Makers' voices: four themes for material literacy in contemporary sculpture

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Material has come to be acknowledged as an important source of political and social meaning due to recent philosophical debates concerning "material agency" (Gell 1998; Latour 2005; Coole and Frost 2010; Bennett 2010; Behar 2016). This has clear implications for art: it explores the effects material has on human behaviour and vice versa. In contrast, art criticism commonly positions material as secondary to metaphysical interpretation. Critics such as Krauss (1979) and Lippard (1997; Lippard and Chandler 2015) avoid analysing material's multiple sources of information. As a result, we as viewers are ill-equipped to examine the meanings it embodies. This paper presents sculpture as an appropriate framework from which to engage with this problem, as it remains a discipline which creatively explores material in three-dimensional space (Tucker 1981). Four themes have been developed from the analysis of qualitative interviews carried out with eight emerging UK sculptors in order to work towards "material literacy" (Lehmann 2016) in contemporary art practice.

Keywords: sculpture; material; agency; meaning; literacy; practice

Introduction

Material is commonly positioned as a subordinate in art criticism; it is rarely analysed as a significant or multifaceted contributor to meaning. Artworks are seldom treated as though they are embedded in the material world. This approach has established a void between makers of art and wider understanding of it. At best, criticism uses material as a portal into metaphysical discussion and at worst, material is viewed as "the antithesis of intellectuality" (Lange-Berndt 2015, 12). Inclusion of material has, however, become increasingly pertinent as new philosophical models of "material agency" have highlighted the impact it has on human behaviour and its capacity to investigate and question political structures (Gell 1998; Latour 2005; Coole and Frost 2010; Bennett 2010; Behar 2016).

Art historian Ann-Sophie Lehmann (2016, 14) is an advocate for "material literacy," which she defines as the ability to "express oneself clearly about materials' qualities, histories, and affordances..." Her call is reflected both internally and externally to visual art: archeology for example, which has always been material-centric, postulates that cultural production and even human cognition are driven by material qualities (Kuijpers 2019). Art historians are similarly observing the ways in which the physical characteristics and cultural perceptions of material influence the artwork (Shannon 2009; Lipinska 2012). In contemporary art practice, material analysis is occurring across many disciplines, including explorations in digital media as journalist Ben Eastham (2017, 42) suggests "the most important works being made today seek to reconcile the digital and physical spheres..."

Though material exploration is expanding across multiple artistic and scientific disciplines, I approach this discussion from the framework of sculpture for several reasons. Sculpture is widely understood to be a mediation on our relationship with

material, corporealised in an end product (Ellegood 2009). Boundaries surrounding art are blurred as sculpture and non-art objects both exist three-dimensionally (Fried 1967). Sculpture "penetrates the inhabited world" (Scott and Tucker 2006, 803). In this view, developing material literacy is timely for sculptural criticism, since materials are not often investigated with a rigor which identifies their multiple contributions to the meaning of three-dimensional works (Lehmann 2012).

This paper argues that contemporary sculptors can contribute to the establishment of material literacy via the formulation of a new critical framework which offers a nuanced approach to material. This is a necessary condition in order to access sculpture's meaning in its entirety. I first discuss theories of "material agency" since the 1990s, demonstrating the various ways in which it embodies meaning. This is compared with art criticism since the 1960s, exploring the criteria through which sculpture has been analysed in recent history and identifying areas where material discussion is lacking. Particular attention is paid to texts by Rosalind Krauss (1979) and Lucy Lippard (1997). Acknowledging the problems which emerge, I present four themes which have been developed from the analysis of interviews with eight artists: "artist as prospector," "pragmatism and vibrancy," "material as information carrier," and "conceptual access."

Defining "material"

First, it is necessary to briefly explore the terms "material" and "materiality" and to specify their applications in this paper, since their definitions shift between disciplines.

In their call to interrogate the term "material," Petra Lange-Berndt (2015, 12) notes it is generally understood as a substance which is subject to alteration and Monika Wagner (2015, 26) observes that traditionally, "material, unlike matter, refers only to natural and artificial substances intended for further treatment." "Material" specifies a

substance with plastic expectancy which recedes into the object. Georges Didi-Huberman (2015, 49) suggests that "material" should not be applied only to those which submit to form, but rather expand to incorporate the variety of different functions that all substances may perform. This implies that "material" is meaningful in its raw form regardless of artistic intervention.

In cultural studies, Georg Lukács (as quoted in Brown 2010, 52) understands "materiality" as the "character of things as things," which alludes to the complexities of an object's physical presence. Bill Brown (2010, 49) points instead towards "different dimensions of experience" which deploys the term as a bodily material encounter. Deviation between these two ideas demonstrates that "materiality" cannot be easily understood, revealing tension between physical qualities and subjective experience.

