

A Speculative Approach to Drawing as Visualising Thinking

Michael Croft, KUB School of Design, Konkuk University, GLOCAL Campus, Korea (South)

The research for the paper was carried out at King Mongkut's University of Technology Thonburi, School of Architecture and Design, Thailand

This paper starts from the premise that drawing can be a means of visualising thinking, with an emphasis on the process involved. A gap often seems to exist in the minds of students of visual/material creative fields in ideas-generative contexts, between thought and action. The thesis is that the gap between thinking and doing can be reduced to being near simultaneous, in this instance through drawing. The methodology is practice-based, with a range of contribution from mid-program and final year students of communication design. Drawing is both the means and the subject of the research. The paper introduces the research's theoretical basis, considers its application and concludes with subsequent development. Some of the students' practical work and linguistic responses illustrate points of the text. The research suggests that at prior or early stages of the design process the relative autonomy of the medium itself can offer visual/material suggestions and objects. Due to the ongoing nature of their practice, the students themselves have moved the research on from its original premise. The paper concludes by proposing to continue the research by observing how one can think about and rationalise one's visual perception of movement at the moment of engagement in the drawing process.

Key words

learning, participatory approaches, experience, creativity, Philosophy, design practice, teaching

Introduction

The paper concerns drawing as a means of visualising thinking, as conducted in an ideologically broad-based Communication Design program in Bangkok, Thailand, with Thai students studying through English language. The title's reference to visualising rather than visual thinking gives emphasis to the *process* of turning thinking into visual forms. Such a process is speculative in the sense of being conjectural, experimental, and insofar as this is the nature of thinking itself. A purpose of the research has been to introduce drawing situations where this process can be both observed and experienced. The usefulness of such a process has been to suggest an alternative to students' tendency to formalise their ideas conceptually, where visualising is a retrospective illustration of thinking.

The content of the research is applicable either to a starting generative mode of design, to an exploratory period prior to designing, or to students of design who have a more generic approach to their practice. Students participating in the research have at the same time been using the practical benefits in their studio projects, either in response to a project brief or as their final year independent projects. These other projects have also enabled evaluation of the research.

The theoretical basis of the research

Students participating in the research have worked on discovering drawing's relevance in and through the work itself, individually and collectively. Confirmation of this is most in evidence in work that a few of the students have moved onto, as described in the Conclusion. The role of this paper's author, as teacher and researcher, has been to track the issues of the research practically and in relation to the work on creativity and visual perception by the theoretical physicist David Bohm. Additional reference has been to psychoanalysts D. W. Winnicott and Marion Milner, French writer and theorist Hélène Cixous, and philosophers A. I. Tauber and Martin Heidegger.

Insofar as *speculation* means as yet unproven, notional, and experimental, the kind of thinking commensurate with this is likely to be what (Bohm 2004: 70) terms "reflective." Such thinking also characterises the research itself, and the Conclusion introduces areas into which the research has more recently moved. Imaging, according to Bohm (ibid), is carried out in the nervous system, whether or not in relation to an externally perceived object, and a combination of thoughts "... resolves the difficulty, first in relation to the image (i.e. in the imagination) and later in relation to the actual fact." In this sense, visualising as something which is at once affected by, and determines thinking, is likely to involve imaging ideas in process, with their less-than-finished formulation. In a similar context of creatively-influenced writing, (Cixous 2005: 37/38) states that "if she were less uncertain she would make decisions rather than essays". The 20th Century French cultural premise of Cixous is appropriate on the basis of French theory's speculation on the relationship between language and other forms of communication. The process of *reflecting* is in this instance considered through the filter of the visual /material medium of drawing.

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Bohm (1980: 23) states that one should not think of the content of thought and the *process* of thinking that produces it as separate: "...content and process are not separately existent things, but, rather, they are two aspects of one whole movement." This quote has bearing on the integral relationship between thought and thinking and the medium of their exposition, how the research has developed, and the role of *movement* in the research, practically and philosophically.

