERMANN, M., JONIDES, J., KAPLAN, S. (2008) 'The Cognitive benefits of Interacting with Nature', Psychological Science 19, pp. 1207-1212. [Online] Available from http://dx.doi.org/10.1111/j.1467-9280.2008.02225.x. [Accessed 23 March 2014]

BLAKEMORE, C. (1977) 'Mechanics of the Mind'. Cambridge University Press.

CARUSO, A. (2009) 'The Feeling of Things'. Ediciones Poligrafa.

COVERLEY, M. (2010) 'Psychogeography'. Oldcastle Books.

DAY, C. (2003) 'Places of the Soul'. Routledge. 2nd edition.

DAY, C. (2002) 'Spirit and Place'. Routledge. 1st edition.

DERNIE, D. Material Imagination. Stable URL: http://www.westminster.ac.uk/about-us/our-people/directory/dernie-david

EBERHARD, J. P. (2008) 'Brain Landscape: The Coexistence of Neuroscience and Architecture'. Oxford University Press.

HALLIWELL, E. Mindfulness Report, British Mental Health Foundation. Stable URL: http://www.livingmindfully.co.uk/downloads/Mindfulness_Report.pdf

HEATHERWICK STUDIOS (2012) Designing the Extraordinary. Victoria and Albert Museum, London.

HEGGER, M. (2006) 'Basic Materials'. Birkhäuser Architecture.

HEIDEGGER, M. (1975) 'Poetry, Language, Thought'. Harper Perennial.

HOLL, S., PALLASMAA, J., PEREZ-GOMEZ, A. (2007) 'Questions of Perception: Phenomenology of Architecture'. William K Stout Publishers.

HOLLOWAY, L. AND HUBBARD, P. (2001) 'People and Place: the extraordinary geographies of everyday life'. Pearson.

KAPLAN, S. (2001) 'Meditation, Restoration and Management of Mental Fatigue', Environment and Behaviour 33(4), pp. 480-506. [Online] Available from http://dx.doi.org/10.1177/00139160121973106 [Accessed April 2014].

LEATHERBARROW, D. AND MOSTAFAVI, M. (2005) 'Surface Architecture'. The MIT Press.

LEFAIVRE, L. AND TZONIS, A. (2003) 'Critical Regionalism'. Prestel Publishing.

LYNCH, K. (1960) 'The Image of the City'. The MIT Press.

MALLGRAVE, H. F. (2011) 'The Architects Brain: Neuroscience, Creativity and Architecture'. Wiley-Blackwell.

MALNAR, J. M. AND VODVARKA, F. (2004) 'Sensory Design'. University of Minnesota.

MENIN, S. (2003) 'Constructing Place: Mind and Matter'. Routledge.

MITCHELL, W. J. (1997) 'City of Bits: Space, Place and the Infobahn'. The MIT Press.

NORBERG-SCHULZ, C. (1980) 'Genius Loci: Towards a Phenomenology of Architecture'. Rizzoli International Publications.

NORBERG-SCHULZ, C. (1968) 'Intentions in Architecture'. The MIT Press.

PALLASMAA, J. (2005) 'The Eyes of the Skin: Architecture and the Senses'. Academy Press. 2nd edition.

Penfield, W. (1978) 'The Mystery of the Mind: A Critical Study of Consciousness and the Human Brain'. Princeton University Press.

PEY, S. (2011) 'Design and Access Statement, Savile Row/Conduit Street', EPR Architects. • PUDDICOMBE, A. Ted Talk: All it takes is ten mindful minutes. Stable URL:http://www.ted.com/talks/andy_puddicombe_all_it_takes_is_10_mindful_minutes.html

RASMUSSEN, S. E. (1962) 'Experiencing Architecture'. The MIT Press. 2nd edition.

RYKWERT, J. (2000) 'The Seduction of Place'. Oxford University Press.

Schwarzer, M. (2004) 'Zoomscape'. Princetown Architectural Press.

SHARR, A. (2007) 'Heidegger for Architects'. Routledge.

STEG L., VAN DER BERG A. E., DE GROOT J. I. M. (2012) 'Environmental Psychology'. Wiley-Blackwell.

THOMPSON, I. H. (2009) 'Rethinking Landscape'. Routledge.

WESTON, R. (2003) 'Materials, Form and Architecture'. Yale University Press.

ZUMTHOR, P. (2010) 'Thinking Architecture'. Birkhäuser Architecture. 3rd edition.

ULRICH, et al. (1991) 'Stress Recovery during exposure to natural and urban environments', Journal of Environmental Psychology 11, pp.201-230. [Online]. Available from http://dx.doi.org/10.1016/S0272-4944(05)80184-7. [Accessed on 24 May 2014]