

***Studies in Material Thinking*, Vol 1., No. 2.**
Guest Editors T.E. Rosenberg and D. Fairfax

A Foreword

The task of a journal editor's foreword is, to a large extent, to clarify what connects and ultimately collects the writings that constitute the volume. In this instance it is nigh impossible. There is no 'vinculum substantiale', no connecting thread of explanation, on which to string the beads of thought that make up this publication. Sure, the term 'material thinking' is addressed in each essay; but the term is awkward, defeats an agreeable definition and is conditioned by the different author's preoccupations. This awkwardness in the compound term is what, in the main, redeems it; recovers it from, and, stops it acting as a bracket that disciplines discourse and practices.

There is a common touchstone though – Paul Carter's book *Material Thinking: The Theory and Practice of Creative Research*. (Carter, 2004) This book appears in all of the contributor's bibliographies, was in many instances their initial source of inspiration, and as such it can be seen to act as a sort of common locus for all of the papers that are presented here. Indeed all of the contributions can be seen, at least in part if not whole, to be responses to what Carter describes as '*material thinking*' in that text.

Much referenced in many of the early submissions, and still evident in some of the papers published here, is Carter's notion of collaboration; collaboration both in the context of his own practice, but also as a necessary prerequisite for what he describes as '*material thinking*.' Carter invokes a metaphor used by Thomas de Quincey (referenced in de Freitas' paper) to explain his concept of collaboration. In de Quincey a collaborative project is likened to a series of journeys that can be plotted on a map. Where the plots of all of those individual or singular journeys that have been taken intersect, they gather, coagulate and ultimately produce a blot on the map; a thickening at those points of intersection between the various passages. The individual journeys are arrested in the swelling of this blot. Singularity in thought and practice is bloated in the gathering of a common, albeit fuzzy, 'determinator' – the punctum at the intersection of all of those different lines that mark the individual passages as they expand into a blot, or bubble, of consensual interest/thinking/practice. As he says

an apt image of remembering beyond nostalgia. It captures the way in which creative collaborations individually create undistinguishable blots. It also suggests how, collectively, their appearance makes possible a new conversation... And it is out of these implicated processes that a third apprehension emerges. When it emerges in this way, it constitutes material thinking. (Carter, 2004, p 5)

The "third apprehension" that is the collaborative project of this journal can in many ways be seen to have worked in completely the opposite direction to this. The blot can

be seen to have been there from the beginning in the readings of Carter's work. Although in the course of the writing, and in the subsequent editing, some of the clues that tethered the contributions to Carter's work have been erased, all of the papers can ultimately be seen to be responses to, developments of, or exceptions to what Carter has written. Indeed the entire project was initially conceived as a response to Carter's work from within a design context rather than an explicitly fine arts one. Carter's '*material thinking*' can in this sense be seen to act as a common locus (a locatable blot) in the larger project of articulating, presenting and making present, the practices and poetics of the thinking-in-making-of-the-useful (whether notional or actual use) of designing.

In the readings of Carter that have taken flight (*lignes de fuite*) in the individual contributor's papers presented here there are perhaps suggestions of shared motivation for the 'project', '*material thinking*,' and a common desiderata to write around the different permutations of matter and thinking; i.e. matters for thinking, thinking on matter, the matter through which we think and so on. Rather like a Moebius strip, the words thinking and matter turn over each other, but, yet, present a common and continuous surface.

In short, what is staked out in this blot of '*material thinking*,' and is discernible in the runs that have taken flight from it, is a desire to explore the material substrate of thinking, matter motivated in thinking and the material substantiation of thought (in all senses, hypostatization, production and ratification) in the 'creative project.'

Material thinking is performed in making – making thinking, thinking making... we again turn over words – commutative function - in this compound of interests afforded by the term *material thinking*. As Reiner Shurmann has suggested, following Heidegger, ever since the Greeks, and Aristotle in particular, this interrelationship between making and thinking has been absolutely inextricable:

In Aristotle the analysis of being, as well as that of knowledge, derives from the observation of change in material substance... what strikes the Greek mind in the classical age is that there is becoming, and first of all a becoming of which man is the author and master. Both metaphysics and logic derive from the astonishment before what our hands can make out of some material... The gist of Western philosophy is thus a metaphysics of handiwork (literally, of manufacture, of manu facere, making by hand). (Schurmann, 1990, p 99 – 104).