In anthropology, "materiality" is linked to social and political considerations. Daniel Miller (2005, 2) defines it as "the driving force behind humanity's attempts to transform the world in order to make it accord with beliefs about how the world should be." Here, "materiality" is an embodiment of idealism. Lynn Meskell (2005) similarly implicates "materiality" as a presence of power, and Michael Rowlands (2005) deploys it as a framework which illuminates hierarchical arrangements and hidden power structures. "Materiality" may therefore be defined as a cultural attitude to material which can impart knowledge about how a society views the world.

Exploring these definitions demonstrates the complexities of identifying sources of material meaning. "Material" may imply a substance intended for creative processing, yet it can also refer to its raw form, detached from relationships with humans. In this paper, "material" is understood as all substances, embedded with meaning prior to their role in art making. "Materiality" can denote the physical qualities of an object; the experience of bodily reality; or manifestations of social power structures. "Materiality" in this paper is not limited to the subjective experience of material or its physical behaviour, and includes all tangible and intangible meanings which crystallise within it.

Theories of material

Historically, material is viewed as submissive to human intention (Wagner 2015). Since the mid 1990s this structure has been challenged (Gell 1998; Latour 2005; Coole and Frost 2010; Bennett 2010; Behar 2016). Debates surrounding "material agency" in anthropology, sociology and philosophy present a radical new way of comprehending our physical encounters, suggesting that materials are not secondary to human intention but active participants in shaping social behaviour. Material agency presents a new pathway towards understanding our impact upon the world, and the way the world in turn impacts upon us. Exactly how this manifests is contested, yet there is agreement that the division between human and material intention is blurred, implicating the importance of material literacy in visual art.

Material agency crystallised as a concept when objects began to be understood as active participants in human behaviours. Alfred Gell (1998, 3) identifies the artwork as integrated within a network of social relations:

...art objects [...] are produced and circulated in the external physical and social world. This production and circulation has to be sustained by certain social processes of an objective kind, which are connected to other social processes (exchange, politics, religion, kinship, etc.).

Art objects are not passively encountered, but exercise their own influence on the social processes in which they are entangled.

Presenting Actor-Network Theory (ANT), Bruno Latour (2005, 71) argues that *all* objects are capable of affecting social relations: humans should not be positioned as

leaders of social action, but as collaborators with a variety of other human and nonhuman "actants." Objects allow us to carry out our actions and as such, they are vital to the exertion of human will. ANT understands society as being affected by objects, and traces them through their encounters with humans.

Whilst Latour lists objects and their effects, Gell (1997, 29) accommodates material's impact upon making processes, acknowledging instances in which "Material inherently dictates to [the] artist the form it assumes." Gell's vision of agentic material is identifiable in "new materialism," a school of thought which argues that "foregrounding material factors and reconfiguring our very understanding of matter are prerequisites for any plausible account of coexistence and its conditions in the twentyfirst century." (Coole and Frost 2010, 2). As our experiences are rooted in the material world, any study of its nature must take materials, as well as objects, into account.

Philosopher Jane Bennett argues that agency may be defined as an intrinsic quality of material itself, and thereby positions human and material intention as equal (Bennett 2010). In Bennett's "assemblage" model, agency is not limited to certain actors, but distributed evenly across all of the materials involved. Bennett's example is a power grid: machinery, grid workers, kitchen appliances, electric current and weather each complex "assemblages" themselves - all interact to produce unexpected effects. Similarly to Gell's approach, this framework enables us to view objects simultaneously as complete *and* complex constructions of different material parts.

Echoing anthropological approaches explored previously (Miller 2005; Meskell 2005; Rowlands 2005), artist Katherine Behar (2016) examines power through the lens of material, arguing that some humans have always been treated as or controlled by objects as enactments of oppression. Behar explains that "this world of tools, there for the using, is the world to which women, people of colour, and the poor have been

assigned under patriarchy, colonialism, and capitalism throughout history" (7). In order to disrupt this, Behar places material in the centre of political discourses as a means of critiquing objectification.

