

This article comes from a paper entitled *Enactive copying : a First Person methodology for investigating thinking processes and the nature of knowledge gained from practice* which was presented at the Practices of Imitation: ASA 2009 Conference. The contents of this paper now forms part of the Author's forthcoming book *Drawing: the Enactive Evolution of the Practitioner* which is due to be published in June 2010 by Intellect books. The article is published with permission of Intellect Books.

Making Thinking Visible: The Method of Copying (2010) Etnofoor Special Edition on Imitation, 22:1

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Introduction

My main practice as an artist involves drawing and painting. I recently completed a doctoral investigation into the relationship between drawing and thinking after becoming interested in why intuitive creative processes are so difficult to express and why skill appears to be so undervalued in British Art School education in an era where concept so often takes precedence.

The early stages of my research revealed that many explanations about creative thinking in terms of *processes* involving invention, innovation and evolutionary change, did not adequately equate to practitioner's descriptions of *thinking through the medium*. These explanations were usually proffered by non-practitioners such as psychologists, philosophers or cognitive scientists. The practitioner's voice was often filtered through the investigative lens of methodologies designed to establish objectivity by reference to scientific method. Artists' accounts did not fit easily within these parameters.

After interviews failed to give me an in-depth insight into the particular qualities of other drawing practitioner's processes for myself, the option of engaging in a literal copying of another artist's drawing appeared to be the most direct way of glimpsing another that artist's experience. I anticipated as Franz did that

...it might be possible through copying a drawing, to closely observe the original artist's intent, process and product and to come to understand, even share, a bit of the creative spirit and intellect of the maker of the drawing that is copied (Franz 2006).

The question of whether it was possible *to embody another artist's thinking process by copying his drawing* did not lead my research, but emerged as my doctoral enquiry progressed from being *theoretically led to practice-led*. The decision to copy effectively made me the subject of my own investigation. By examining my own experience of drawing in the *First Person* I was taking myself out of a more conventional scientific investigation and exploring drawing as a First Person *methodology*. I could align this type of investigation with others in cognitive science and

consciousness studies which explored similar methodologies to expand how we investigate 'what it is like to be' (Petitmengen 1999, Gallagher & Shear 2000, Pickering 2000).

As a result, my experiential account became central to understanding how this question developed. It is the idea that our experiential accounts (of making drawings) can show us *what and how* we come to know from our experiences that might be useful in anthropological study, particularly because the discipline is already so well-versed with the problematics associated with First Person methodologies.

Discovering the need to research through the practice of drawing

Whilst historically, the development of drawing was intimately connected with the availability of materials, understandings about the activity have been influenced by the prevalent philosophies of the time. My investigation of the relationship between drawing and thinking might be seen as being pertinent to developments in the 20th century during which the activity was established a cognitive tool to facilitate and assimilate information (Tversky 1999).

Drawing as a medium through which to investigate creative thinking is pertinent because there is little in the medium that intervenes between the artist and the marks that are made.

Drawings are seen as a unique form of access to the thoughts of the people who make them. Indeed they are simply treated as thoughts (Wigley in De Zegher & Wigley 2001:29).

By contextualising how the drawing/thinking relationship has been accounted for by others and perhaps more importantly the means by which this has been accomplished, it is possible to re-focus one's interest from 'the drawing as an artefact' to the process that produces it.

I initially found myself considering the idea that the style of a drawing could reveal the nature of the thinking processes that made it - in other words, style could be analogous to mode of thinking and, by extension, its purpose (Thomson 1969). In this sense, cool or analytical linear, hard-edged and precise drawing might be considered the outcome of pre-determined and conventional cognitive processes. Warm or intuitive drawings on the other hand suggest informal, gestural and experimental attitudes to mark-making which involve no *a-priori* or forward-thinking processes (Rawson 1969 Thomson 1969 Perry 1992). The problem with this is that it implies that a practitioner knows in advance what he or she is doing and can choose to use a particular style accordingly. It fails to take into account how in practice, ideas often appear to emerge as the activity progresses.