As some of the contributors have pointed out, and indeed as Carter himself points out in his Serres inspired analysis of the liquid, non-linear, indeterminate, or "colloidal" nature of the materiality of thought and practice, the "ontogenesis" of our existence can never be completely "grasped" by this hand of "productivist" metaphysics.

Indeed for de Freitas and Miles it is the liquidity of thinking that is important. De Freitas' paper explores the '*fundamental materiality and the inevitable imperfection of design and its processes*' through views from three datum. The first is a meta-view; a look at the epistemic, ideological regimes that effect design. De Freitas considers design as being in a 'transitional period' (although it seems to be two in her writing – one out of the modern and one out of the postmodern). In her paper she rehearses a postmodern critique of modernity in order to index the impossibility of perfection and the negative concomitance/outcome of an ideological volition for it. The second

datum is at the disciplinary level - generally about how design configures its discourses and practice(s). She writes about the problems of a 'young' discipline – design - that needs the (necessary) importation of theories from other disciplines. This, she writes, creates a collage-ing of discourses, for better or worse, that produces an un-disciplined discursive space for design. The third is at a micro level looking at the practice of designers on the ground (embodied practices (Merleau-Ponty)). Here she reflects on the imperfectability of design process and thinking; and considers how in embracing the imperfectable (using for instance, the alliotoric (im-perfection in process)) one may break with and move beyond the habitual (regularities) in designing and living.

Even while considering the imperfectability of design, de Freitas proposes that it is important to set out an axiological base for designing; in what design affords and in anticipating its "*phusis*". The tension between the imperfectability of a design programme and its value (and values) is important to de Freitas. She is particularly concerned with what an ethical programme for design may be in light of its 'imperfectability'. When the perfect is out of reach (eventually acknowledged in modernism), it can lead to unrequited desires and cause a constant disaffection with design outcomes; with a concomitant yen to consume and produce more. De Freitas invokes Buchanan's appeal to designers to look to produce designs that embody '*goodness, usefulness and the just*'. De Freitas, as she intends, leaves us with more questions than answers: She leaves us questioning an axiology that inevitably falls short of any absolute measure of goodness, usefulness, and judiciousness – being necessarily im-perfect. She leaves us considering what imperfect-able goodness, usefulness and justice may be? Is it also possible that she is proposing that it is necessary to have a utopian ideal even (and especially) if one acknowledges the imperfectability of design at all registers – a necessary quixotic construct. She is not interested in the Grand Utopia of modernism but a smaller, micro utopian vision to be instituted in and used as a conceit to drive an ethical programme of design.

In his contribution Miles is concerned with relationships of practices – practice to practice: of writing and designing, reading and making - and the new material relations of agent to action afforded by current and emergent technologies. In his paper, Miles first makes the case that writing is an embodied activity that has its own particular affordances and possibilities and material constraints. The way we actualize writing and what is actualized through the '*specific materialities of writing*' have historically relied on a concept, both literally and metaphorically, of '*permanent or semi-permanent textual inscriptions upon receptive surfaces*.' Miles is particularly critical of a kind of writing, that he believes was developed in the humanities and subsequently sanctioned and used as a validating model for all writing in academe that has this idea of certainty or permanence at its base; a writing that captures and relays thought (thinking concluded) but has none of the irregularities – hesitations, repetitions and deviations - of thinking-through (thinking in process).

In his paper Miles promotes a '*heuristic, poetic and iterative 'thinking-within'*' (not quite the thinking of thinking so much as the thinking of thought-as-writing) which not only aligns itself with design but is itself 'design thinking'. He is interested in what he calls '*the materiality of the digital*' and the performance of writing-thinking afforded by the 'digital'. It is particularly the non-linear constructions of hypertext he is interested in. He writes:

To write hypertext hypertextually is to regard the link as the performative and enabling connection of parts into mobile wholes. These wholes are constituted not only by the sum of their parts, their content nodes, but also by the variety of possible relations established between them by their link structures.

The link, the interval between ‘things’ traversed in the performance of connection through hypertextual writing is not merely a navigational tool - but acts in the structuring of thinking - ‘*generative, associative, metaphorical and inclusive.*’ What Miles is essentially writing about is an ‘*architecture of argument that lies between the affordances of writing-as-thinking and a thinking-through-writing.*’ He criticizes a model of writing that moves to establish a point (veridical writing pointing to a ‘truth’) and rather supports new opportunities for writing where thinking may be crystallized – not only in the sense of it becoming solid (solid formed in actions in the colloidal suspension) but also, and here importantly, having facets that allow thought to be multidimensional and open to further growth and connection.