Theories of material agency are important for two reasons. Firstly, they call artistic intention into question. By deconstructing anthropocentric arrangements of intention, the artwork is understood as the result of a series of complicated encounters between various actors. Artist Mark Cypher (2017) explores his practice from the framework of ANT, discovering that his tools and equipment operate beyond his intention and exert their own agency on the finished piece. As such, material must be acknowledged in critical analysis in order to reflect its influence. Secondly, material agency demonstrates that meaning may also emanate from the political and social associations which material carries. Analysis from this perspective occurs in art history: Joshua Shannon (2009, 107) recognises that Robert Rauschenberg's use of found detritus in his work "bring in particular kinds of signs replete with their own specific [...] associations," whilst Donald Judd's galvanized steel and its associated processes conjure "not the manual tinkering actually undertaken to make it, but rather that of disembodied mass-production" (165-166). By foregrounding material's impact, Shannon discerns new sources of information which contribute to critical meaning, locating sculpture within social networks.

Adopting material agency in visual art criticism may enable us to increase our sensitivity to materials and objects, and our empathy towards other human bodies (Coole and Frost 2010; Bennett 2010; Behar 2016). As such, both material's physical behaviour and social connotations must be rigorously explored in order to fully reflect meaning.

Material in art criticism

Material experimentation in art practice was ongoing throughout the twentieth century (Collins 2010), yet Lehmann (2012, 11) notes that art criticism "offers ample theories about the aesthetics, style, iconography, perception, reception, collection and so on of artworks but little about their materials." Critics such as Clive Bell (1949) and, later, Clement Greenberg (1986) established material's secondary position by asserting a separation between art and the physical realm. Lehmann's observation is evident in Greenberg's rhetoric, as Hope Mauzerall (1998, 81) states: "Matter, in this tradition is the stuff of this world; form belongs to a higher, abstract realm that transcends worldly materiality." Here, we see Greenberg's firm distinction between material and the metaphysical.

This division was not strictly enacted by all critics, and material analysis does occur in reflections of modern sculpture. Alan Bowness (1965), for example, explores Henry Moore's "truth to material" framework, which emphasises material's characteristics and affordances, promoting the importance of appreciating its physical properties. The broader "Western doctrine of 'truth to materials" is, indeed, included in Gell's (1998, 30) discussion of material agency. Bowness observes Moore's "insistence on preserving the hard, concentrated quality of stone right through to the finished work" (118). Echoes of this notion occur throughout sculptural practice: William Tucker (1981, 51) observes of Constantin Brancusi's work that "articulation of form into parts was not imposed by style or decoration, or by an emphatic use of tools, but inherent in the material itself!" Artist Susan Hiller (2015, 54), however, is critical of "truth to material," detailing contradictions as Moore paradoxically celebrates artistic domination of material and pays little attention to their cultural genealogies. Though "truth to materials" contributes to material literacy, it was limited to examining material qualities whilst overlooking other nuanced sources of meaning.

Two of the most prominent voices spanning art's expansion during the 1960s and 70s were Rosalind Krauss (1979) and Lucy Lippard (1997; Lippard and Chandler 2015). Examination of these two critics' work is particularly pertinent, as both narrate visual art's shift through the "expanded field." Though both account for material in some manner, I argue that this does not venture beyond brief acknowledgement, which is symptomatic of a deeper rooted lack of material literacy.

Despite the opening of new material possibilities (Bowness 1965), postmodernist critics enforced hierarchical Modernist frameworks. Krauss (1979, 33) describes a new malleability of the term "sculpture" as it is now expected to include materials that it did not before:

[..]. "sculpture" began to be piles of thread waste on the floor, or sawed redwood timbers rolled into the gallery, or tons of earth excavated from the desert, or stockades of logs surrounded by firepits, the word sculpture became harder to pronounce - but not really that much harder.

She asserts that formal qualities of the discipline remain evident, though they have been obscured by material.

Krauss (1979, 33) calls for fixing sculpture's definition to accommodate inconvenient materials, explaining that the discipline retains "its own set of rules, which, though they can be applied to a variety of situations, are not themselves open to very much change." In Krauss' view, new materials are forcing sculpture to perform an uncomfortable stretching which is alleviated by anchoring formal criteria.

Krauss (1979, 43) recognises her own dismissal of materials:

[...] it is obvious that the logic of space of postmodernist practice is no longer organized around the definition of a given medium on the grounds of material, or, for that matter, the perception of material. It is organized instead through the universe of terms that are felt to be in opposition within a cultural situation.

Here, Krauss concludes that sculpture can no longer be categorised according to which material it is or is not constructed from, but that it must be understood as emanating from specific forms. In part, this claim is solid due to blurring of disciplinary boundaries advanced by movements such as Cubism, initiated partly by material experimentation (Tucker 1981). However, Krauss argues that because the disciplines were previously defined by materials, further analysis of them offers no useful progression. Theories of material agency explored previously in this article, however, suggest incorporating analysis of its social genealogy or political associations. Rather than initiating a critical break which sought meaning in "timber" or "thread waste" from an anthropological perspective, Krauss continues to abide by form as a primary critical source and removes materials from intellectual discussion.