I began to question whether it was actually possible to carry out a totally pre-determined drawing without the making process having an effect as one went along. Could it be the case

that the act of making would always interfere to change one's intentional or logical reasoning? Could the act of drawing change one's ideas? Moreover simply identifying a type of thinking by reference to a *visual* style did not adequately explain the complexities of the bodily processes required for different types of mark-making.

Even texts which described the notion of 'making as a knowledge constituting process' where thinking takes place *within the medium* (Galbraith 1999), whilst useful, also failed to make sense to the practitioner because the requirement for research to produce 'objectively' based deductions often meant that practitioners accounts are 'averaged out': the idiosyncrasies of their descriptions are difficult to categorise when using methodologically reductive formulas. Whereas case studies have in part allowed the practitioner's voice to be heard (Ghiselin 1952, Gruber 1989), what practitioners have to say is not necessarily straightforward to investigate. Gardner captured this dilemma by commenting,

Among the individuals who have proved extremely difficult to study under ordinary conditions are artists; such creative persons are few, display little sympathy towards empirical investigations, and possess skills of such fluency that they defy dissection and analysis (Gardner 1982:89).

As a practicing artist I found it easy to concur with Herival when she said that '*Most of what I had read about the creative process in the thought patterns of artists was through speculation by others*' (Herival 1997:64). Artistic practitioners were not the easiest of subjects to directly investigate for a number of reasons. How does one investigate the statement that '*Writing a play is thinking, not thinking about thinking*' (Bolt in Murray referred to in Galbraith 1999:138), or that '*The thinking that comes about comes from thinking on the paper*' (the artist Richard Talbot in interview with the author)?

It was only at this stage that it became evident that my research would involve seeking to locate a relevant methodology as much as it was about evolving new ideas, which considered the drawing process as (using Thompson's description of embodied thinking) *a whole organism event* rather than as disconnected and fragmented stages (Thompson 1999).

As my enquiry in the studio progressed, I gradually made more and more connections between what I was doing and how the neurobiologist Francesco Varela¹ explained emergent thinking as being *enactive*. Considering drawing as an *enactive* phenomenon allowed me to regard the drawing practitioner not as an individual entity operating in isolation from the environment but rather as *part* of an eco system in relation to the world around him or her. Varela describes enactive knowledge as being brought forth in the 'loop' of self-referencing processes and recursive coupling between the individual and their environment. It is formed *within* the process:

¹ Evan Thompson and Francesco Varela are co-authors of the text *The Embodied Mind: Cognitive Science and Human Experience* (1991).

We are talking literally about 'in-formar'e; that which is formed within. In-formation appears nowhere except in relative interlock between the describer, the unit and its interactions (Varela 1979:xv).

Varela questions the assumption that cognition is independent of the world and asks whether thinking is a matter of representation at all (Varela et al. 1991:150). Thinking is not a form of representation but a matter of *enaction* in which knowledge occurs from *knowing through* the body².

As a practitioner I found this particularly interesting because I could identify emergent processes as being *physical* events. I started to consider the possibility that knowledge which emerges from drawing might be 'brought forth' through our own recursive circular patterns of human processes and our interactions with our environment. It also prompted me to question whether we are essentially bounded in what we do as practitioners by our own capacities, such that what we do is not novel but *self-referential*.

It was only at this stage, that I became able to identify my research questions:

To what extent if any, can the drawing practitioner throw new light on the assumptions made about embodied thinking?

How is it possible within the practice of drawing to use First Person methods as a tool to investigate the notion of embodied thinking?

The decision to use the method of copying and some methodological considerations about doing this

Richard Talbot was one of a number of artists whose work I had earlier identified when spatial representation had been a possible avenue for my research project but there was also an underlying aesthetic attraction or connection that had drawn me to his work. Despite being erudite and thoughtful, the Artist Richard Talbot's account in interview about how he made his perspectival drawings had failed to provide me with an in-depth insight into the particular qualities of his creative process. The problem lay in the way that I could not get closer to understanding these qualities for myself by simply being told about them. I asked myself 'How can I reconstruct Talbot's process with a view to examining how he thinks as he draws? 'How can I inhabit his practices and take studio practice into active cognition to explore the notion of embodied thinking?'