Vaughan’s paper also explores ‘*material thinking as an embodied and placed [practice] an emplaced practice of local invention.*’ Referencing de Certeau, she understands place as a practiced space. Vaughan picks up on Carter’s idea that mythmaking is place-making, but she re-focuses the matter of material thinking; shifting concern ‘*from the space between material thinkers, to the space or location of material thinking.*’ She advances the idea that creative work is constituted in, and is a constituent of place; be it places of the past, present and future, physical and virtual, transparent and opaque. She contends that creative practice is inter-located – and the designer/artist performs as interlocutor in the inter-location of all the places of production and of reception of the work (ongoing). And, this inter-location is through the body.

Vaughan to some extent is seeking, in her idea of ‘place’, the ‘grounds’ of practice. She does, however, appreciate that practice is both about placing and displacing, and that creative thinking is articulated (literally jointed) in the restlessness and necessary arrest of place in, or as, physico-cognitive space. In order to illustrate the diasporic nature of practice she quotes Edward S. Casey:

‘Smooth space provides room for vagabondage, for wandering and drifting between regions instead of moving straight ahead between fixed points.’ (Casey, 1998, p. 304).

The problematic of place in creative practice – the diacritical relation of emplacing and displacing – is in Vaughan’s paper ‘incorporated’ within a subject (*self*); a subject formed in subjection to the arrest of place (‘*the lure of the local*’ (Lippard quoted by Vaughan), but in practice wresting itself from place; the subject in motion dis-places and thus reconfigures the subjects relation to space (and in practice, place) and throws it at times into doubt. She quotes Perce to illustrate this ‘doubtful space’:

‘I would like there to exist places that are stable, unmoving, intangible, untouched and almost untouchable, unchanging, deep rooted; places that might be points of reference, of departure of origin...Such places don’t exist, and it’s because they don’t exist that space becomes a question, ceases to be self-evident, ceases to be incorporated, ceases to be appropriated. Space is a doubt: I have constantly to mark it, to designate it. It’s never mine, never given to me, I have to conquer it... Space

melts like sand running through one's fingers. Time bears it away and leaves me only shapeless shreds. (Perec 1997, pp. 90-91)

Vaughan understands that thinking needs to 'dwell' in, and on, space; in other words inhabit space. But the (in)habits of space, the known, consistent and stable, necessarily 'melt like sand running through fingers' and give way to displacement and irregularity in the course of creative practice.

In a similar vein in his contribution Tonkinwise also focuses on Carter's analysis of the role of our shared, embodied, or "emplaced," 'tacit' knowledge of our "being-there-making" in the world in his analysis of the concept of "material thinking."

Largely complementary of Carter's project Tonkinwise suggests that Carter's ability to '*let the makingly knowing of each of his co-creative cases guide him*' and thus theorise '*from the ground up, rather than fitting making into this or that theoretical frame about research*' allows him to '*maintain a certain open-endedness or finitude in the poetics he develops.*' A poetics that he sees as being uniquely capable of furthering '*how we might begin to understand and convey the knowing involved when making: a non-nostalgic kairotic remembering forward or clairvoyance through manipules of the informe, humidly colloidal criss-crossed blots.*'

For Tonkinwise the open-endedness or finitude of this poetics of the "colloidal criss-crossed blots" of the materiality of thought and practice - and indeed the concept of finitude as he uses it should be understood in that sense in which Jean-Luc Nancy has used it to describe what he calls the "in-finitely finite" nature of the way in which of our world or existence comes into being or "*ek-sists*" (Nancy, 1998) - is by no means simply a more adequate, appropriate or "mimetologically" correct representation of the nature of the way in which our thought or existence is "materialized," produced, designed, or brought into being.

Indeed in complete opposition to many of those voices within the ever burgeoning discourse of "material" cultural studies, and those that take their influence from the "ontological materialism" of Deleuze and Guattari's work in particular - work that in many instances appears to be little else than an attempt to construct a more mimetically appropriate, up-to-date, or scientifically "correct" reflection of the "neurophenomenological" nature of cognition and the material "ontogenesis" of our existence, Tonkinwise suggests that that "pre-conceptual," "pre-theoretical," or 'tacit' knowledge that Carter attempts to described in his concept of '*material thinking*,' that knowledge that is implicit in all of those shared or collaborative practices through which we originally, or perhaps even more appropriately, "pre-originally," make, and inevitably make sense of, our world, can never simply be reduced to any of those models that we then retrospectively attempt to "re-present" them in terms of.