Lucy Lippard traced the democratisation of visual art, and her criticism emphasises action and concept rather than product. She is similarly overt in her dismissal of materials, which she justifies as a necessary break in order to usher in a new set of values. Lippard's prioritisation of thinking as a primary mode of production implicates the "dematerialization" of the art object (Lippard and Chandler 2015). Lippard (1997, 6) states: "It isn't a matter of how much materiality a work has, but what the artist is doing with it." As observed previously, "materiality" may also pertain to anthropological frameworks (Miller 2005) which may have more fully exposed visual art's shift towards social engagement. Whilst seeking to dismantle hierarchical arrangements of art and life, Lippard avoided interrogating material's contribution and extended its submissive status. Materials do impact conceptual art, despite arguments to the contrary. Lippard (1997, vii) states that "the material form is secondary, lightweight, ephemeral, cheap, unpretentious and/or dematerialized." Her choice of adjectives passes on significant information about art making through the lens of material, and new materialist critics would suggest that these words illuminate the socio-economic situations in which artists operate. As such, we see a new investment in the everyday, using "cheap" and "unpretentious" material to promote democratic access. Lippard also insists, however, that these materials are "secondary" and "dematerialized." Further consideration of their contexts and meanings outside of conceptual art is denied.

Theories of material agency expose a discrepancy in Lippard's overt rejection of material. Latour (2005) argues that all human behaviour is enacted via material objects; Coole and Frost (2010) tell us that any understanding of society must consider how things materialise around us; and Behar (2016) insists that analysis of social inequalities must be enacted via material participation. This is indeed reflected in the practices of artists such as Robert Morris (1993, 46), who states: "investigations move from the making of things to the making of material itself." Artists were overtly linking their actions to material encounters, yet Lippard's narrative overlooks this.

In contemporary criticism, materials in sculpture remain largely unacknowledged for their contribution to meaning. Krauss' and Lippard's avoidance of them is evident in recent surveys of contemporary sculpture. Anna Moszynska (2013, 10) celebrates loss of the plinth, for example, stating that art "was no longer isolated, physically or literally, from the everyday world." This conforms to Krauss' emphasis of formal criteria: though sculpture's movement onto the floor did signify new social entanglement, this shift can also be attributed to new material experimentation, which remains unmentioned. Krauss' and Lippard's approaches to form and concept remain integral to current understanding of visual art. The concern here is that the vocabulary necessary to analyse material is absent and as a result, the meanings inherent in its artistic applications continue to be disregarded. Philosophical approaches to agency clearly evidence the importance of taking material into account: materials do not readily submit to intention; have unpredictable effects on our environment; and are the means by which we impact the world around us with their capacity to code social structures such as gender, race and class. Only by dealing with them directly can we fully understand and critique both visual art and social hierarchies. This is something that cannot be developed from existing critical models, since materially literate vocabulary is limited. The solution lies in practice-based investigations of material, which unfold in artistic experience.

Four themes for material literacy

Responding to the identified need for a new vocabulary towards material literacy, the following analysis of eight interviews captures artists' voices in writing. This uncovers four different themes which construct a critical framework for decoding different sources of material meaning.

First, it is necessary to detail the intention behind the interview methodology. With roots in social sciences, interviewing requires acknowledgement that participants are embedded in broader contexts than the scope of the research (Bazeley 2013). As such, it opens access to individual experiences outside art practice which may be influenced by material. This acts upon Gell's (1998) call to locate art within wider social networks. Interpreting physical encounters verbally captures the nuanced ways artists use materials which may not be reflected in art criticism, offering more than a visual analysis of each sculptor's practice. Interviewing addresses the tension which emerges when expressing material in text: when we write about it, it recedes into intellectual thought (Coole and Frost 2010, 3). This is evident in artist Paul Carter's (2004, xi) statement that writers "lack access to the creative process and, more fundamentally, they lack the vocabulary to explicate its intellectual character." Integrating verbalised language generates new vocabulary which is led by makers, accessing "the creative world of process and method, of influences and stimuli, of materials and ideas, watching as the raw material of thought takes visual form." (Harper and Moyer 2007). This allows for impulsive expression and illustrative anecdotes which may be translated into text.

The interviews were semi-structured, permitting unexpected tangents in conversation. They were audio recorded and transcribed. Content analysis began with a close reading, noting relevant sections of discussion. The sections were organised under notational headings, which were cross-referenced across the eight interviews in order to identify common themes. Together, these themes map patterns, agreements and oppositions between each artist's approach to materials. Many of the artists disagreed with one another, demonstrating spectrums and divergences which are not necessarily evident from an aesthetic comparison of their sculptures, divulging a richer understanding of material uses in contemporary sculpture.

