We are expected to be creative because we’re in an art college, but hardly anyone teaches us the techniques to be creative.

There is now a compelling body of evidence that indicates creativity can be developed and enhanced in almost everyone. No longer seen as being on the fringes of education as an optional extra, developing creativity is being considered a core aspect of education (Craft 2006; Robinson 1999; Robinson 2001; Starko 2010). The discussion has moved from whether creativity can be taught to how it is best taught and how it can be assessed (Jackson and Sinclair 2006; Sefton-Green 2008; Lassig 2011; Vessey and Mumford 2012). There are many creativity courses being taught worldwide that use a range of methods known to enhance creative thinking. The National Creativity Showcase held in Brisbane in 2007 highlighted the work of thirty academics teaching across twenty-one Australian universities (Dawson 2007). One such course is 2545QCA Creative Thinking, which has been taught at the Queensland College of Art (QCA), Griffith University, since 2003 and thus it provides a source of information and evidence on the topic.

This course, which combines theory with practice, is highly experiential. While students from virtually every studio area in the College have taken the course, with the majority of them have been enrolled in Interior, Product, and Visual Communication Design disciplines. This is unsurprising as the course was originally intended for design students. However, by the end of its first year, it was being offered as an elective available to all QCA students. The design background is important in the present context as it frames the very concept of teaching creativity implicit in the course. From a fine art perspective, teaching creativity may be considered quaint or unnecessary, although the students enrolled in Fine Art who have taken the course have all declared how much they gained from the experience. In this respect, the point of interest lies in praxis, and whether this is fundamentally different between designers, fine artists, photographers, etc.

Designers are generally presented with a problem to which they are expected to find a solution. Crucially, this is usually a problem not of their making. Artists may also be presented with a problem (‘commission’) for which they are expected to produce a solution/outcome, although, more frequently, they will set their own problems and seek their own solutions. Either way, they are expected to produce a highly personal interpretation of ‘the brief’, and it is their very idiosyncratic response that is valued. By contrast, designers are so often required to perform within narrow parameters, subject to exacting demands, and within specified timeframes. There is an overriding need for the designed product or service to function on a practical level.

In the present context, however, the concern is less about disputing the demarcations between disciplinary practice and more about the techniques themselves and their application to studio/professional practice, personal development, and their potential to inform research. The quote at the start of this essay indicates the importance of creative techniques to students in their academic studies and subsequent professional practice. The following extract is from an unexpected e-mail received in 2011 from Maya LaCroix, a former student of the course who graduated in 2005 with a Bachelor of Film & TV Production:

You may or may not remember me from a class on creativity in 2004? . . . It was one of the most invaluable and fun classes of my (nearly) 2 degrees/6 years at uni! I use the
The ‘stuff’ referred to by Maya are the creative methods that have been refined and developed over the intervening decade but retain their essential features. This paper describes the ‘stuff’, the most successful creative methods as rated by students, and how they may provide a framework for artistic and design research. As an essential aspect of research, a methodology includes a systematic strategy with methods of evaluating experimental outcomes, a timeframe in which this happens, and a stated purpose in relation to outcomes (Noble and Bestley 2005). In relation to the creative aspects of studio art practice, action research and reflective practice are particularly relevant methodologies. Identified as being especially important in practice-based research in design (Yeo 2012), they feature prominently here. To give a context against which creative methods may be examined not only in terms of their efficacy in producing a ‘solution’, but also in their potential to further studio research, I will briefly discuss the modus operandi of ‘Studio Anybody’—a graphic design studio that operated in Melbourne from 1998 to 2004—since it provides an exemplary case study.