² This assumption locates Varela within the arena of Biology of Cognition which broadly deals with human experience as wholeness. In this regard, he can be identified with others in Cybernetics such as Gregory Bateson, Margaret Mead, Heinz Von Foerster, Gordon Pask and Norbert Weiner.

Whilst it might have been possible to either stay within the linguistic boundaries of the interviews to develop the notion of a 'practitioner's grammar of drawing' or reconstruct Talbot's processes from his linguistic descriptions, I took the decision that literally copying one of Talbot's drawings might be the most direct way of glimpsing the experiences he talked about for myself.

Copying was not an arbitrary choice. It is a time-honoured method used by artists as a fundamental way to observe and learn and has been a necessary aspect of the training for practitioners in many cultures (Leeds 1984:42). My aim was to try to understand that artist's decisions through the logic and force of drawing. By doing this, I might discover something about an artist's approach that I could not have accessed from either looking at or theorising about the original drawing. As a 'visual to visual' model, copying might have the advantage of avoiding the synaptic jump one has to make as one moves from 'looking at' a drawing to making assumptions about the intentions of the artist. By choosing this option, I would be questioning *why* the method works rather than *if* it works, and trying to find out what stops it from merely being a transaction around style.

The decision to copy meant allowing my enquiry to be centred upon and directed by the act of drawing and there were some methodological consequences of doing this. Many of these issues arose as questions both before and during my time in the studio and whilst it is not practical to discuss these fully in this paper, it is worth mentioning the most pressing of these questions as they require navigation by anybody who wants to find things out for themselves through 'doing' things rather than conceptualising about them:

- What *form* does the *processual*³ nature of knowledge-making that comes with the use of a skill? How would I be able to identify what I could know from the unstable knowledge occurring in the loop of activity between artist and drawing take? I recalled that Varela had situated the idea of 'I' within emergent behaviour. He described how a *selfless* sense of *self* was located in the dynamical relations of the cognitive being in terms of *process*. The embodied mind could be found in how the individual emerges through cycles of processes constrained by the individual and his or her surroundings. One's mind is thus 'a coherent whole which is nowhere to be found and yet can provide an occasion for coupling' (Varela in Rudruaf et al. 2003:41). How did one practically locate and observe this mind which did not physically or functionally *reside* anywhere?
- How might one deal with the primarily philosophical condition of *self* in practice? If I was going to make myself the subject of my investigation, where in practice was my *self*? I recalled Hume's quandary that he could '*... never catch [him]self at any time without a perception, and never can observe anything but the perception*' (Hume in Varela et al. 1991:60).

³ I have borrowed this term *processual* from Depraz et al. 2003.

- Observing this process would be another matter. How would I be able to both live through and identify these processes at the same time? What part of my *self* would be observing my conscious experience and chronicling these processes? Am I separate from the *self* I observe?
- How could a situation of 'not knowing' with the head might be incorporated and valued in contexts which often require us to be certain and explicit?
- How did one deal with the notion of subjectivity during an investigation?
- I suspected that by re-enacting a drawing I would be aligning myself with Bolt's proposition that the logic which arises from practice offers 'a very specific way of understanding the world which is grounded in "material thinking" rather than in conceptual thinking' (Bolt 2004) How useful would the specificity of knowledge that is developed in the studio be to more general situations? Could I move from the specificity of one particular practice to form understandings about thinking generally?
- What distinguishes art research from simply being 'art'?
- What is the relationship of practice to theory?
- How is research through practice done?

These could not be answered without starting to draw. I took heart from Palmer's advice about the nature of research through practice:

If you start with a project, you'll find that you spend time seeking a theoretical framework to 'explain' the work. Theoretical works should address the same problem as practice, not attempt to explain or justify decisions made about the work. Unless you do this, you'll find that your 'theory' will be doomed to lack any literal coherence, as having been doomed to 'explain' your practice it clusters around the work rather than working through the work with any rigour. (Palmer 2003)

Using the method of copying in the studio

Take pains and pleasure in constantly copying the best things which you can find done by the hand of great masters...take care to select the best one every time...and as you go on from day to day, it will be against nature if you do not get some grasp of his style and of his spirit (Cennini 1954:15).

