



Materializing pedagogies
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Theorising out of practice, I would argue, involves a very different way of thinking than applying theory to practice. It offers a very specific way of understanding the world, one that is grounded in (to borrow Paul Carter's term) "material thinking" rather than merely conceptual thinking. Material thinking offers us a way of considering the relations that take place within the very process or tissue of making. In this conception the materials are not just passive objects to be used instrumentally by the artist, but rather the materials and processes of production have their own intelligence that come into play in interaction with the artist's creative intelligence. For Paul Carter, this collaboration 'is not simply a pragmatic response to increasingly complex working conditions; it is what begins to happen wherever artists talk about what they are doing, in that simple but enigmatic step, joining hand, eye and mind in a process of material thinking' (Carter, 2004: xiii) (my emphasis). I would agree with Carter that it is in the joining of hand, eye and mind that material thinking occurs, but it is necessarily in relation to the materials and processes of practice, rather than through the "talk", that we can understand the nature of material thinking. Words may allow us to articulate and communicate the realizations that happen through material thinking, but as a mode of thought, material thinking involves a particular responsiveness to or conjunction with the intelligence of materials and processes in practice. Material thinking is the magic of handling.

If creative arts "research" commences in our dealings with the tools and materials of production, rather than a self-conscious attempt at theorization, how do we begin the task of developing creative arts research pedagogies from the bottom up, rather than from the top down? The challenge facing us as art educators is both simple and complex: How does one devise a pedagogical strategy that makes "practical sense", but does not merely fall back into a skills based pedagogy? This question has become particularly critical at a time when art education has become so driven by conceptual and thematic concerns that materials and processes are conceived instrumentally to be used in the service of an idea, rather than as productive in their own right. In this paper I investigate how Martin Heidegger's conceptions of "handling" and "handlability" offer an alternative pedagogy to the conceptually driven pedagogy that currently dominates art school's curriculum.

In order to set the scene, I propose to demonstrate how David Hockney's "hands on" investigations into the drawing practices of artists from the 1400's to the 1900's enabled him to develop a unique in-sight into the use of optical devices in the drawing of what he calls the "Old Masters". David Hockney begins his treatise *Secret Knowledge: Rediscovering the Lost Techniques of the Old Masters* (2001) by recalling a viewing experience that pitted his own experience as a drawer with his long held assumptions about the drawing skills and capabilities of "The Old Masters":

When I went to see the Ingres exhibition at the National Gallery in London in January 1999, I was captivated by his very beautiful portrait drawings—uncannily 'accurate' about the features, yet drawn at what seemed to me to be an unnaturally small scale.... Over the years I have drawn many portraits and I know how much time it takes to draw the way Ingres did. I was awestruck. 'How had he done them?' I asked myself. (Hockney, 2001: 21)

On first appearance this seems like a straight forward art historical enquiry. However Hockney makes a very critical point, pertinent to the notion of practice-led research, when he suggests that such observations and such questioning could only have been made 'by an artist, a mark-maker, who is not as far from practice, or from science, as an art historian' (Hockney, 2001:13). Here Hockney sets up a division that is not entirely valid, since many art historians are also practitioners, but his point is a critical one. It is the special kind of "sight" that Hockney gained through being a practitioner that enabled him to be able to offer both original and originary approaches and insights into the drawings of Ingres. The specificity of Hockney's experience as an artist, and particularly a drawer, fashioned the nature of the question, the methodology and the types of realisations that emerged from the investigation.

Hockney's research question was a very simple one. How had Ingres achieved such uncannily accurate portraits at such a small scale in such a limited time frame? From his own experience as a drawer it did not seem possible that Ingres could have achieved the accuracy, demonstrated in these drawings, through direct observation and free hand drawing. In setting out his enquiry, Hockney followed his hunch that Ingres had in fact used a camera obscura to make these drawings. In order to test this proposition, he set about making drawings using a camera lucida and compared them with drawings that had been achieved through what he terms "eyeballing" or unaided freehand drawing. Through these drawing experiments he observed that not only could the use of this optical device achieve uncanny accuracy, but more importantly drawings made this way were characterised by a particular quality of drawn line that distinguished them from freehand drawing. The line was much surer and more confident than the "groping lines" of a drawer struggling to "see" and record freehand. However, in this confidence the drawn line lacked the struggle, the variation in line quality and indeterminacy of the eyeballed drawing.