**STUDIO ANYBODY: A CASE STUDY IN DESIGN-AS-RESEARCH**

The practical and commercial imperatives facing designers do not preclude a design-as-research approach: “Design is a way of inquiring, a way of producing knowing and knowledge; this means it is a way of researching” (Downton 2003, 1). Studio Anybody provides a case study of how a graphic design studio may foster a speculative culture through practice-led research. This critical space for speculation allowed designers to explore original concepts by stepping aside from the familiar and derivative, as well as stepping outside of the evidence-driven culture of much academic research, allowing practice to lead research. It embraced an approach to researching where the starting point is a hunch rather than a defined brief. Over time, it was possible to identify the conceptual and formal threads that formed the basis of the practice, and that provided a critical line of enquiry. These were culture sampling, imperfect beauty, and public intimacy. Such studio-initiated projects influenced the commercial work of the studio and helped to develop a collaborative approach between designer and client where each gained from the speculative poetic process. This was a particular form of action research that courted the unknown and posed the question ‘What if?’ (Grocott 2006; Poynor 2002). The term ‘creative assemblages’ has been applied to such practice-led research projects where the assembling process of creative practitioners, development, alliances, circulation of information, etc., gives rise to the creative rather than it being identified with a single author (Wilkie et al. 2010).

The exploratory and reflective practice of Studio Anybody, which interlaced the roles of practitioner and experimenter, manifested Donald Schön’s collaborative reflection-in-action model. His model, which combines the researcher with the practitioner, allows the individual to alternate between the two roles over time (Schön 1983). Notably, a design approach that seeks a solution to a particular problem has been described as effective research, inasmuch as its intent is to effect change, while the artistic approach has been cast as evocative research as it forefronts human experience (Hamilton and Jaaniste 2009). Studio Anybody’s allowance of the ‘hunch’ to initiate researching resonated with artistic practice, with the evocative, but it also embodied the effective and essentially melded both forms of research.

The methodologies of action research reflect the heuristic creative process by effecting change as it continuously gathers and interprets data, and thus amalgamates enquiry and application in a mutually interactive cycle. Action research formalises aspects of the practice of design and art, and relates to the experience of both the undergraduate and professional (Swann 2002; Yeo 2012). These methodologies are largely heuristic by nature, an aspect that needs to be examined.

**HEURISTICS AS A MEANS OF ENQUIRY**

The essence of creative problem solving is to find solutions that are “new and useful” (Batey 2012, 56). An heuristic provides the means to find new
and useful solutions. Researchers use heuristics to solve a problem through discovery by finding a close-to-optimal solution, one that may then be refined by the application of a further heuristic. A heuristic approach is flexible and responsive to perceiving links between ideas. It uses cognitive strategies known to engender potentially useful ideas and, perhaps through trial-and-error, arrives at a variety of potential solutions from which one is selected. If that solution doesn’t work, then one or more of the initially discarded ideas are revisited, perhaps even combining with the original solution to produce a hybrid concept that leads to a ‘surprisingly’ effective outcome (the exploration or divergent thinking phase). The surprise can be the result of insight, whereby new linkages between concepts and new patterns of thought may emerge apparently spontaneously from the unconscious. Examples of creative problem-solving heuristics are brainstorming, mind mapping, and backcasting, all of which are discussed below. Each provide a starting point, a framework and set of guidelines, but the outcome is not known until after the process is undertaken. These are cross-process heuristics, that is, they may influence multiple cognitive processes (Vessey and Mumford 2012, 46). For example, brainstorming and mind mapping are variability heuristics that produce a large number of ideas and thus plenty of material to work with. Paradoxically, backcasting is a forecasting heuristic that helps identify critical issues.

Creative Problem Solving (CPS) is a meta-cognitive heuristic that organises and structures the thinking process, including exploration and causal analysis heuristics. Indeed, identification and analysis of causes are vital in producing creative solutions (Vessey and Mumford 2012).