In difference to Carter though, who he sees as only parenthetically or limitedly recognizing the enormous epistemological and institutional significance of this question of our inability, or refusal, to recognize the inherent value of this form of knowledge that inheres in the very materiality of practice - this form of 'tacit' knowledge that, as he suggests following an obviously Heideggerian/Dreyfusian

line, we acquire through our “being-there-making” in the world, both with others and through other beings and things, and that thus can’t be abstracted from its material context, “universalized” or “generalized” and objectively validated - Tonkinwise foregrounds what in another context he has described as the truly deconstructive potential of this question of our inability to recognize the inherent value of “practice” based knowledge for the entire edifice of academic or institutionally based knowledge. A fact that, as he rightly points out, not only has implications for the way in which value, or evaluate, creative research and “institutionalize” knowledge, but also for the way in which we understand ourselves as “social maker-beings” who collaboratively produce our world together. As he says:

It is important to recognize that such an ontological claim is not merely a legitimation of creative research, but a wider claim about all types of knowing. This is not just an attempt to say that there is a knowing in making that deserves to be titled research, but a wider insistence that research, as a knowing, must also involve this sort of embodied social maker-beings.

In her contribution Toni Ross also takes her initial inspiration from Carter’s critique of our lack of institutional respect for the ‘*distinctive character of creative research in art and design*’ and its privileging of ‘*collaborative and cross disciplinary practices*’ and “*inventive*’ research attuned to open-ended, unpredictable outcomes’ rather than that which is ‘*directed by instrumental goals, or the empirical and objective claims of scientific investigation.*’

In difference to Tonkinwise though, who focuses more on the institutional, epistemological, and ontological significance of these questions, Ross focuses more on their explicitly art historical, critical, or aesthetic significance. By questioning what she patently sees as Carter’s rather predictable, all too easy, and typically “postmodern” critique of the “aesthetic autonomy” of art in his descriptions of the supposedly more socially and politically engaged nature of ‘*material thinking,*’ and its privileging of the “democratizing” power of collaboration, indeterminacy, and invention, Ross points out, following Rancière, that the idea of art as a socially and politically engaged form of creative practice that is capable of recognizing its “heteronomic” relation to its “material” context was an important part of exactly that period, or what Rancière calls a “regime” of art, that Carter appears to discount.

For Rancière, as Ross points out, there are three broadly definable, if in some instances overlapping, periods or “regimes of art” that have defined it historically. They are what he calls the period of “the ethical regime of images,” which is perhaps most famously typified by Plato’s *Republic* where, as Ross suggests, ‘*art is judged according to its utility for reflecting the collective ethos of a society or people,*’ the second is what he calls “the representative regime of art” where art is considered, as a consequence of its inherently mimetic function, to have an essentially instrumentalist, hierarchialising and taxonomic function, and lastly, “the aesthetic regime of art” in which arts autonomy from ‘*prescribed content or normative criteria, and its disruption of classical hierarchies of subject matter, form and style*’ is finally asserted.

In difference to most of the conventional readings of art within this period of “the aesthetic regime of art” in which, as Ross points out, arts autonomy from *‘prescribed content or normative criteria’* and the *‘classical hierarchies of subject matter, form and style’* is taken to be indicative of exactly that type of subjective disengagement that Carter criticizes in modernist art practices, for Rancière it is indicative of exactly that type of resignation of the will to mastery, that rationalist, productivist, and conceptual mastery, that Carter sees as being essential to his supposedly more “postmodern” concept of *‘material thinking.’* Indeed as Ross points out through a careful reading of Rancière’s analysis of the function of art in Kant and Schiller’s aesthetics, art within “the aesthetic regime of art” appears, in its recognition of the inherent “heterogeneous sensibility” of creative practice to be similar to what Carter proposes in his concept of *‘material thinking.’*

As Ross points out though, whilst it is easy enough to see *‘efforts to save the ‘heterogeneous sensible’ as an antidote to instrumental reason... everywhere in modern art’* it is more difficult to *‘imagine them becoming so in design.’* And yet as she reveals in her insightful reading of the extraordinary hybrid “design art” of Andrea Zittel, the historically instrumentalist and productivist discourse of design theory and practice is extremely ripe for such a critique. Indeed as she points out, Zittel’s practice can be seen to be specifically dedicated to the manufacture of the *“effects of the ‘heterogeneous sensible’ that undo hierarchical relations between categories, temporalities, and disciplines”* in design.

