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# T-SHAPED THINKERS: DRAWING AND ITS ROLE IN ART SCHOOL PROFESSIONAL PRACTICE

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Drawing is fundamental to all creative practice and teaching it begins with challenging student perceptions of what drawing can be: process more than outcome, journey more than arrival. Through the agency of drawing comes invention and the construction of a 'middle road' between theory and practice: that of the Platonic idea of *poesis* (the uncovering of meaning through making).

This paper will examine the synergy that can exist between drawing and the teaching of professional practice in the art and design subject area. It will explicitly link drawing as a process in creative development to the teaching of entrepreneurial skills and the ability to notice opportunities (Kirzner, 1979, p.48).

The paper proposes that arts education that engages with drawing as a means of embedding professional practice in the curriculum produces graduates who are actively engaged in their professional world as confident, entrepreneurial practitioners.

*The boss's strangest mania was this: he was one of those men who lick their fingers before turning the page of a book…actually, I noticed he licked his finger every time he was about to open anything: the desk drawer, a window, the safe. Once I saw him licking his finger before raising the hood of his Lancia.*

*(Primo Levi, 2010, p.40)*

This paper will set out the case for a synergy between drawing education and the teaching of professional practice in forming creative graduates. It will be arguing for the agency of drawing and the fundamentally useful contribution that it can make to this teaching in art and design education. It will explicitly link drawing as a process in creative development to the teaching of entrepreneurial skills and the ability to notice opportunities (Kirzner, 1979, p.48). It argues for the centrality of drawing in developing student's professionalism and divergent thinking and acknowledges the role of 'failure' in drawing with its implications for the creative student as entrepreneur. The paper holds as a core theme the developing of the reflexive and "T-shaped" thinking essential in negotiating an uncertain future of discontinuity and accelerating change (Leonard-Barton, 1995, p.77). It will describe the key themes of collaboration and empathy, across levels and disciplines, and the evolution of a community of drawing practice that leads debate and group critique. The impact of this teaching will be discussed alongside current ways of thinking about skills in art and design education and the resulting implications for pedagogies of professional practice.

I would like to begin by thinking about drawing knowledge, in particular with the idea of drawing as hand-craft. That is to say, if drawing is a form of embodied thinking then it can be identified most closely with the hand, specifically the hand as utilised in drawing as a mode of human thinking (compared to what might be seen as the merely grasping mandible of animals). Heidegger (1999, pp.369-391) in his essay 'What Calls for Thinking' posits that 'only a being who can speak, that is, think, can have hands and can handily achieve works of handicraft'. The hand carries its rich craft into the life of the human being, welcoming, extending greeting, receiving welcome, holding, designing, carrying and signing: 'Every motion of the hand in every one of its works carries itself through the element of thinking.' (ibid, pp. 369-391) Francis Bacon described the 'manipular' way in which we order the world, making sense of the 'noise of the infinite by holding that which is near in the finite pace of the hand'. (1620 cited in Jardine and Silverthorne, 2000, p.192) We exist as bodies in our environment: ranged around us are its constituent parts more or less to hand or requiring our effort to reach them. As Terry Rosenburg says 'to grasp something is to know it'. (2008, p.111) Touch, it has been proposed, is the primal sense[1], with the eyes

[1] Alva Noe in his theory of enactive perception describes vision itself as 'touch-like' after George Berkeley who held that touch is the only genuine spatial sense (Noe, 2006: p.96)

a means to 'touch' the parts of the environment that are out of reach of our hands. The hand is the prime mover in this field of perceptual touching and we find our place in the world through its agency: what is near to us falls within its locus and is the means by which we locate our bodies within the human co-ordinates of up-down, right-left, forward and backwards.