By contrast, an algorithm will impose a structure of logical progression that ultimately produces a single answer, using a defined set of steps that produce an outcome (essentially predetermined), at which point the process terminates. An algorithm does not allow for deviation from the rules or chance encounters. An example is a cooking recipe that states what you will achieve, lists precisely the ingredients you need to mix together, specifies each step in the process, and defines the time involved. Using methods known to give the same answer every time is helpful in many contexts, but not when it comes to searching for ‘new and useful’ solutions. Some heuristics may affect a wide range of processes, while others may apply to a particular process—that is, they are context specific—and a heuristic that can benefit one situation may not work in a different situation (Vessey and Mumford 2012). The example of Claude Monet’s self-imposed constraints supports the notion that heuristics that are focused on varying specific aspects of a process can produce higher levels of creativity. By restricting himself early on in his career to how light falls on objects, Monet induced variability within narrow boundaries. This led to him to produce work of great originality (Stokes 2001). Used judiciously, imposing constraints on a work may produce highly original outcomes, but applying the same heuristic in every instance, whatever the problem may be, can lead to stagnation and a dearth of new ideas.

As with Monet, problem-finding is a characteristic of many creative individuals. However, the very term ‘problem-finding’ is problematic and variations such as ‘problem construction’ have been used to describe the variety of generative processes involved in creative thinking (Mumford et al. 1997). Problem construction has a playful aspect, but it requires dogged determination to keep on grappling with an idea that may be vague, at least in the beginning. This often involves a change of perspective—using the same data but rearranging them to create a new pattern—similar to the visual gestalt experience of seeing marks on paper as one thing suddenly ‘flip’ to be seen as a different thing entirely. Many of the methods described below attempt to help the brain ‘flip’ and produce novel ideas as a result. Metaphor is highly successful in this respect, and has even been identified as a major element in the categorisation of theories of creativity.

CATEGORIES OF CREATIVITY
Some of the numerous theories surrounding creativity involve heuristics. In reviewing theories of creativity, Kozbelt, Beghetto, and Runco (2010) identified the following ten major categories: Developmental; Psychometric; Economic;
Stage and Componential Process; Cognitive; Problem Solving and Expertise-Based; Problem Finding; Evolutionary; Typological; and Systems. Given the inherent difficulties in delineating creativity theories, some of these categories gain prominence over others, particularly Cognitive, Problem Solving and Expertise-Based. This is apparent in many established methods used to initiate and develop creative thinking. An example would be using synectics, where exaggerating an attribute, such as weight, could easily link with a synaesthetic relationship to deeper musical tones or to darker colours. Connections such as this often occur as insight and are not amenable to logic and clearly have a strong metaphoric orientation. Another example, and one that also touches on problem-finding, is CPS (discussed below).

In broad terms, Kozbelt, Beghetto, and Runco (2010) grouped theories according to their being either predominantly scientific or metaphoric. Considering within-category variation, the authors make the point that there may be equally valid orientations, the clearest being between the scientific, empirical reality of creative phenomena versus more metaphorical theories. Nevertheless, as they point out, “metaphorically oriented theories are often underwritten by rigorous empirical study; likewise, more scientifically oriented theories often use metaphors (e.g., the mind as an information processor) to illustrate key principles” (Kozbelt, Beghetto, and Runco 2010, 21–22). This highlights the inherent difficulties in attempting to clearly differentiate between perspectives on creativity as well as the difficulty of considering any form of creativity that does not encompass metaphor.

The distinction between scientific and metaphorical (i.e., non-scientific) approaches could perhaps be reframed in terms of quantitative and qualitative approaches, although, even then, the contrast between metaphor and meaning, and the scientific precepts of objectivity and truth, remains problematic. Semiotics show that figures of speech (i.e., rhetorical devices) are not mere ornaments; rather, they are the very stuff of language. As Hawkes writes, “in the long run the ‘truth’ does not matter because the only access to it is by means of metaphor. The metaphors matter: they are truth” (1972, 91). Put another way, bald ‘factual’ statements may be less clear than metaphorical ones. Indeed, Aristotle’s description of the primary aim of language to make manifest the “bare facts” is itself metaphorical (Hawkes 1972, 11). Linguists have been unable to find a language that does not include metaphor, and attempts to eradicate figures of speech result not simply in sterility of expression and loss of meaning, but in a linguistic cul-de-sac (Hawkes 1972). The rhetoric of science has had a powerful effect in blinding many people to the power of metaphor. Rhetorical figures may be seen to be not just unavoidable but, in fact, essential elements of language, while the pervasiveness of metaphor in how we construe meaning has been apparent for some time (Lackoff and Johnson 1980). The pervasiveness of metaphor is equally apparent in many of the creative techniques described below.