Participating artists were selected according to three criteria. Firstly, they share a sensitivity to material: it is treated as an autonomous carrier of information and allowed to remain identifiable in their sculptures. Secondly, they belong to an emerging demographic, meaning that they are less likely to have their work fabricated and are more immersed in material experimentation. Lastly, each artist represents a dramatically different practice, working either intensively with a limited selection of materials, or rapidly with an array of different ones. Together, their intentions and values depict variation in sculptural practice.

Anna F.C. Smith recreates historic relics from materials which confront us with forgotten practices; Rebecca Molloy impulsively builds enlarged food, plants and body parts from plastic bottles and other detritus; Laura Yuile gathers substances from her urban surroundings which implicate human presence; Elly Thomas emphasises the importance of play, building organic forms from papiermâché; Jamie Fitzpatrick undermines power structures, replicating classical statues in wax and silicone; Dominique White emulates shipwrecks using materials which transmit Black histories; Olivia Bax recycles discarded paint and paper into looming sculptures; and Sarah Roberts' immersive installations direct our attention to the host of materials we are in contact with on a daily basis.

The four themes are designed to foreground core sources of meaning in material which may be broadly applied to a variety of artworks. They are "artist as prospector," "pragmatism and vibrancy," "material as information carrier," and "conceptual access."

Artist as prospector

Positioning artists as prospectors, we can perceive their experiences both encountering and gathering material resonating in their sculptures. Sociologist Richard Sennett (2008, 6) states that understanding making "requires a fuller, better understanding of the process by which people go about producing things..." As such, analysing prospecting behaviour precedes studio based engagement, acting upon Gell's (1998, 3) argument that art production is entangled with other processes: it uncovers art's connection to wider behavioural patterns, seeking to comprehend the social and political meanings that emerge when artists select particular materials. Prospecting sheds new light on historic sculpture: Helena Bonett (2015, 85) examines Barbara Hepworth's guarea wood carvings, asking "Who ordered the samples, how did the wood arrive and where was it stored?" This theme considers how artists come upon the materials they use, how they are physically acquired, and what this activity contributes to the meaning of the work.

Olivia Bax produces vast quantities of paper pulp to coat her large dusty blue or lemon yellow sculptures. In their final imposing, abstract forms, their origins are not immediately apparent, though the material's qualities are bared on their surfaces (fig. 1). Bax collects free newspapers to pulp as she travels around London. She buys discarded tins of household paint from hardware shops at discount prices. Her colour palette is restricted to shades that others do not want. These raw components are gathered as she moves through the city: the papers are equally available to the next train passenger as they are to her, and the paint is affordable for anyone with loose change in their pocket. Collection of material for her work is relatively democratic, which is articulated in her sculpture.

Laura Yuile also harvests materials from routine encounters. She uses dust, lint and soap which suggest bodily presence. Substances are gathered from public locations: gravel is poached from building sites; dust is hoovered from the floor of Westfield shopping centre; and lint is picked from communal tumble dryers (fig. 2). Their formlessness is interrupted by the use of rusted appliances and hard construction materials. Yuile's experiences charge the material with meaning, as they situate art making within daily occurrences.

While both artists use materials which are collected from worldly, habitual experiences, their sculptures appear formally dissimilar. Materials found in the urban landscape do not result in comparable aesthetics; they may refer to their origins or they

may not. What they have in common is a presence which locates each artist's practice within their social rituals, encouraging us to consider how materials are collected and subsequently transformed in the studio.

Anna F.C. Smith exhibits a different prospecting model. Materials do not reveal themselves to her from the lived environment but from her research. In a recent project, investigating her town's ceramic industry revealed the criminal practice of digging clay from public streets in order to source cheap material for pot-making. Smith ventured out one night to experience this herself, and mined enough clay to make a collection of traditional toby jugs (fig. 3). Textual research uncovers materials that are in close proximity, though they are obscured by modern life. Personally collecting them is crucial as it cultivates Smith's awareness that the material world is active and engaging.

Prospecting is located within environmental and ethical concerns, which are linked to the new materialist call to "live as earth" rather than on it (Bennett 2010, 111). Most of the interviewed artists stated their selections are influenced by a collective realisation that the environment is affected by the materials we produce and consume. Bax uses prospecting as a means of putting discarded materials to use; Yuile collects appliances which are destined for the landfill and Rebecca Molloy stuffs her sculptures with plastic bottles which would otherwise be thrown away (fig. 4). Viewing artists as active collectors of material reveals their values and we can contextualise sculpture - in parallel with the broader landscape of art practice - against the burgeoning awareness of environmental impact. This demonstrates material literacy in action.