Copying as a method of learning has been discouraged in Western education over the last 50 years for reasons that it inhibits creative growth and is contrary to the concept of originality. Lowenfeld for instance suggests that one should,

Never let a child copy anything...because we will not only divert the child from creative expression but we will also hinder the development of his imagination, his own originality and thinking (Lowenfeld in Kozlowski & Yakei 1980:25).

As a consequence, there are very few texts by practitioners giving specific advice about copying as a form of learning. Most texts made only general reference to the method from either the historical perspective of art education (Bambach 1999, Aimes-Lewis 2000) or, (and this was usually negatively), in the context of children's education (Kellogg 1969, Gardner & Winner 1982). As I had no prior experience of copying, I spent 3 months copying a wide variety of drawings in museums and art galleries and allowed my choice to be led by what attracted my eye. Towards the end of this period I was made case studies of drawings by the artists I had earlier interviewed and allowed the method of how I copied Richard Talbot's drawing, *Glass* (Fig. 1) to emerge from practical engagement.

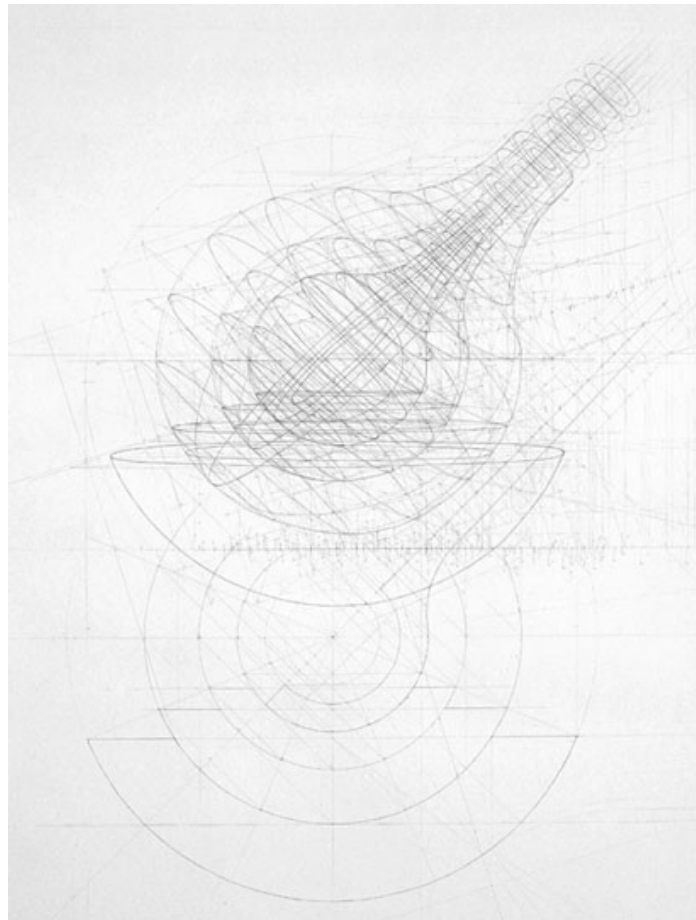
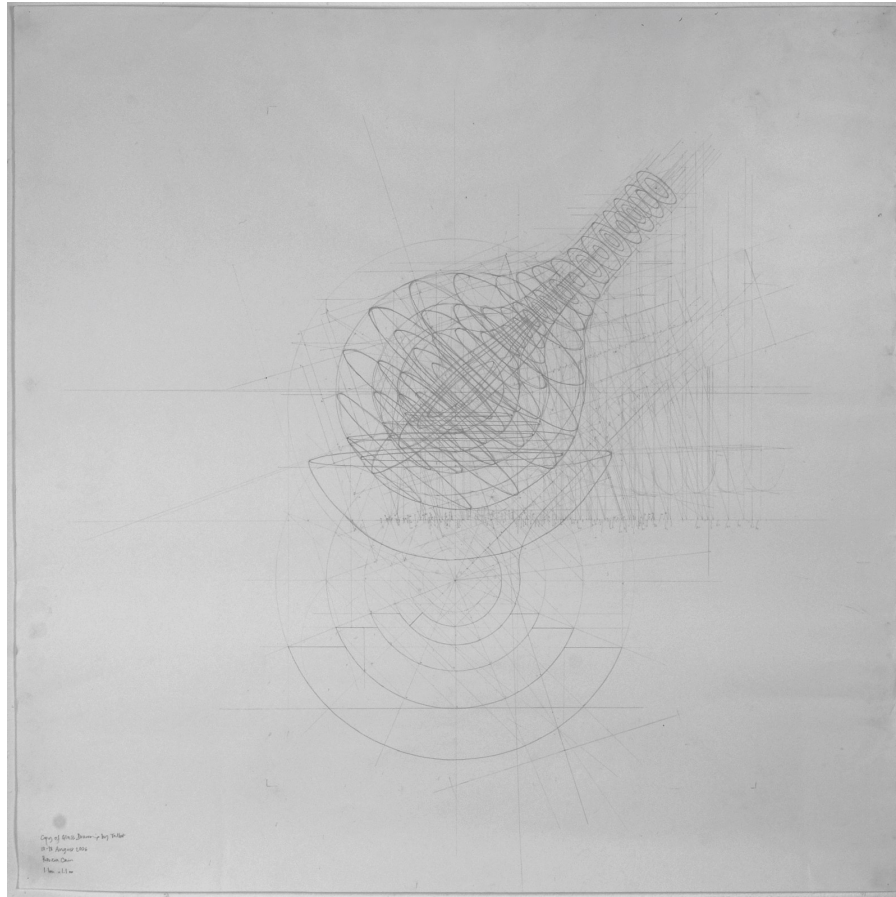