If the hands are a way of establishing place then drawing, as hand-craft, must also be in some way bound up with this basic need. The act of drawing is one of 'place-making', a defence against the continual surprise of every succeeding moment, insuring us from the fear and invasion of the accidental and ambivalent (Berger, 2005, p.109). However, it is also possible for drawing to provoke doubt and instability in the viewer, destabilising Berger's defence against the unexpected in the way that it can oscillate between the physical and the metaphysical, between thought and perception, whilst referring to both simultaneously (Downs, et al., 2007, p.xi). Thus, one of drawing's contradictions is that can be a defence against a loss of place and, at the same time, its agent of provocation. Deleuze talks about drawing constructing an 'alternative poetic' to 'enable us to approach the *"architecture of the impossible"* (cited in Rajchman, 2000, p.132). It is here, with Deleuze, that I start to move closer to the theme of the paper. Drawing for Deleuze is a way to construct new knowledge, what he calls the 'altogether-other of our invention, the surprise of what is not yet possible in the history of the spaces in which we find ourselves'. (ibid, p.120). He terms this knowledge (after Spinoza) *potentia*, one that 'catalyzes a potential to produce again and differently; to produce what is not presently constituted in the course of our history' (ibid, p.71). This is very different knowledge to that which is validated by academia, that of *potestas*, characterised as the possessive and authoritarian knowledge of the state. The knowledge in a drawing is 'knowledge-in-potential', hovering on the edge of a 'becoming', what Michel Serres calls 'small generations, numerous becomings, abounding possibilities and disappearances' (Serres cited in Assad 1991, p.278).

Having described drawing as 'knowledge-in-potential' I would like to describe how it can relate to the teaching of professional practice in art and design. It can also have relevance to other subject areas and their need for teaching newcomers how to operate in their professional domains, but I would argue it has a special synergy with the teaching that happens in arts education. As a preface to this I would like to explore what being an entrepreneur means in terms of being an artist.

Entrepreneur is derived from the French verb 'entreprendre' (meaning 'to undertake') and describes a person who creates or starts a new project, opportunity or venture. In this definition to 'under-take' implies to move forward and take or pick up an object, idea or a project. It has a tactile sense and thus is an expression of the human hand at work. The entrepreneur, though, is not only one who 'seizes the day' with their hands but is also one who can project outwards from themselves into other futures and contexts, using their

vision to extend their reach beyond their locus. In this manner Israel Kirzner refers to the entrepreneur as someone who has "the ability to notice … opportunities that have hitherto been overlooked" (Kirzner, 1979, p.48). These interpretations show how entrepreneurship has potentially a broader significance across the breadth of the curriculum than teaching of students how to start up and manage businesses or mount exhibitions (as important as these functions are nevertheless). This concept of 'noticer of opportunity' also fits much more comfortably with the experience of the creative student and is perhaps the key to introducing entrepreneurial experiences and opportunities within the creative curriculum.

Seeing entrepreneurism as 'opportunity spotting' is part of developing a heightened sense in students of the creative process and its relevance to the wider context of society, to encompass networks, social or commercial enterprise or other cultural activity. It is to argue that entrepreneurism is a set of beliefs, attitudes and competencies that cut across all areas of life, making it more than a subset of business studies. It is here that the term becomes close to a definition of drawing: a process more than an outcome, a journey more than an arrival. Another important parallel is the element of potential failure: an entrepreneur is one who makes things happen, a risk taker, a creative thinker and a 'go-getter' in a similar way to an artist who approaches their drawing practice and starts to combine, juxtapose and risk failure. There is already acknowledgement that 'art comes out of failure' (Baldessari, 2008, p.52) but drawing exhibits a particular quality of failure in the way it interrogates meaning: Derrida describes it as 'disseminated meaning, which remains fragmented, multiple and dispersed' (1993, p.61-2). As dispersed meaning, it can extend beyond the thing or entity it describes (Downs et al, 2007, p.xvi) and so, liberated from the need to access truth, the concept of meaning in drawing can extend beyond appearance allowing a number of multiple possibilities to inhabit the image at the same time. It is paradoxical:

> *As soon as one thought is articulated, another is lost, and every point of significance identified makes it seem less likely that we will find other possible points. There remains an enormous difference between what is seen and what is understood, and again between what is drawn and the drawing itself. In an effort to delineate, drawing is contradiction' (ibid. p.xvii)*

The inevitable gap between the intention and realisation of a drawing therefore makes failure impossible to avoid. If we agree that drawing is fundamental to all art practice then this condition makes failure, and thereby risk-taking, central to art as a defining characteristic or as Baudelaire puts it, drawing is *"..the fear of not going fast enough, of letting the phantom escape before the synthesis has been extracted.."*(1964, p.5)