A broad definition of creativity as suggested by British psychoanalyst Winnicott (1996): 13/19) may underpin designing in terms that acknowledge the role of human subjectivity. Winnicott (1996: 13) states: "the strain of relating inner and outer reality" relieved by an "intermediate level of experience" commensurate with the child who is "lost in play." A 3rd year student, B., has stated of her approach to her work:

I should draw to find my own space in those public; before I lose my chance to get into that space this is my first time to see what I usually ignore. I will drive into it, through my imagination...

Winnicott's 'strain between inner and outer reality' relates to the difficulties that students seem to have in articulating thoughts in an external visual sense as immediately as possible after their thinking. The research has therefore

explored the medium of drawing as providing "an intermediate level of experience" psychologically, and for where it is pitched in relation to the process of designing on a program that is broad enough to include questions of socio-cultural and personal reflection.

The starting hypothesis of the research, that thought and action relating to visualising could be simultaneous, has been challenged by the theory of (Bohm 1980: 74), who states that thinking cannot be uninfluenced by memory; this in a broad sense that in turn interacts with sentience and corporeality. However, according to Bohm (1980: 65), a "flash of understanding" can often precede thought, which he terms an "intelligent perception," after Piaget (Bohm 1965, 1980). Such perception, Bohm suggests, is the only phenomenon of the mind which is not conditioned by memory. The words of a 3rd year student, J., reflect this: "It's kind of confusing when there's a picture in your head of what the thing looks like that you're trying to push away, but it's still there but blurry." Bohm's theory, however, does not preclude that students' tendency to conceptualise at the outset of presenting questions can at least be reduced by a shortening of the time-frame between thinking and acting. Equally, the facility of the flash of unique insight, an "intelligent perception," remains in place as something which can either precede visual thinking or occur at any point in the process of visualising.