In this investigation, Hockney's research methodology was idiosyncratic and whilst his research findings have been the subject of much debate, it is precisely this idiosyncratic methodology that highlights the importance and relevance "handling" and "material thinking". Firstly, the initial question that drove Hockney's research arose out of a disjunction between his understanding of the possibilities of drawing and the disbelief he experienced when viewing Ingres' (1829) drawing of Madam Godinot. Secondly, Hockney's hunch and subsequent visual hypothesis about Ingres' drawings derived from his experience in using projection devices and photographic technology in his work. Thirdly, his experience as a drawer predicated the particular methodology he developed to test his observations in the laboratory of drawing. Fourthly, Hockney focussed on particularity, rather than a generalization to examine his proposition. Finally, and most

importantly, Hockney's visual argument demonstrates the double articulation between theory and practice, whereby theory emerges from a reflexive practice at the same time that practice is informed by theory. His thesis demonstrates the material nature of visual thinking.

Hockney's insights demonstrate a very specific sort of knowing, a knowing that arises through handling materials in practice. This form of tacit knowledge provides a very specific way of understanding the world, one that is grounded in material practice or "material thinking" rather than in conceptual thinking. Material thinking is the logic of practice.

Hockney's observations about Ingres' drawings arose out of a sustained and sustaining drawing practice. His particular tacit knowledge came from the experience of working with pencils, charcoals, paint, projections and the camera in realizing an image—and in particular in the struggle to render reality "out there" on a two dimensional surface with a graphite pencil. Put simply, his engagement with the tools and technologies of drawing practice produced its own kind of sight or logic.

Martin Heidegger terms the kind of "sight", through which we come to know how to draw, to paint, to dance or to write, *circumspection*. For Heidegger, it is through *circumspection* that the "new" emerges. In this way artists gain access to the world, in what Emmanuel Levinas terms, an 'original and an originary way' (Levinas, 1996: 19). *Originary* is a term rarely used, but one that seems particularly pertinent to creative arts research. It is a way of understanding that derives from, or originates in and of the thing in question. In this case, the "thing" in question is practice. It is understanding that originates in and through practice.

In *Being and Time* (1966) Martin Heidegger sets out to examine the particular form of knowledge that arises from our handling of materials and processes. Heidegger argues that we do not come to "know" the world theoretically through contemplative knowledge in the first instance. Rather, we come to know the world theoretically only after we have come to understand it through handling. Thus the new can be seen to emerge in the involvement with materials, methods, tools and ideas of practice. It is not just the representation of an already formed idea or is it achieved through conscious attempts to be original.

Heidegger's notion of *handlability* is orientated around a constellation of *praxical* terms. He suggests that the primary relationships we have with the world are those things that we deal with, noting that the kind of dealing which is closest to us ... is not bare perceptual cognition, but rather that kind of concern which manipulates things and puts them to use.... Such entities are not thereby objects for knowing the 'world' theoretically (Heidegger, 1962: 95). Thus for Heidegger it is only through use that we gain access to the world. Heidegger makes this distinction between theoretical conception and *praxical* understanding clear when he argues that it is through active use, we establish original relations with things. He cites the example of the using a hammer to support his contention:

The less we just stare at the thing called hammer, the more actively we use it, the more original our relation to it becomes and the more undisguisedly it is encountered as what it is, as a useful thing. The act of hammering itself discovers the specific "handiness" of the hammer.... No matter how keenly we just look at the "outward appearance" of things constituted in one way or another, we cannot discover handiness. When we just look at things "theoretically," we lack an understanding of handiness. But association which makes

use of things is not blind, it has its own way of seeing which guides our operations and gives them their specific thingly quality. (Heidegger, 1996: 65)

The kind of being that a tool or material possesses comes to light in the context of handlability. I can look at pots of different coloured paints, a camera or a computer screen and take pleasure in contemplating them, but it is only in use that they begin to reveal their potential. I can lay out my brushes and set a fresh canvas before me, but until I actually begin to work with them in making a painting I can not understand their being. Similarly I may think I have a good idea, but until I begin to work with it and “handle” it I can not understand where it will take me.