CREATIVE TECHNIQUES THAT MATTER

The 2545QCA Creative Thinking course introduces students to the importance of creative thinking on a personal, professional, and societal level. Students learn and apply numerous techniques of enhancing creativity, learn to take risks, and to engage in individual and group creativity. Included in these techniques are attribute listing, synaesthesia, mind mapping, multi-sensory awareness, the Six Thinking Hats (de Bono 1985), accessing the unconscious, team creativity, and challenging assumptions. Students are asked to reflect upon these experiences in a journal, and finally to demonstrate an application of these methods in the context of specific issues within their own discipline to produce a creative/innovative outcome. The course is fundamentally about facilitating personal development and of achieving ‘self-actualisation’ (Rogers 1967; Maslow 1970) through learning creative strategies.

Because of individual differences, a technique that might resonate strongly with one student may leave another unimpressed. The methods that the majority of students have found most valuable are discussed here. The feedback is based on student evaluations of course content obtained at the end of each semester, and from students in their second and third years who had taken the course in their first year of university. Mind mapping
thoughts (Geschka 1996; Heslin 2009; Runco 2010). This led to it being replaced by brain writing (Geschka 1996; Heslin 2009), which has proven to be more successful as well as personally satisfying to the majority of students.

Students use these techniques for the remainder of their program of study and beyond. A graduate of the course, Emily Burgess, reflected on her experiences in the course as follows:

I strongly believe that my studio project was greatly enhanced and realised due to the creative thinking . . . The course provided me with both understanding and application of methodologies that informed my research and subsequently continue to assist my current creative practice . . . As an artist and illustrator, I find mind-mapping essential for effectively and creatively matching text and images. I understand ‘brainstorming’ more to do with the activity of the mind, which becomes externalised on paper, using visual thinking methods such as mind-maps, free-thought sketches and diagrams.

(e-mail to the author, 2014)

For Burgess, who is currently a practising artist and art teacher, brain writing and mind mapping proved to be of particular benefit, which, along with other techniques learned in the course, have allowed her to explore and extend her art practice.

One valuable creative aspect of mind mapping occurs only after there are many branches and sub-branches to each idea. A word is blindly selected from the end of one of the outer branches, then a second word blindly selected from a different outer branch, and every attempt is made to find a connection between the two and the original concept written in the centre of the sheet. These forced relationships may point to the most bizarre, unlikely, and creative possibilities.

Many of these associations are made through simile and metaphor.

TEAM CREATIVITY

A major means of identifying and developing creativity extends beyond the individual and concerns team work. Until fairly recently, the focus of creativity research was on the individual.
The examples shown here comprise only part of Emily Burgess's exploration of this topic.

**Figure 1** Emily Burgess Mind Map 1: Idea Zones 2008

**Figure 2** Emily Burgess Bat Brellas 2008, one outcome from Mind Map 1 (fruit-bat wings are black, stretchable, and foldable like an umbrella).

**Figure 3** Emily Burgess Mind Map 2: Idea Zones 2008

**Figure 4** Emily Burgess Guava Vitamin C Supplement 2008, outcomes from Mind Map 2 (fruit bats feed on guava fruit)

**Figure 5** Emily Burgess Emily's Rorschach Test for the Tactile Minded 2008. This is the final outcome of the exploratory process. The globe, shown from both sides, is covered with intricately delineated sections of appliqué material. You interact with it by closing your eyes and exploring the surface by touch. This embodies Rorschach patterns arising from earlier 'bat splat' shapes while alluding to the dark of the night when bats are active (closed eyes), along with the texture of bat wings.
While interest in individual creativity remains dominant, interest in group creativity has grown significantly. This has been driven predominantly by business in an attempt to gain market share and maximise profits through innovative ideas that may be turned into new products, and more efficient organisational practices. As well as refereed journals on management that aim to bridge the gap between theory and practice though praxis, such as *Creativity and Innovative Management* and *Journal of Management*, there are more scholarly publications such as *Creative Behavior* and *Creativity Research Journal*. Consequently, a considerable body of experimental data supporting the value of team creativity exists.