Fig.1 Glass by Richard Talbot

My experience of copying *Glass* is shown through a combination of recording and reflective analysis in the five (edited) narrative accounts below. These demonstrate how I have come to make sense of what I do: their quality and character demonstrate *what* and *how* I have come to know from the increased awareness of my own situation that has evolved through drawing

Narrative 1- Becoming a trained observer and displacing my habitual practices



*Fig.2 Glass - copy by the Author after Richard Talbot 1.1 x 1.1.m
3H and 4H pencil on Fabriano paper*

It took me a week and a half to make an initial full size copy of *Glass* (Fig. 2). Its complexity and size meant that the process was very intense and time-consuming. I kept a journal to record the experience and photographed the process. Initially I saw *Glass* as a brilliant technical drawing of various perspectival views of a real object. The task of reproducing it seemed impossible because I had very little knowledge about perspective drawing generally. I was also aware that I was trying to visually read the image as an 'object' both before and during the process.

Copying was not easy to start with. My mind was not restful and rather than labour with the careful reproduction of marks, I had a constant urge to experiment with the image and make it more my own. I started the drawing at the point where I thought Talbot would have started - with what looked like a plan (Fig. 3):

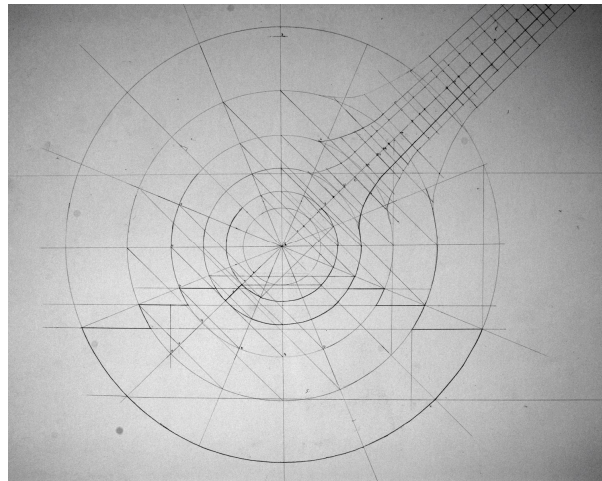


Fig.3 Glass: plan drawing by the Author.