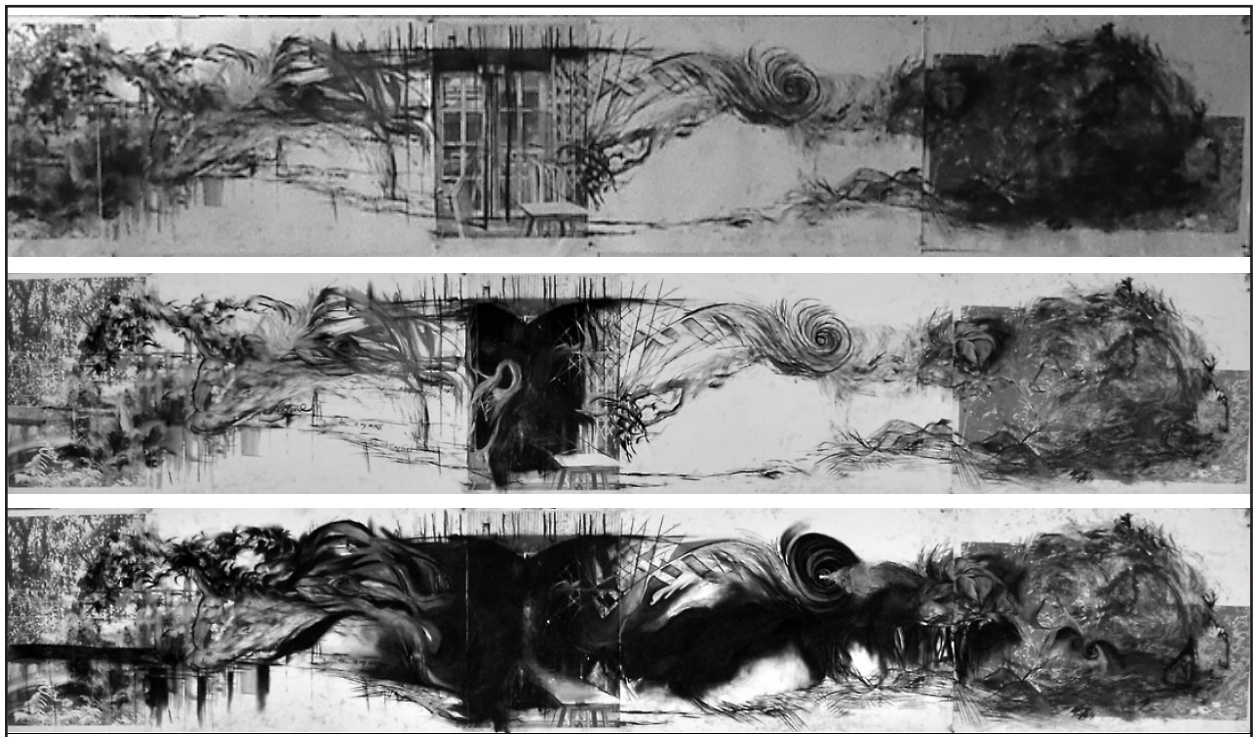


Figure 1. Screen-shots from 3rd year student, B's stop-frame drawn animation (2011)

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The proposition that thought is a material process suits the possibility of thinking as transformed into a visual/material medium, and can substitute for more open and less-structured thinking. It could almost be said that the medium has *itself* to offer as a form of thinking, whereby students participating in the project should be sufficiently unrestricted by their assumptions to interact with what are the medium's automatic tendencies. According to Bohm (1980: 197), "...something may behave with a *relative and limited degree* of autonomy, under certain conditions and in certain degrees of approximation."

The question of human subjectivity links to the above considerations. A reason for encouraging the generative and exploratory character of visualising thinking is to enable students' greater self-involvement, especially insofar as the process is creative. If subjectivity is comprised of individual human sensory experience, where many kinds of feeling are common and shared, it should be possible to utilise these and allude to them by visual and material means. Equally, these might be assessable to some extent objectively in oneself, and comparatively with the subjective experience of others. Fesser (2010: 111) cites the philosopher David Chalmers on *qualia*, or human feelings: "Here there is no gap between appearance and reality, because the appearance – the way things seem, which is constituted by qualia themselves – is the reality." If the basic mechanism of the engagement of feelings is *reflexive*, this is at work before, within, or despite the activity of conscious thought. According to Tauber (2010: 182), there is a distinction between *reflexivity* and *self-reflexivity*, the former as a "passive mode of self-consciousness" and the latter as "an active introspection". 3rd student, B., had the following to say of the approach of her colleague, P., towards his work:

In our sharing session with my group,
we talked about those conscious subject...
I wonder as she told me that P's virtue is to work with
unconscious drive.

He's born and lives his life with unconscious driving.
But my unconscious drive's quite weak so I work with
conscious mostly.

Debatably, students' individual enquiry into how their subjectivity works in relation to their designing will facilitate their appreciation of the reciprocal interplay of this from the client or beholder's point of view.

Similarities with the topic of this paper are apparent in recent research by Nell Breyer, *Motion Perception: Interactive Video and Spatial Awareness*, Journal of Artistic Practice, Current Issue (2011), who uses the medium of interactive video to consider how 'human movement drives the phenomenology of space', particularly the sections [Tuesday: Volume](#), concerning space, and [Wednesday: Time](#), concerning movement.

The approach in practice

The research project has been explored between six classes. Four of the classes have been with 3rd year Communication Design (CMD) students and two classes, Final Project Preparation and Final Project, have been with 4th year CMD students, over two semesters. Of the four 3rd year classes, the main two have been Parallel Studio/Drawing (which is a supportive concept to the design studio) consisting of ten students. These same students have explored their studio projects mainly through drawing, with the paper's author as their main advisor. Eleven 4th year students have approached their final year through their interest in drawing and 2D image-making and several 3rd year students have started to use drawing in their more independent work.