How could this quality of failure in drawing and its wider applications be related to the risk-taking of the entrepreneur? An unexpected aspect of entrepreneurism is the extent to

which failure informs the entrepreneur. In the face of statistics that show 60-70% failure of start-up businesses in the US, theories such as that of 'Positive Entrepreneurial Failure' (Greidanus, 2010) have begun to describe models where entrepreneurs are defined by an increased acceptance of the risks of failure or by an ignorance of the potential for failure. The propensity for accepting risk, or alternatively, a tolerance for ambiguity, is a well-known trait of entrepreneurism. There is evidence that 'entrepreneurs may utilize flawed heuristics that limit their ability to see the potential for failure, thus increasing their likelihood of acting in the face of potential failure' (ibid. 2010). They also persevere through their setbacks, learning from them and applying knowledge gained from past failures to new ventures.

While there may be many resonances between the respective practices of artist and entrepreneur there is at the same time much resistance to the concept in the minds of art students. Negative student perceptions of the entrepreneur contain images of commercial gain, confrontation, profit and lack of concern for the environment and as such are antithetical to their own creative practices (ADM-HEA, 2006, p.14) Art students also do not tend to view themselves as being a part of a continuum that includes business practice. They are more likely to rate *sustainability* over financial growth: delivering social and cultural benefits to society as an alternative to economic value. This is the positive role model of the socially responsible entrepreneur, who succeeds through good networking, creativity and problem solving and are characteristics that students value in their own practices. The view is that art and design education is already inherently entrepreneurial, through the tendency for its students to innovate through their practices and to become self-employed or start businesses (ibid, p.15). Art and design students hold other entrepreneurial traits: they are encouraged to be critical thinkers, they question prevailing norms and their education is based on problematising and on divergent thinking, not a quality valued in other, convergent, disciplines where answers already lie in the knowledge of the domain (eg. medicine). For these reasons entrepreneurial education in art and design subject areas can be subject itself to student criticality and be difficult to deliver as a discrete practice.

So how can it be teased out, taught and enhanced as a positive attribute in art and design? We have looked at how drawing and entrepreneurship can relate through a shared heuristic. The context, however, has changed: in many ways the situation that art and design education finds itself in now is problematic with respect to the ideas we have covered so far, that of the idea of the 'thinking hand' and risk-taking through a practice-led material research that allows failure. We have seen an education in the visual arts move away from teaching the practices of production in the last twenty years towards one that preferences the imparting of strategies and connections. There is not space here to expand on the practical, cultural and historical reasons for this but it has undoubtedly happened and it now occupies the foreground of art school practice. The passing on of tacit knowledge, learning-by-doing and the thinking-through-making can now seem a hangover

from when the art school taught the 'craft' of art production. Nonetheless these are still traits that are inherent in art education and I would argue they have maintained their currency with students through drawing despite the rise of a concept-driven, dematerialised arts education. But what relevance does this decline in 'craft' practices have on the teaching of professional practice or entrepreneurism?

The defining qualities of the art school (this term describes art programmes in universities as well as the few remaining independent art schools) are that it develops critical thinking, including the capacity for self-criticism; it gives the student by various means an apprenticeship that conveys in practical terms the nature of the profession that lies outside the institution and it can be seen as a "half-way house…a shelter for artists" and, in its ideal form "as a space where the freedom to experiment, to negotiate ideological positions and to fail are not only accepted, but defining". (Relyea, 2007, p.81) As I have indicated, the field of traditional art school learning has become eroded, becoming instead the transmission to individual 'student-clients' of a grasp of the whole art-world, a map of the multinational field of art-related practices and their various connections and affiliations. As James Elkins states: 'the mechanism of contemporary art, rather than the results, should be the field of academic knowledge. Instead of studying works and canons, we should study processes and strategies' (2007, p.146) with the resulting 'professionalisation' of arts education. We could see this turn as being the result of a new communications paradigm in which we 'research, discuss, categorise, editionalise, refine and enrich raw information to produce high-grade knowledge' (Relyea, 2007, p.85), a response to the dematerialisation of the art object or a result of the pressures of the art market. The turn has nonetheless prioritized networking. Artists are valued for the number of functions they enable, for the diversity of the information or resources they obtain or cross-reference. Art schools year by year produce networks of loosely affiliated young creatives within a dispersed yet coherently defined professional field. A student seeks to leave their art school experience with a choice selection of contacts and a wide social circuitry from which to gain job tips, project ideas, social introductions and professional relevance: to become interesting and well-connected people. This description could of course have been applied to the graduates leaving any art school in the last sixty years, except that now it would seem to be one of the principal outcomes rather than an accidental result of the process. The dangers inherent in such an approach are that what used to be a broad, liberal arts education now serves to produce professional 'cultural workers': people who have grasped the map and not the territory.