After this I moved on to make lines that seemed to act as scaffolding that emerged from the plan. Many of the initial stages in the drawing involved the slow process of plotting lines in a fairly exact manner. At times it seemed like I was blindly following patterns and trying to work out with my head and body what their purpose was as I went along:

Excerpt from the Author's journal

...I am spending a lot of time trying to work out the role of each line and mark in relation to the others. It seems like I'm working backwards to try to pinpoint the point at which I can 'enter' the work.

At a certain point however, Talbot accentuated certain forms in the matrix he had created with freehand lines, which visually suggested that there was some change in the types of decision he was making to create them. By making these lines darker than others by going over them again in freehand it was as if I was affirming Talbot's decisions or choices (*Fig.4*).

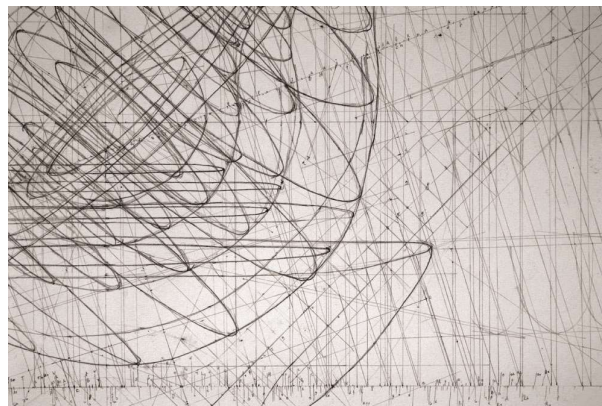


Fig. 4 Glass: different qualities of lines

The trouble was that I could not identify Talbot's decision-making process by reference to the quality of his lines. All I could identify generally was the way in which his conscious thoughts

must have intervened with making the line, so that he was playing 'in his head' so to speak rather than 'through his body'.

There was an overwhelming sense of construction to the way in which *Glass* had been made. Various forms seemed to have been developed not only by reference to the plan but also to other subsequent stages but the logic about where these began and ended and how they were put together was not immediately evident. When I tried to communicate to my supervisors what Talbot's constructive thinking process looked like and the way in which each stage was linked to the original idea in the plan, yet extended by reference to all other stages, I almost intuitively visualised this as a diagram (*Fig. 5*). I suspected that Talbot's process involved the interplay between himself and what he was drawing on the paper:

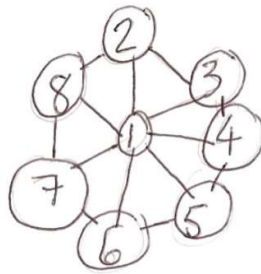


Fig. 5 The Author's diagram of Talbot's constructive model of thinking.

In comparison, my own drawings were usually made 'on the hoof'. Rather than letting a conscious overall strategy lead the process, I often simply started drawing on one side of the paper and became created as the drawing spread out from that point (*Fig. 6*).



Fig. 6 Glasgow Harbour #4 by the Author

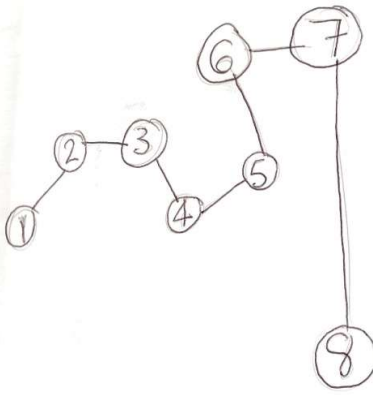


Fig.7 The Author's diagram of her own sequential mode of thinking.