In her contribution Katherine Moline also takes up the question of Carter’s analysis of the “heterogeneous sensible” nature of *‘material thinking’* and the way in which it supposedly undoes the *‘hierarchical relations between categories, temporalities, and disciplines.’* Taking particular issue with the way in which Carter analyses the function of “poetic wisdom” and “wit” - which is understood as the ability to *‘perceive similarity between disparate things’* that exceed the synthesizing and categorizing intelligence of an enlightenment based model of reason – Moline shows how, through a comparison to Theiry de Duve’s analysis of the opposition between intuition and reflection, which she suggests reflects the opposition between wit and reason, that these two modes of understanding cannot be so easily separated. Indeed as she reveals through a close reading of both Arup’s Advanced Geometry Unit’s (AGU) project *H_edge*, and the idiosyncratic design work of Tony Dunne and Fiona Raby, the still predominantly rationalist and functionalist discourse of contemporary design can just as easily challenge the sort of hierarchical oppositions that Carter suggests only his “mythopoetically” based model of *‘material thinking’* can challenge.

As she points out in her analysis of AGU’s work, *H_edge*, which is *‘a maze of interlaced metal that floats without any structural support’* and is based on the complex fractal geometry of the Menger Sponge – a not wholly inappropriate visual metaphor for the nature of *‘material thinking’* - this work can be seen to subvert not only the traditional hierarchical relationships between structure and ornament, and form and function, that Carter derides, but the traditional opposition between mechanical and organic models of functionalism as well. As she says:

By instrumentalising these twinkling ornaments to create a structure, AGU collapse the distinction between ornament and structure and follow architect Louis Sullivan's recommendation for organic functionalism.

Similarly as she also succinctly points out in her reading of Dunne and Raby's work, and their *Technological Dream Series #1 (Robots)* in particular, the sort of dystopian "hyper-functionalist" ethos that much of their work conveys, reveals an extremely sophisticated critical subversion of many of those themes that she outlines as being central to the history of the "functionalist" debate within architectural and design theory. A critical response that, as she rightly points out, is much more nuanced than Carter's apparently simple call for a form of '*material thinking*' that subverts conventional categorical oppositions and transgressively combines disparate things. As she says:

Rather than transgressively combining disparate things, as Carter implies is necessary for creative production, I interpret Dunne's and Raby's reflections on design as a product of thinking that is better described as hyper-functionalism. The push of the functional to the extreme of dysfunction, or the rational to the irrational in their work, exemplifies the sentiment of dissent observed by de Duve, and from one perspective, can be interpreted as a re-modeling of the moral functionalism proposed by Ruskin.

The papers published in this volume can then, as we have suggested, be seen in a variety of different ways to both explore, and explicate the *contexts* of *material practices (thinking-making)* in either disquisitions on the general matter of this *material-thinking-making*, or, in particular examples of its practices. The authors do not seek to delineate material practice but instead, rather like Carter's book did for this volume, provide a generous text, a colloidal suspension, capable of engendering further writings and thoughts on the matter of '*material thinking*'.

In an email to us, the editors, following the first edit of her paper, de Freitas wrote:

'It was not my intention to delineate the concept or create precision in a definitive way. I like the uneven terrain that exists around the idea of material thinking and I hope that at this stage we are 'prompting' others into definitions and speculations of their own'.

And this is in our opinion how it should be. There is no one view in this volume. Writings do not add up and present a single articulation or consensual account of material thinking. Not only do the ideas expressed not present a consistent view there are notions in the writing that conflict with each other. We cannot pretend to hold with all that is expressed in this volume. We do however value the generosity of each paper; each offering grist for further musings on '*material thinking*.'

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In addition, he is actively engaged in researching through designing. He is the Project Leader on one of the research projects of a Leverhulme funded research programme, goldsmiths media research programme. The project titled the 'Mediatized View' is to design scopic devices for the London Eye. The devices are 'discursive objects' engaging with, amongst other things, the performance of the 'spectral' in mixed reality constructions and the effect of new technologies on the production of socio-cultural space.