Thus Hockney did not understand the making of Ingres' drawing theoretically through contemplative knowledge in the first place. Rather, he came to understand the nature of Ingres' drawing through the “sight” that his own drawing practice opened up. Through such handlings, his apprehension was neither merely perceptual nor rational. Handling or material thinking revealed its own kind of tacit knowledge, a knowledge that can be generalized beyond an individual artist's practice to enter into the discursive dialogue with other discourses, such as those of art history, art theory and drawing. Hockney did not set out to find the new, but the new arrived to confront him. I would suggest that the “shock of the new” is thus a particular understanding that is realized through our dealings with the tools and materials of production, and in our handling of ideas, rather than a self-conscious attempt at transgression. This is material thinking.

If we are to begin with Heidegger's premise that we come to know the world theoretically only after we have come to understand it through handling, how do we structure programs to give “voice” to material thinking? At first glance, it may appear that this offers a return to the skills based pedagogy that preceded the conceptual turn. Such pedagogy tends to emphasise a relation of mastery in the use of materials and processes by the artist. Materials and processes are used by the artist to produce an artwork. However Heidegger's insights do not support such a return. Whilst in *Being and Time* (1929) he uses the terms “handiness” and “use value” to set out his tool analysis, (terms that suggest an instrumentalist use of tools to achieve an end, for example, an artwork), his later essay, 'The question concerning technology' (1954) offers a reconceptualisation of what handling might involve.

In 'The question concerning technology', Heidegger questions the contemporary instrumentalist understanding of the human-tool relationship—using tools and materials as a means to an end—in order recast our understanding of the relations between humans, and technology. In a challenge to the contemporary figuring of our relations with tools and processes as one of mastery, he posits a relationship of co-responsibility and indebtedness. In this reconfiguration, handling is no longer predicated on the use value of technology, but rather our “technologies” become co-collaborators in the revealing of Being.

The radicality of Heidegger's refiguration of the human-tool relation has tended to be overlooked, particularly in the creative arts. I would suggest that the shift from the instrumentalist use of materials towards a notion of handlability and concerned dealings, provides the context to develop creative arts pedagogies around material thinking. Firstly it offers another sight into how knowledge emerges from practice. Secondly it offers a different way of thinking about our relations with our tools, a way of thinking that I would argue ushers in a post human “understanding” of creative practice.

When Heidegger talks of understanding, he is not referring to understanding as a cognitive faculty that is imposed on existence. For him, understanding is the care that comes from handling, of being thrown into the world and dealing with things. Emmanuel Levinas notes that the originality of Heidegger's conception of existence lies in positing a relation that is not centred on the self-conscious subject. He says 'in contrast to the traditional idea of "self-consciousness" [conscience interne], this self-knowledge, this inner illumination, this understanding ... refuses the subject/object structure' (Levinas, 1996: 23). This relation of care is not the relation of a knowing subject and an object known. Rather what is critical to Heidegger's notion of understanding is that it emerges through the care of handling. In this way, handling as care comes to supplant the instrumentalist in-order-to that defines the contemporary engagement of humans with technology and also with the world.

What then makes art a special case of handling? Surely everyday life is concerned with handling, whether it is with tools, emotions, ideas or other beings. We understand, for example, that children learn to ride a bike by riding it, not by being told how to ride it and that the instructions that come with flat packs are no substitute for the trial and error that it takes to put something together. How is art any different? Heidegger suggests that in the everyday, our handling of things tends to become habitual. When we become habituated we forget the wonder of it all. Our handlings become a means to an end. The privileged place of art arises from its capacity to create an opening, a space in which we are forced to reconsider the relations that occur in the process or tissue of making life. It is here that we can contest the instrumentalism of contemporary ways of being.