The Parallel Studio/Drawing class has involved several exercises concerning articulating movement through drawing, and two exercises that have been objectively structured around visualising thinking. The following short descriptions indicate the scope of the drawing exercises across the two groups.



A three-hour drawing exercise, *Two Time-lapsed Photos*, conducted with 3rd year Parallel Studios/Drawing students, concerned linking two time-lapsed photos from a cinematic narrative through drawing to suggest continuity

Figure 2. 3rd year student, A, working on connecting two time-lapsed photos (2011)

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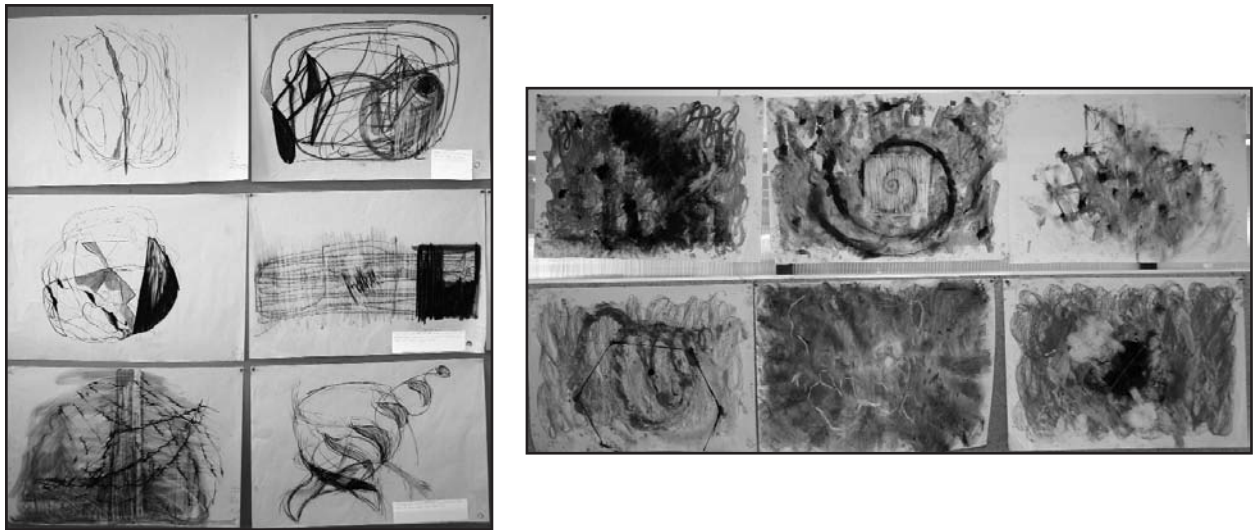


Figure 3. Outcomes for the drawing exercise, *Drawing Verbal Prompts*, by two 4th year students, to show differing kinds of iconographic resolution (2011)

across the gap in time and the missing transition/s. Students were required to respond to a precise set of verbal instructions.

A three hour drawing exercise, *Drawing Verbal Prompts*, conducted with 4th year Final Project Preparation students and with participation of some 3rd year drawing students, formed the generative basis of the 4th year students' independent work. This exercise was also an experiment in formalising a situation where students would respond with near immediacy to linguistic prompts. The exercise resulted in six A2 charcoal drawings from each student. Students were provided with several keywords, for example such terms as 'object'; 'relation'; 'contrast'; 'separate/combine', as prompts from each of Mimicry; Time; Cause and Effect, each prompt producing one drawn response at a time, resulting in each drawing having several steps.

Students were instructed to respond immediately to the prompts with the first thought that entered their heads; this translated visually and materially through the medium. It was stressed that whatever the students drew should as nearly as possible correspond with their first thought.