Questioning artists' prospecting behaviour exposes the breadth of sculpture's processes of materialisation, laying the foundations of meaning before construction begins. Bax's newspapers and Yuile's gravel implicate shared experiences of traversing the urban landscape, whereas Smith's potholed clay unearths hidden materials. The "artist as prospector" theme reveals material's origins and encourages consideration of the maker's attitude towards consumption, production and sustainability.

Pragmatism and vibrancy

This theme presents a model which accommodates differing artistic approaches to material behaviour. "Pragmatism" denotes the practical considerations artists encounter which are often obscured by the end product. The term alludes to Richard Sennett's (2008, 286) philosophical framework for the decision-making involved in labour, and the search for meaning in "everyday, small acts." This may manifest in the acknowledgement and preservation of known characteristics, which is reflected in Morris' (1993) examination of material's literal properties, for example. Pragmatic artists are likely to view their work as the result of purposeful decision making. Conversely, "vibrancy" signifies an agentic idea of material which conceals unexpected qualities from the artist, necessitating an intuitive response. This term is taken from Bennett's (2010) extreme approach to material agency, evident in Francis Upritchard's (Griffiths and Upritchard 2018) articulation of her innovative balata rubber sculptures. As such, artists who subscribe to vibrancy view material as partially resistant to intention, and their work may be the product of accidental experimentation rather than concrete decisions. Application of these terms is not an attempt to place them in opposition, but to triangulate different attitudes in practice.

If there is an epitome of a vibrant approach, it is Sarah Roberts' proposition that all material is seductive and volatile. She creates environments of abundance: her installations - combining found, fabricated and handmade objects - encapsulate the viewer (fig. 5). Walls are coated with printed vinyl, floors are covered with coloured fish-tank gravel and galleries are filled with stacks of unexpected things. We are immersed in her provocative, temperamental world. Roberts relishes the points at which she relinquishes control of material, a primary source of meaning which she aligns with new materialist debates.

Jamie Fitzpatrick's sculptures draw from classical sculptural motifs, referencing soldiers on horseback, extravagant baroque wigs, and ruddy masculine faces (fig. 6). Rather than enduring marble, Fitzpatrick renders them in dripping wax and ragged silicone which are susceptible to damage and dirt. The clumsy surfaces, carrying traces of their violent making process, ridicule traditional power structures. Material and form both carry equal weighting in the work: the former is used to undermine the latter.

Though Fitzpatrick's work implies vibrancy based on his apparent engagement with material resistance, he does not view wax or silicone as responsive collaborators. Instead, most decisions are of an increasingly practical nature, emerging from the necessity of transporting large works across continents in shipping containers. Materials are selected due to their potential to trap gesture as well as to survive long journeys. Fitzpatrick's approach to material is pragmatic: he has a detailed understanding of which particular wax will provide which particular texture, or which silicone will be ragged enough for his intended aesthetic. If the sculptures appear materially agentic, it is not the product of vibrant exploration, but because he has selected the correct material (fig. 7).

Despite these two differing examples, pragmatism and vibrancy are not mutually exclusive: each participating artist exhibited a unique combination of the two. Olivia Bax works with paper pulp because it is lightweight, yet views her making process as a dynamic negotiation between herself and the material. Similarly to Fitzpatrick, Elly Thomas uses materials that attain an organic aesthetic, but acknowledges unforeseen results. Materials do not directly enact her intentions, but rather embody a vibrancy that is resistant to her control of them. Overlaps between pragmatism and vibrancy operate in "truth to materials," as the theme permits contradictions between artistic collaboration with and domination of material.

Sculptural production operates in the gap between material and artistic intention. The "pragmatism and vibrancy" theme demonstrates that material agency is not a comprehensive template for art practice, since use of material is as defined by practical decisions as it is by inherent resistance. Artists remain sensitive to both known characteristics and unanticipated responses.

Material as information carrier

This theme acts upon new materialist arguments that material embodies social and political meanings. The term "material as information carrier" is adapted from Wagner's (2015, 27) observation that material has "immaterial properties attributed to it." This operates on a more abstract level than materials' physical manifestations, addressing information which can be deduced from the associations they carry. Historian Aleksandra Lipińska's (2012, 106) analysis of alabaster during the sixteenth century demonstrates this, as the "beholder's visual or tactile perception of alabaster, in raw or artistic form, was reframed by 'learned cultural perception.'" Though there are clear overlaps, this is not the same as prospecting, as it relates to intangible connotations rather than the physical encounter.