Rather than constructive, I recognised my own manner of making as being sequential (*Fig. 7*). Re-enacting Talbot's marks created a conflict with my natural way of mark-making, something I would have to master if I was to learn anything about the mind of the other. This left little room for interpreting *Glass* my own way because that would mean I was making findings on my *own* terms. I started to see that copying to learn depended upon remaining on the other artist's terms, because nothing new could come from simply re-iterating an already known vocabulary. I noted in my journal that:

My findings from this experience are that:

- Perseverance and fortitude are required to copy.
- I have to put my drawing practice into the service of copying by quelling my own creative response.
- Copying takes me out of my own style or knowledge of drawing into that of another.
- Copying prompts a reflex in the practitioner to place the original artist within a tradition or context and to place themselves by reference to that context also.
- Copying raises questions about the differences between the original and subsequent copies.
- Problems arising in the process include dealing with the conflict between exact reproduction and the urge to experiment: wanting to play with the method without full engagement: finding the discipline necessary to stay with the method in order to allow 'knowledge to pass' between practitioners.
- There is a possibility that I am trying to find a way to 'get into' another's work by deconstructing it according to what is already familiar to me.

Narrative 2 – Bypassing the literal content – the difference between imitating and inhabiting

I say to painters that no one should ever imitate the style of another because he will be called a nephew and not a child of nature with regard to art (Da Vinci in Bambach 1999:83).

After the taxing experience of making a complete copy of *Glass*, and my impulse was to find a way of being able to describe more accurately what I needed to do in order to re-create Talbot's lines. I decided to compare the apparent fixedness of Talbot's lines with other more expressive and gestural lines by comparing the experience of re-enacting a section of *Glass* to that of re-enacting a section of a drawing by Rubens' as a way of exposing the qualities manifested in each and how these were arrived at (*Fig.8*). I chose to copy a section of a Rubens drawing because in terms of mark-making, it visually seemed to be opposite in nature to that by Talbot. Rather than simply discussing these apparent differences, my intuitive response was to compare the process of re-enacting each.

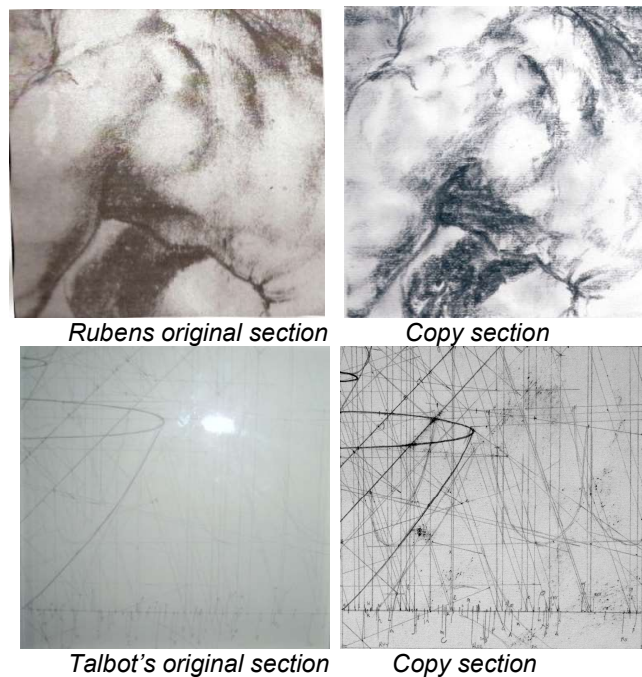


Fig.8 A section of Rubens' Study for Abraham and Melchizedek compared to a section of Talbot's Glass.

Part of this experience of comparison involved simultaneously jotting down in my journal what came to mind as I was doing this (*Fig. 9*):

The experience of re-enacting Talbot's lines seemed to be about:	whereas my experience of re-enacting Rubens' lines suggested that:
Intersections: placing: plotting. Some marks serve as the approximation for points: others rely on carefulness to create a certain length of line. There is an interruption of marks because of the use of instruments. New lines come from plotted trajectories. The lines serve as junctions to give meaning to the placement of other lines. Points in time are relational. The fixed points are the perpendicular and the horizontal. These are used to judge angles and positions for others. ...some are arteries from which others branch off... His notation is unconnected. I have to join things up to make sense. I have to be orderly to make sure I don't miss anything. I can't sidetrack the system as lines don't make sense then. I am looking for patterns to aid my understanding.	I am groping, dealing with outline, defining shapes. There is a fight between the processes of approximation and exactness that comes with 'eyeballing' his subject matter. The lines seek to find out form, but are replenished as more become established over the originals. There is a build up – the accretion of events. Nothing of Rubens' marks is accidental. The light-handedness of his lines evokes a sensitisation. I may not know the scale well and the image is awry but at least I'm starting to understand how to hold the chalk. Some of his lines are single and uninterrupted. I can see he has made a foray into the paper with a certain faith about what will arise. Other lines hover. I try to emulate their hesitations or adventurousness.