According to Bohm (2004: 62): "...we have to consider the relationship between imagination and reason if we wish to obtain an adequate account of the operation of the process of thought." An illustrated presentation to both student groups theoretically contextualised the work that they had been doing in terms that encouraged them to be more aware of the role of their personal subjectivity, hence being able to read the difference that often exists between the generating thought and its visual/material outcome. A 4th year student, G., wrote the following on the process:

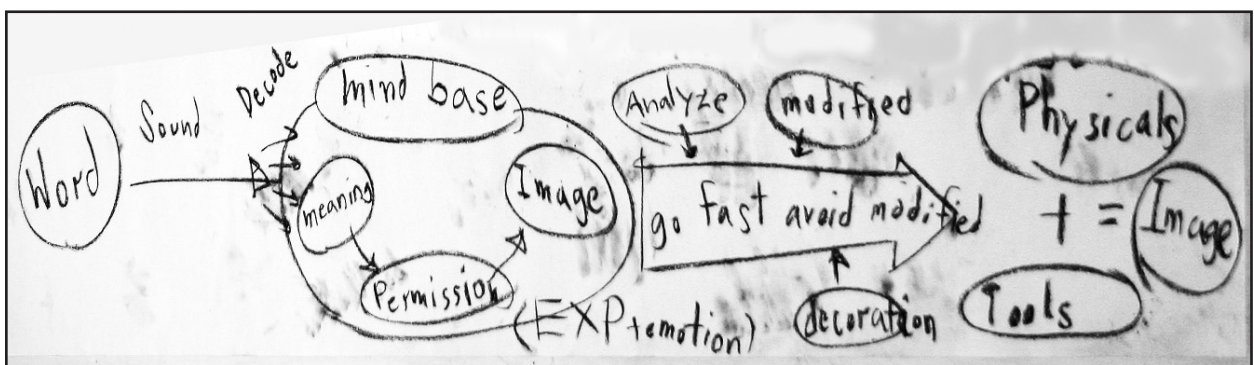


Figure 4. 4th year student, G's diagrammatic formalisation of the *Drawing Word prompts* exercise (2011)

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While I draw these project, when listening to the keyword I try to analyse, connect, and modified the meaning of the words. So I draw it by a raw Idea which on my head first. The interest point is the Image which pop up in my head that is a kind of the main perception then from the thinking base transfer the image as fast as possible for avoid the modification thinking to decrease the gap between two senses as close as possible that is the kind of Idea about transferring information between senses.

In a presentation to both 3rd year and 4th year, participating students were introduced to Marion Milner's *The Hands of the Living God* (1969), a psychoanalytical case study by Milner of her patient, Susan, through an exploration of the latter's doodle drawings. A key point, through direct reference to Milner, was that "...a symbol is both itself and the thing it stands for, without being identical to it." (2011: 46), in other words the idea that *meaning* can either be suspended or felt to exist in ways that do not obviously correlate with drawings' visual and pictorial qualities. In the semiotic context, Chandler (2004: 35) states that "...communication and media theorists... stress the importance of the active process of interpretation, and thus reject the equation of 'content' and meaning." It was explained to students that Milner's project with her patient was to help her to pass through her emotional block and achieve once again, "free compliance with the outside world."

Reference in the presentation to Cixous's corporeal visual/psychological interpretation (1998: 38) of several major artists' drawings: "...we want to draw the instant. The instant which strikes between two instants," contextualised the question of reflexivity in terms of professional artists' practice. The suggestion of *wanting* to achieve immediacy between thought and action recalls the question of thinking in relation to the interaction of the creative agent with the autonomy of the medium, as posed by Bohm.

Thinking *in* may consequently define the silent immediacy of engagement with the activity, while thinking through may relate to retrospective thought-based and linguistic communication of the form, content, purposes and suggestions of the resulting drawing. It was useful too, in a cautious sense, to convey the point that Milner makes about her patient: "...an extreme and excessive concentration on logic and outer things at the expense of both reverie and fantasy." (2011: 47)

The work of a 4th year student, M., is indicative of two of the above points: thinking's memory-basis, through his consideration of colour, and the role of subjectivity in



Figure 5. 4th year student, M's acrylic painting, *Moon's Breath* (2012)

thinking. In a short passage from his blog, the student refers to his colour-impairment: "I think I can see almost like any other people.... Simply speaking, I see colours through my memory while others understand them...." He has also stated that he has to "remember colours between the few choices" that he has.