Materials are charged by their social genealogies. Smith's keen awareness that her town's histories are absorbed by the clay beneath its streets is an example. Potholled clay is a recepticle, bringing unseen social histories of the ceramic industry into the gallery space, which speak of poverty alongside industrial production. Dominique White's approach is similar: her use of kaolin clay, which is saturated with histories of Black diaspora, transmits information to audiences by confronting them with embedded narratives. Confrontation is crucial to White, as she selects materials with haptic qualities. Sisal rope, for example, is present due to its nautical use, but also because it is tarred and dirties the skin when handled (fig. 8). History for White is corporealised in material; its traces are carried on our clothes and bodies.

Material may also absorb information from contemporary surroundings. Yuile's use of gravel is not exclusively due to its availability, but also because it relates strongly to its social context. Yuile's studio is situated in a developing site in London, which is endemic of rapid urban remodelling. By incorporating construction materials into her sculpture, she reflects the city as a monstrous building site, in constant competition with itself. The combination of industrial materials with ephemeral lint links the macrocosm of the city to the microcosm of personal rituals. This points towards the continual development of our lived environment; the social structures which are embodied within it; and the conditions of working as an artist in an expanding city.

Roberts' work is similarly charged with social narrative. Working with a wide array of handmade, fabricated or found objects and materials is a means of visually representing a physical world which is simultaneously fascinating and worryingly unpredictable (fig. 9). Roberts works with the foundry which manufactures Transport For London's metal street tiles, evidencing her interest in materials that steer us through public space. Handmade objects are installed alongside bizarre plastic ebay finds - noseplugs or cake tins - and their jarring associations symbolise an array of human behaviours (fig. 10).

The "material as information carrier" theme demonstrates that material has the capacity to gather information from historic and contemporary culture. Artists use this to broadcast the specifics of social contexts to their audiences. The world in its past and present is represented through associations we make with material, as in Yuile's construction gravel or Roberts' plastic relics. To understand the work, we must attune

ourselves to material's intangible connotations.

Conceptual access

This theme suggests that the hierarchical arrangement of the conceptual "idea" over physical "material" is not necessarily adopted by artists. Polarisation of form and material, as explored previously, has led to the assumption that any artist grappling with materials is unlikely to be invested in theoretical research and analysis (Lange-Berndt 2015).

Whilst some of the interviewed artists do indeed view theory as stunting due to its emphasis on metaphysics, this approach is not unanimous. Smith's and White's practices both approach conceptual research as capable of corporealising hidden materials. Roberts devours texts of all kinds in the same way she gathers objects, drawing from philosophy, sociology, science fiction and contemporary prose. In these cases, concept and material are not at odds but intrinsically woven together, unsettling the approaches taken by Greenberg, Krauss and Lippard.

Elly Thomas uses academic theories of play (particularly citing Brian Sutton Smith) to navigate her interactions with material, describing her sculptures as objects to explore the world with. Materials are selected for their particular qualities; stuffed silicone and fabric sculptures are tactile and invite touch, whilst papier-mâché is surprisingly robust and can withstand collision (fig. 11). Both provoke different physical responses. Adopting the language of play allows Thomas to understand her interactions, and the materials she uses embodies this by permitting contradictions. Theory is a tool for guidance and allows Thomas to operate dialectically between material and concept, each informing her treatment of the other.

The question of access is integral to this discussion. Concerns about who may or may not understand theoretical references emerge if we view material as a subordinate of concept. Fitzpatrick suggests that art's function is not to illustrate theory or concept, arguing that artworks which translate it too literally are reductive. White takes this point further, regarding artwork which relies too heavily on specific theories as inaccessible, even to those who have received artistic training. Though she draws from academic research, theory is never her primary generator of meaning, and material enables her to promote conceptual access. Materially focused practice has the potential to democratise critical participation if we understand material as opening accessible pathways towards meaning.

The "conceptual access" theme reveals that artists who demonstrate material sensitivity in their work may also conduct academic research, and there is no unanimous approach to the relationship between theoretical concept and physical material. The conditions which enable artists to weave theory and practice together are difficult to define and articulate, but it is possible to learn two things about the relationship between them in the context of materially focused sculpture. The first is that they do not mutually exclude one another, but operate dialectically: material can animate concept, and concept can enable artists to navigate the material world. The second is that material can facilitate democratic access to intellectual ideas. In this way, concept is not detachable from material, as it has been predominantly viewed by art criticism.