Against this background governments are also increasingly asking institutions and students to take employability, progression and the idea of the entrepreneur much more seriously. I would argue that this message misses arts students unless the teaching of professional practice and entrepreneurism becomes more aligned to what the student wants to know and is delivered in a way that has relevance to their practice as artists. I would like to turn to how this can work pedagogically in the context of practice-led research into drawing in a

studio context. There is growing evidence that an alternative approach to entrepreneurial learning, one that 'seamlessly embeds' (Raffo and O'Connor et al, 2000, p.356) learning within the main curriculum, is the most effective approach. Live project based activities can allow entrepreneurial skills to be delivered almost 'by stealth' with students able to connect the lessons learned directly to their own needs. Students can be 'switched on' to the concepts behind entrepreneurialism and professional development. My own teaching practice begins with expanding student perceptions of what drawing can be and fostering construction of new knowledge, idea generation and cross-level communities of drawing practice. This has to take the form of drawing workshops and seminars that encourage debate, critical thinking, collaborative practice, research into practice and idea generation through experiential learning. Experiential learning in this context is through tacit knowledge; gesture and its link to the haptic process of making; gathering information by touch; the inter relationship between handwork and the individual body's physique and temporality and rhythm in learning.

FIGURE 1

FIGURE2

Allan Gibb, in 'Towards the Entrepreneurial University', states that entrepreneurial skills should be 'acquired on a 'how to' and 'need to know' basis dominated by processes of doing, solving problems, grasping opportunities, copying from others, mistake making and experiment' (2006, p.5). Further, he writes: 'the world of the entrepreneur is one that

values tacit knowledge and the heuristics (mental maps) of judgment and intuitive decision making' (ibid. p.5). Deanna Petherbridge calls tacit knowledge, 'a residual category, a holding place for many unverbalised forms of knowing, including but not limited to knowledge gained through visual elements and touch' (2008, p.34). Tacit knowledge is a form of silently imparted or implied knowing. Humans, if they are not speaking, are often imparting information with their hands and bodies. Petherbridge includes in her statement the sense of touch and it is here that tacit knowledge comes close to 'tactile' knowledge. Tacit learning takes place often without 'active' teaching, in group or shared activities that rely on the presence of the others in the same space, on being engaged with the potential for touch in its different sensory forms. Providing these situations can be difficult to orchestrate: however drawing in the curriculum provides a natural context for this and is something that generates much enthusiasm amongst students.

My approach aims to foster divergent thinking through drawing practice: memory drawing, blind and touch drawing, filtering stimuli, collaborative drawing practices, encouraging 'failure' and disrupting student perceptions of drawing as an index of vision by reintroducing it as an 'attitude' in creative practice. Drawing practice is carried through into entrepreneurial workshops, where students are asked to visualize their futures, describe their practices and collaborate in drawing to re-envision what professional practice could be. By developing drawing paths through the curriculum that foster critical thinking, problem solving, sense making and the social construction of knowledge I aim to encourage the questioning of ideas within a group as a necessary part of learning through experience based, collaborative and entrepreneurial approaches to education.