Most designers do not work in isolation; they are often members of an interdisciplinary team. This is also the case with artists involved in collaborative projects that involve the input of a multiplicity of skills beyond the capabilities of any one individual. Even if working independently, designers and artists will almost inevitably have to cooperate with others to attain their goals. Understanding how teams form and function at an optimal level is therefore important (Luft and Ingham 1955; Moxon 1998). Students greatly appreciate a supportive approach to helping them develop their team skills, and in understanding the creative capacity inherent in well-integrated and high functioning teams (Sawyer 2007). Team creativity is always in flux and involves the dynamic relationship of a number of individuals and factors. A purely logical understanding of teams is difficult to sustain given the idiosyncratic nature of individuals. Thus, the influence of the emotions, the irrational, is implicit in teams and this has been considered at the organisational level (Ekvall 2002).

As well as providing an introduction to numerous creative methods, the QCA course explores the consequences of design decisions and how these frame human behaviour. It focuses attention on the sort of information gathered and how this is analysed through the use of hypothetical scenarios. For example, by presenting ill-defined problems, such as ‘Why should women in cities find it unsafe to walk home at night, in the dark? Envisage ways of making the urban experience safer for women’, students are confronted with the consequences of separate design decisions that arise out of building regulations, neighbourhood planning, street lighting, public transport, etc., that coalesce to produce what may be unintended consequences. Complex issues like these are introduced towards the end of the course when students have learned and applied numerous creative methods and have expanded their awareness of thinking more creatively. Typically, backcasting is employed to envisage the ideal situation. This technique is an exercise in teamwork and imagines the ideal outcome as its starting point. By creating a clear objective, the process avoids all those reasons that come to mind as to why it could not happen; i.e., being too difficult, too expensive, too time-consuming, etc. Initially using brain writing and mind mapping to explore the issue and to identify possible solutions, the team then works backwards to identify the steps necessary to achieving this goal by using a sequence of storyboards, thereby literally envisioning the process. Student feedback has indicated this method offers a fresh and optimistic way of tackling problems. Backcasting has become of strategic importance as a means of analysing alternative futures, particularly in areas of sustainable development (e.g., Transition Network 2014).

The CPS process is then applied and the appropriateness of the concept is either reinforced or remodelled based on the rigorous analysis of the problem demanded by the process. As a methodology, CPS is a type of action research; it is not simply about solving a problem creatively, but is a distinct process that contains a set of heuristics embodying fundamental ways of engendering creativity through divergent and convergent thinking (Treffinger, Isaksen, and Stead-Dorval 2006; Puccio, Mance and Murdock 2011). The main stages of CPS are as follows: understanding the challenge; generating ideas; preparing for action; and building acceptance. Each stage has its own subset of heuristics. Overall, CPS is a comprehensive approach that demands considerable application and is best suited to large, complicated problems that appear to have no clear solutions. While written feedback indicates some students find CPS overwhelming, the majority of
them value knowing that such an holistic approach exists. It forces participants to confront the realities of putting into practice their decisions.