Heidegger's critique of instrumentality derives from his questioning of the essence of causality. He argues that the essence of causality is not, as modern thought would have it, a simple case of cause and effect. He suggests that for the Greeks, causality is 'the letting of what is not yet present arrive into presencing' (Heidegger, 1977: 10). Through a careful unpacking of the etymology of the term *causa*, Heidegger traces the origin of the term back to the Greeks. Whilst *causa* was the Roman designation for cause, the Greeks used the term *aition*. In Greek thinking, *aition* carries with it a different sense. Here, according to Heidegger, *aition* means 'that to which something else was indebted' (Heidegger, 1977: 7).

The relevance of this rethinking of "causality", for creative arts pedagogy, is set out by Heidegger in the example of the making of a silver chalice. Here Heidegger teases out a different and complex relationality between the silversmith, the silver and the idea of a chalice and the chalice, to exemplify how the making of a silver chalice involves relations of indebtedness and co-responsibility. His argument unfolds as follows:

Silver is that out of which the silver chalice is made. As this matter (*hyle*), it is co-responsible for the chalice. The chalice is indebted to, that is, owes thanks to, the silver out of which it consists. But the sacrificial vessel is indebted not only to the silver. As a chalice, that which is indebted to the silver appears in the aspect of a chalice and not in that of a brooch or a ring. Thus the sacrificial vessel is at the same time indebted to the aspect (*eidōs*) or idea of chaliceness. Both the silver into which the aspect is admitted as chalice and the aspect in which the silver appears are in their respective ways co-responsible for the sacrificial vessel.... But there remains yet a third that is above all responsible for the sacrificial vessel. It is that which in advance confines the chalice within the realm of consecration and bestowal.... Finally there is a fourth participant in the responsibility for the finished sacrificial vessel's lying before us ready for use, i.e., the silversmith. (Heidegger, 1977: 8)

Thus where we have come to accept the view that humans use materials and methods to achieve an artistic end, Heidegger makes the claim that the four ways of being responsible let something come into appearance. Thus in this reversal of the causal chain of means and ends we can reconfigure the “artistic relation”: artists, objects, materials and processes become co-responsible for the emergence of art.

Whilst Heidegger “uses” the silversmith example as an illustration for his philosophical ideas, his argument makes practical sense to a maker. In watercolour painting, for example, one becomes very aware of the complex set of inter-relations that allow a watercolour to emerge.

In the relation of care that characterises artistic production, the artist is no longer considered the sole creator or “master” of the painting. On the contrary, the artist is co-responsible for allowing art to emerge. In the constellation, the matter of paint, paper and the materials and technologies of production—watercolours, brushes, sponges, water, paper, gravity, humidity—are not a means to an end; the motif or the idea is no longer conceived as an object for a human subject; nor is the artwork merely an end. Handling as care produces a crucial moment of understanding or circumspection. This “material thinking” not the completed artwork, is the work of art.

The relationship of care and careful dealings signals a different way of thinking the precise state of the interminglings between humans and technology. In our contemporary epoch, ecological necessity has re-awakened a concern to establish a different relation to the technological. Heidegger's critique of technological thinking and his ability to rethink the human relation to technology offers us a way to differently configure the relations involved in art. We can begin to talk of “skill with” rather than “mastery over” technologies, materials and processes.

It remains to ground this discussion in current teaching pedagogy. I have asserted that Heidegger's elaboration of handability, provides a key to rethinking the conditions of possibility of creative arts pedagogy. I have suggested that understanding, with the “hands and eyes”, operates in a different register than the assumed theoretical-cognitive engagement that characterizes contemporary art education. It offers an alternative pedagogy to the conceptually and contextually driven pedagogy that currently dominates art education. However in placing an emphasis on the “sight” that is gained through handling, Heidegger does not return us to the skills and techniques based programs that preceded the so-called conceptual turn, nor does it re-invoke the purity of formalism. His emphasis on careful and careful dealings suggests an alternative ethic to mastery and a different engagement from our instrumentalist dealings tools and materials. It suggests that humans are indebted to and co-responsible for the emergence of art. I would suggest that this refiguration of the human-technology relation sets out principles for a post-human pedagogy. In a digital present this task appears particularly urgent.

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