FIGURE 3

FIGURE 4

But what are the implications of 'working across boundaries' and how does collaboration work as a process in education and in the wider professional world? A key metaphor for thinking about this is the concept of the T-shaped thinker. David Guest (1991) was the first to suggest that creatives in the design sector should develop great depth in one sense (the vertical stroke of the T) and breadth in another sense (the horizontal stroke). There are two different ways of understanding this metaphor. First, as the vertical stroke of the T as a *"specialization" and the horizontal as "a broader appreciation of the landscape in which the specialization fits."* Secondly there is also the creative who has depth in one domain but knows a little bit about every other domain, or *empathises* with them. There is an important distinction between having empathy towards other disciplines and having skills in those disciplines. Empathy enables one to work alongside those disciplines, to understand their languages, to build upon ideas from those disciplines and to succeed within the systems that bring those disciplines together. Having skills or knowledge in other disciplines can also enrich one's own work, but this is different to empathy as technical skills and knowledge can be disconnected from their original disciplinary and professional contexts. Tim Brown, CEO of IDEO and Visiting Professor at Northumbria University states that T-Shaped individuals are 'not to be confused with a 'jack of all trades', T-shaped

people have a core competency, but can easily branch out. And they possess curiosity, empathy and aren't afraid to ask why' (Brown, 2007).

T-shaped thinking means going beyond breadth of skill and knowledge towards a broad understanding of the environments of a professional practice. A skill set based on "a little bit of everything," is decreasingly useful in specialized situations. There is a suggestion that the T shape should be followed by a second and a third vertical: the 'm' shape. We could even replace the model of horizontals and verticals with a one that consists of many verticals of different lengths, a visualisation of portfolio or subset skills that vary in importance throughout one's professional life. Understanding and empathy comes from learning in a 'social situation', in experiential and situated learning where learning-by-doing in real-world environments and communities of practice happens alongside other disciplines, rather than just a sense of 'skill-sharing'. Drawing can foster empathy in these situations: collaborating with students from other disciplines in drawing events and workshops leads, not to a learning of the other's skills, but to an empathy that comes from the practice of a fundamental human activity in a group situation. The provision of situated learning experiences and placement opportunities can also help students to empathise and understand how creative practice is balanced with commercial reality. For example my recent teaching has promoted the idea of 'student conference', with drawing as its central strand, to foster practice advocacy, the practice of debating work and ideas and cross disciplinary dialogue. This helps to prepare students for professional engagement with the creative sector, through drawing as a prime mover.

FIGURE 5

We have seen how drawing and entrepreneurism share some important attributes. Both are identified closely with hand-work and with the creation of a new forms, whether these be through the paradoxical nature of drawing or through the expression of a noticed opportunity. We have acknowledged the inherent difficulties in making the connections between entrepreneurism, with its overtones of big business, and the art student who in many cases is a part of the art school specifically to avoid interacting with this world. Nevertheless I have argued that it is through a shared sense of 'failing' as a fundamental part of their respective processes that drawing and entrepreneurial practice can come to terms in art school practice. Further to this we have seen how the onus on employability and entrepreneurism in art schools and the wider sector has come at a time when the idea of hand-work is under threat in art and design education. We are losing something important from art and design education and not just the workshops, space and skilled staff who provide the 'education for the hand' and who are increasingly becoming a rare breed in the modern art school. We are losing a more fundamental understanding of the world that comes through thinking through making; an understanding that can be explicitly related, as this paper shows, to the entrepreneurism that is now such an important part of the discourse in the sector. This sense of loss, arguably, begins much earlier than post-compulsory education and is implicated in how children are taught from a young age. However, as art and design educators, we receive some of the best makers and thinkers in any given generation and it is up to us to capitalise on their natural entrepreneurial flair. If art education has become less and less to do with the imparting of technical skills then it could be tempting to conclude that its replacement is the 'doing' implied in professional practice. This, however, has already resulted in the much debated 'professionalisation' of the art school and graduates who will have left with a refined sense of networking but without the opportunity to gain the core discipline that is so vital in the development of T-shaped thinking.

Entrepreneurism, like drawing, is an alternative way of viewing the world and can help art students make the transition from their institution to the wider world of their work in society. It is perhaps time to reclaim and reframe the word away from the business sector, as it can be argued that the creative sector has greater claim to it. Drawing has a key role to play in this process, not only as a way of re-emphasising the 'thinking hand' in the curriculum but also as a way of engendering deep learning and a realisation of the student's own potential. The aim is that under these circumstances an education in Art and Design will have produced people adept at working across boundaries and categories and under conditions of uncertainty and risk: as natural 'noticers of opportunity' through practice-led research in drawing.

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