**SYNECTICS**

The associative nature of creative thought—that is, producing novel outcomes through making unlikely connections between two or more different things, be these concepts or material objects—is fundamental to many of the heuristic methods used to enhance creativity. Synectics, which uses twenty-three trigger mechanisms based on analogy, metaphors and similes, is a prime example. These mechanisms include substitution (what other idea can you switch for some or all of your concept?); distortion (twist your subject out of its true proportion, shape or meaning); contradiction (deny or reverse the function of your subject; e.g., reverse natural laws by allowing heavy objects to float and light objects to sink); parodying (make fun of your subject; e.g., mimic or caricature—make a visual oxymoron), etc. Many of the metaphors and similes used in synectics are drawn from nature (Gordon 1961), referencing animals, insects, plants, or natural systems, such as the atmosphere or the water cycle, where solutions to similar problems may suggest themselves. While artists and designers make such connections every day, the value of synectics is that it identifies all possible associations, likely and unlikely, and systematically explores their potential. The most extreme or ‘silly’ connections are encouraged as these may lead to the most creative outcomes.

**SENSORY AWARENESS**

The preeminence given to vision over the other senses has been well documented, as have the negative effects this has consequently had on the built environment. Ways of providing a more inclusive approach to design have been developed and promise a much richer environmental experience (Malnar and Vodvarka 2004; Pallasmaa 2005; Schifferstein 2011). Sensory awareness and synaesthesia have become increasingly important as means of engaging with our environment. Synaesthesia is the sensation of a stimulus exciting two or more sensory modalities at the same time; for example, sound being experienced simultaneously as colour. Our understanding of the world is permeated linguistically with synaesthetic allusions e.g., a loud shirt, sharp cheese, a sweet child, etc.). While most of us are not natural synaesthetes, it seems possible to enhance our sensory awareness to a level that may be termed ‘sympathetic synaesthesia’. This helps ground the animate in the design of objects and the environment, and lends itself to an action-research methodology. Multi-Sensory Design (MSD) is an example of how this approach may be put into practice. MSD explores all sensory modalities and is explicitly incorporated in the design process (Schifferstein 2011). There is a need to be sensitive to different sensory modalities: “A bus stop may look attractive and welcoming, but may leave the waiting passenger standing in a cold breeze, next to a smelly trash can, or with a lot of traffic noise” (Schifferstein 2011). MSD comprises the following eight steps: selection of the target expression; conceptual exploration; sensory exploration; sensory analysis; mind mapping; user-interaction scenario; model making; and multisensory presentation.

The simple expedient of blindfolding students and taking them on a carefully guided excursion leaves a lasting impression on them. Following this exercise, and by referring to a sensory chart that provides the means to analyse the auditory, haptic, taste/smell, orientation, temperature/humidity, and visual (Malnar and Vodvarka 2004, 281), students are able to identify and reconnect with all of their other senses in ways that transform their appreciation of space and place. The results can be quite profound, as evidenced in the reflection of an Interior Design graduate:

Specifically, the methodology that I used in my final class assessment, the sensory exploration of space, is naturally not the literal approach that I now use in my professional practice. But this exercise did shift my paradigm of the understanding of space and the way people experience it, so it has informed the way I consider spaces and my design practice, adding an extra layer of consideration to how I think about spatial design. (Chloe Smyth, e-mail to the author, 2014)
THE UNCONSCIOUS

Consciousness varies along a spectrum that has been termed the "conceptual-primordial cognition continuum" (Martindale 2007, 1778), which ranges from rational, reality-oriented wakefulness through to different levels of reverie, to irrational dreaming. The less focused our thinking, becomes the greater the likelihood of making associative connections between unconnected and unlikely subject matter: the deeper one plumbs the unconscious, the more original the ideas are likely to be (Martindale 1990).

This is achieved by tapping into the associative connections of memory, in a non-linear manner. Memory is fundamental to intuition, to sudden insight, which relies on mixing existing information into new and unexpected combinations to generate entirely unlikely, unforeseen, and remarkable outcomes; as Dietrich comments, “associated combinational creativity during altered states such as dreaming or daydreaming can play a vital role in the creative process for the arts and the sciences” (Dietrich 2004, 1018). Some of these strategies are explained below.