In a longer blog entry, concerning a coloured piece which in his mind oscillates between painting and drawing, the student's description reflects Bohm's "relative autonomy of the medium" – "my paper.... always talks and questions to me" – and, in its more semiotic considerations, Chandler's "active process of interpretation".

For the A1 format is really bigger than the journal painting which I have done every day and its size make my eye more open and my vision also more wider. Today I try to mix my painting skill into the drawing. The question is what will I draw? The question is not come from my mouth or my subconscious but it's from my paper. It always talks and questions to me. I closed my eyes and listen to the sound of wind but for my ears it's

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heard and understood that was the moon's breath, why? Because of the thing the floated through my ear is not just a wind but it's like a living thing was talking and gossiping to me. If you try to focus on something around then you will know the way to communicate with it.

With this student it would seem that his struggles to have to rationalise with colour are compensated by more lyrical and associative thinking around his works' content.

Several exercises in stop-frame drawn animation provided the basis of focus on movement. The formality of the routine of stop-frame drawing, instead of disrupting students' imaginative flow, seemed to allow them to explore their imagination in an almost meditative sense. The sense of the students understanding the space which they were constructing through their own corporeality is substantiated by Böhme's phenomenological interpretation (2003): "The space of bodily presence is essential to my bodily existence, since to be bodily present means to find oneself within an environment."

The approach of 4th year student, G., towards his final project may also be considered phenomenological. This student's objective has been to visualise felt muscular tensions within his body, through an interest in bodily meridians, outwards and hence into the space in front of him. His statement in his project description – "I choose to transmit body tension into painting without emotion included" – would suggest the more objective inflection of "sense experience" (Merleau-Ponty, 2002: 61), for example, than the research's concern with subjectivity.

The research has recently involved specific exercises in drawing movement with some students, and an approach

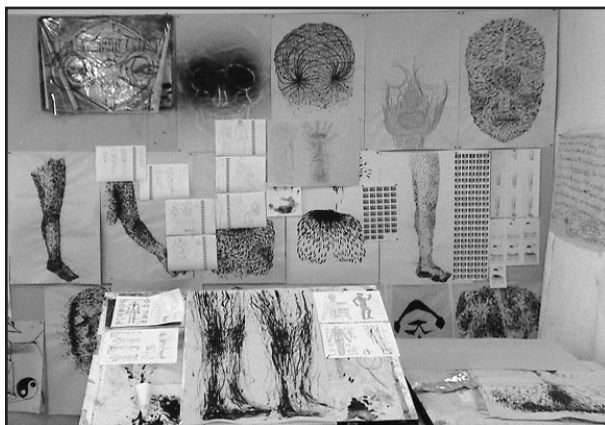


Figure 6. 4th year student, G's drawings in black ink that attempt to visualise internally sensed muscular tension (2011)

to thinking *in* the activity of drawing in a free-form sense with 4th year final project students has resulted in a tendency towards self-reflective abstractions of the body.

The Research's Conclusions

Insofar as thinking in and through the medium of drawing is now in process, a way forward with the research has been to focus more closely on the question of articulating movement. According to Arnheim (1972: 379), similar to (Bohm 2009: 245), "Stroboscopic motion... takes place between a memory trace and the percept of the present moment." *Stroboscopic* may here mean the perception of an apparently automatic tendency of marks made, which appear to move in their repetition across the drawing, and the apparent movement of the object and its aspects, to which the marks refer. Self-observation in this instance may take the place of self-reflection, in an investigative context, as further example of how human consciousness interacts with what are conventionally viewed as being external phenomena.