Conclusion: strategies for decoding material meaning

The artists interviewed for this study concurred that material is not commonly discussed by critics in a way which aptly communicates their use of it. This paper suggests that makers' voices provide the means to work towards a solution to this problem. The four themes - "artist as prospector," "pragmatism and vibrancy," "material as information carrier," and "conceptual access" - lay foundations for a critical framework which may be applied more broadly than these eight sculptural practices, and even beyond sculpture as a discipline.

"Artist as prospector" invites us to question how materials are encountered and collected. It enables audiences and critics to understand art making as deciphering a maze of social experiences outside the studio. Smith's gathering of clay, or Bax's collection of newspapers situate artists within the social fold, which enables a higher degree of empathy from audiences. This prompts us to interrogate the materialisation of all objects, which new materialist scholars view as a requirement of social analysis.

"Pragmatism and vibrancy" overlays practical decisions and intuitive responses to material. Artists may simultaneously view material as possessing agency, whilst making practical decisions relating to transportation and construction which otherwise configure material as static. It allows viewers to perceive art making as a complex yet comprehensible negotiation between human and material agency.

"Material as information carrier" foregrounds the narratives that material carries with it from historical and contemporary contexts. Yuile's use of gravel, for example, brings associations of construction sites, referencing London as a city under constant development. Decoding meaning from material via its social contexts is not limited to an informed few, but integrates audiences' own material encounters into critical analysis.

"Conceptual access" demonstrates that the relationship between concept and material is not polarised but dialectical. Thomas' use of play theories to navigate a material investigation of the world is an example of this. This theme also evidences that artists engaging with materials are not disengaged with theoretical research, and that material is not a subordinate of concept, and the two may promote access to one another.

The themes demarcate broad boundaries of discussion across the current ecology

of contemporary sculpture, allowing it to reach out towards other disciplines which are similarly engaged with material literacy. Together, they demonstrate that "material" is not a monolithic word which denotes a single tool at an artist's disposal, but a large and multifaceted field containing complex sources of meaning. Some of these sources relate to tangible physical qualities and others refer to material's intangible associations, linking it to social structures and environmental effects.

Throughout its long history to contemporary practice, sculpture is deeply implicated with material interactions. As we encounter it, from the Elgin marbles, to Phyllida Barlow's detritus works or Kara Walker's innovations with sugar, it offers many ways to engage with the world around us. While sculptural experience may principally be gained through sight and movement - by examining and moving around the object or in the installation - an understanding of its material qualities is crucial to fully comprehending its meaning as an individual object, as well as within the social network from which it is produced. Vocalising sculpture in material terms - it's mass, surfaces, fragments - has the capacity to uncover and illuminate social practices, hidden histories and new tactile encounters. I have argued that to promote material literacy to audiences, critics and artists, we must acknowledge the crucial effects material has on human behaviour; the complex ways in which it contributes to meaning; and the fundamental role it plays in the construction of contemporary sculpture.

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Figures

Figure 1. Bax, Olivia. *Mothership*. 2019; steel, chicken wire, paper, glue, paint, plaster; 273 x 250 x 180cm. Courtesy of the Artist and Ribot Gallery, Milan.

Figure 2. Sculpture work in Laura Yuile's studio. 2018. Photographer: Ellie Barrett. Courtesy of the artist.

Figure 3. Toby Jug sculptures in Anna F.C. Smith's studio. 2018. Photographer: Ellie Barrett. Courtesy of the artist.

Figure 4. Rebecca Molloy's sculpture in her studio. 2018. Photographer: Ellie Barrett. Courtesy of the artist.

Figure 5. Roberts, Sarah. *Fresh Meet.* 2017; text and interactive mixed media tableaux. Dimensions variable. Photographer: Karanjit Panesar. Courtesy of the artist.

Figure 6. Fitzpatrick, Jamie. *Your Wives are at Home Having Sex with Bart Simpson and Burt Reynolds*. 2017; mixed media; 340 x 152.5 x 122cm. Courtesy of the artist.

Figure 7. Fitzpatrick, Jamie. *Memorial to Sausage Politics* (detail). 2017; mixed media; 297 x 124 x 132cm. Courtesy of the artist.

Figure 8. Dominique White in her studio demonstrating sisal rope. 2018. Photographer: Ellie Barrett. Courtesy of the artist.

Figure 9. Inside Sarah Roberts' studio. 2018. Photographer: Ellie Barrett. Courtesy of the artist.

Figure 10. Roberts, Sarah. *Everything's Mustard*. 2019; mixed media tableaux; dimensions variable. Photographer: Jenna Foxton. Courtesy of the artist.

Figure 11. Elly Thomas' sculptures installed at the Rectory Projects. 2018. Photographer: Ellie Barrett. Courtesy of the artist.

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