Dreams, whether occurring naturally or induced artificially, lay at the heart of Surrealism. Indeed, a defining characteristic of this artistic movement was recording and unravelling the meaning of dreams, and portraying the highly subjective results through enigmatic and disquieting imagery. Surrealists attempted to circumvent moral strictures and socially imbued by delving into the unconscious. In their search for a means of spontaneous expression (Picon 1983; Wach 1993), they placed themselves in a state of receptivity using hypnosis, dreams, automatic writing, and collage. (Picon 1983; Wach 1993). For example, Salvador Dali would hold a metal key above a plate while allowing himself to fall asleep. The moment conscious control was lost, the key would slip between his fingers and the sound of it hitting the plate would wake him. At this point, he would record the imagery from this hypnagogic state.

There are fairly simple means of accessing the unconscious, such as recording one’s dreams, or inducing a hypnagogic state or lucid dreaming (Welch 2012). Outcomes from students who have explored these techniques can be entrancing, disturbing, or both. One method that can be surprisingly vivid is to imagine yourself selecting a volume from a bookshelf full of books, and reaching out and looking at it, describing the binding etc., then opening it and reading from it, describing any illustrations that it may contain. I call this exercise ‘My Book’. This may seem rather fanciful and results depend on the propensity of the individual to respond to this method, but when it works, it can produce a vivid experience that has its own ‘reality’. On one occasion, doing this myself, I found I was reading a poem, which I then wrote down. The result is unlikely to find itself in anyone's anthology, but that's hardly the point. That one can read from a non-existent book gives pause for thought, and provides every reason to further explore such techniques. These strategies were part of Keith Johnstone’s approach to theatre, which emphasised improvisatory techniques and exercises to foster spontaneity and narrative skills (Johnstone 1981). Student outcomes, whether individual or collaborative, included video movies, stop-motion videos, slide shows and static artworks (hand drawn and/or digitally produced). These have been based on a single strategy, such as recording dreams, or a mix that may have included personal dreams, dreams of friends, daydreams, automatic writing, ‘my book’ exercise. By contrast, in pursuing intensely personal and introspective means of expression, many fine artists may find they ineluctably cover much of this ground in the development of their art practice.

CONCLUSION

As indicated by the opening quotation, potential creativity is not the same as explicit instruction in creative thinking, and learning techniques of creative thinking is fundamental to everyone involved in the creative arts. The methods described in this paper are those that a cohort of QCA students has reported as being most useful. Mind mapping (associated with brain writing) has been exceedingly influential in developing concepts and making unlikely and 'surprising' connections. Team creativity is valued for a number of reasons, including its social nature. The power of metaphoric association is brought out strongly in synectics. Sensory awareness is growing in significance, with implications extending to every aspect of our environment.
The unconscious offers a source of extraordinary originality and individual exploration. Particular methods have had a profound effect on students and graduates who continue to apply them in professional practice and in their individual art practices. While accepting differences between design and artistic practice, the creative methods described offer a common currency between the two. In terms of the creative aspects of studio art practice, action research and reflective practice have been identified as especially relevant methodologies. The methodologies of action research, as well as being generally heuristic, also mirror the exploratory and recursive nature of much creative endeavor in both art and design, and in practice-based research.

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ENDNOTES
1 In the present context, I will sidestep discussion on the social and political framework that frequently drives such research, as this is a topic in its own right and is beyond the scope of this essay.

2 On 24 May 2010, in daylight and with eyes wide open, I imagined a bookshelf in front of me filled with many volumes. I selected one, reached out my arm, extracted it, and ‘read’ the title, which was Impossible Dreams by Michael Flanders. Holding the book in one hand, I opened it at random to what I saw as page 69, and then ‘read’ the following poem:

Fire trees darkly standing
In the forests of the night
Left alone and struggling
Dripping cold and dimming light
Not the life imagined
Or the dream outright
Just the thud of horses passing
Out beyond the candle light.
(In retrospect, I detect associations with William Blake and Walter de la Mare, and even, by way of the ‘author’, with Michael Flanders.)

REFERENCES


USING CREATIVE THINKING METHODS TO ENHANCE STUDIO PRACTICE AND RESEARCH

Donald Welch