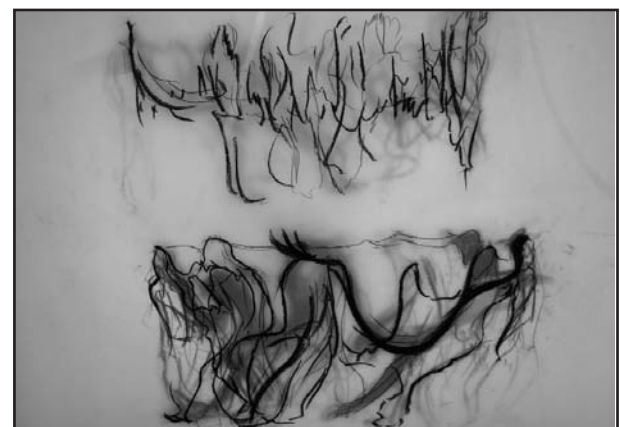


Figure 7. 3rd year students drawing two seated human figures, placed back-to-back, while moving slowly around them, repeatedly (2012)

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Figure 8. Two sets of visual studies by a male 4th year student (left), and a female 4th year student (right), who are exploring self-reflectively through the human image (2012)

A specific current question of the 3rd year design studio class, to which some of the 3rd year students are responding through their interest in drawing, concerns visualising *time and space* as a dual phenomenon in the context of memory. According to Bohm (1980: 268),



"...sequences of moments that 'skip' intervening spaces are just as allowable forms of time as those which seem continuous." It is proving useful to adapt the question of articulating movement in drawing to that of the lapse of time that such a question spans in the process, and how shapes that are generated can be read both as figure/ground reversals and spaces in the Bohm sense. The 3rd year students have not yet begun to individualise this to their own needs in respect of the project brief, but the idea has been put to them that the movement drawings can be adapted to the project through this direction of their thought.

In the context of interactive video, Nell Breyer (2011) has stated: "We can switch immediately from taking in one instant of time discreetly to many instants of time layered or merged together. ...our understanding evolves through individual, empathic translation and physical engagement."

There is some indication that self-reflective involvement in drawing is being more deeply appreciated, where drawing, in this instance, is a channel for the medium generally as a means of personal conversation. One 3rd year student has also been using drawing as part of an independent study of a ramshackle wooden house and its owner, where her drawing also interacts with poetic text as a means of externalising her dialogue with herself.

He cut himself with the wood, twice
She said And disappear

There's more than three persons here
His past, this I call one
He is two
She is three and myself is four



Figure 9. 3rd year students drawing two seated human figures, placed back-to-back, while moving slowly around them, repeatedly (2012)

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Figure 10. 3rd year student, V's use of drawing for a project outside of the curriculum (2011)



Figure 11. Stills from 4th year student, G's animated ink drawing installation as final piece for his project: *Physical Story* (2012)

Some 4th year students are now also using drawing independently, either as a main medium or as a key support medium. Such developments confirm that students have gained from the drawing experience, and can continue to engage in the program's familiar content through being more immersed in a medium which conveys strong implicit visual/material characteristics.

The research has suggested links between psychoanalytical references to thinking (Hélène Cixous) and a more phenomenological approach. In Martin Heidegger's *Building Dwelling Thinking*, a section (2001: 155) concerns not only how one preempts the passage of the body through space, but how one "pervades" space. If the research continues to develop through visualisation of thinking in relation to consideration of movement, time and space, the more practical or

applicative articulation of this understanding of space, as suggested by the above theory, will provide a direction relevant to a range of design contexts.

The main linking thread in the research between a variety of exercises and two groups of students with differing needs on the program has been the question of how one thinks in and through the medium, and by dint of thinking that results in seeable and readable material, in a semiotic sense how one communicates thought. Insofar as the transcription of linguistically presented or formulated ideas into a visual/material medium is nevertheless problematic, increased by teaching and learning in the context of English as a second language, the immediacy and subjective relative *warmth* of the medium of drawing has helped to facilitate this process.

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mcroft.contact@gmail.com

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