Fig. 9 Excerpts from the Author's journal

Making things explicit in writing *whilst* I was drawing enabled me to identify the distinct ways in which each artist relationally made his marks and how their respective decision-making processes differed. Re-enacting Rubens section revealed how his lines appeared to 'seek to find form' and their *relational* characteristic was determined by the precision of scale and tone. I found myself having to learn how I could alter the inclination of my hand to master the chalk to improve my understanding of *how* Rubens had made his marks.

Remaking the Talbot's section however, had involved the actions of placing and plotting. This was indicative of an activity that was not necessarily predetermined, but in which each mark served as *the next line of enquiry*. From this I began to see that Talbot's framework was not simply formed by the rules of perspective drawing but rather the way in which he made decisions about his next line of enquiry *whilst using* perspective drawing. Despite seeming 'softer' in tone I was surprised to find that Rubens lines were perhaps more concerned with exactness than Talbot's were.

It was easier to identify the alternation between instances of certainty and hovering in Rubens' line because Talbot's non-gestural lines were implacable. If I could 'read' this alternation when

re-tracing the lines, I could get a sense for myself of how the original artist had also alternated between focusing and de-focusing whilst making the drawing.

Once I stopped trying to concentrate on the exactness of the line and take less notice of the original drawing's literal content, a different focus of attention started to set in. When I was not so much trying to reproduce the line itself but a 'sense' of what it conveyed or contributed towards the whole, I stopped thinking self-consciously in a focussed way. This form of engagement took me beyond merely reproducing the image.

Being involved with activity forced my conscious mind to become quiet, and this was not replaced by anything explicit apart from the act of making. This helped restore the rhythm or fluidity of the lines which had been lost through a concentration on accuracy: emulating the sense of energy in the quality of a line felt more fluid than emulating detail by conscious concentration. When I reached this point, I stopped trying to direct what I was doing and the act of drawing seemed to take over: I allowed the activity to direct me.

It was as if I was reproducing the original artist's '*thinking-in-movement-in-the-moment*' or '*transformation-in-movement-in-the-line*'. In a similar way, the calligrapher's observation of movement in line is not only essential for the inspiration of original drawings but also for learning about the calligraphic line – 'the line with which to explore'.

From this I concluded two things: firstly that the object of copying was not to make a faithful reproduction. Instead it depended on *reproducing the action* required to make the marks and identifying the subsequent effect this had on one's mindset as a result. Secondly, it was harder to physically investigate 'non-gestural' drawings because there was less for the body to understand. Because of this, it would be necessary to find a way of exploring Talbot's 'non-gestural' drawings in a deeper way. I noted in my journal that:

My findings from this experience were that:

- Concentrating on technical reproduction inhibits my ability to reproduce the quality of the line and makes the resultant marks sterile.
- Copying a 'non-gestural' mark is more difficult to connect with because I cannot bodily put as much of myself into the activity as I can with a more 'gestural' mark.
- Copying a 'non-gestural' line can make the experience of copying onerous and hinder a more immediate understanding of the process which lies behind the original being made.

3. Breaking down key stages in Talbot's thinking process

Having discovered that Talbot's lines relationally created points for his next line of enquiry, my instinct was to investigate what was creating the coherence between these stages in a series of acetate drawings. I isolated nine stages as I saw them, identifying each in different colours on separate sheets of acetate paper (*Fig.10*). By laying each layer one on top of the other I could play with visually deconstructing and reconstructing the drawing either as a whole, singly or in a group of stages.

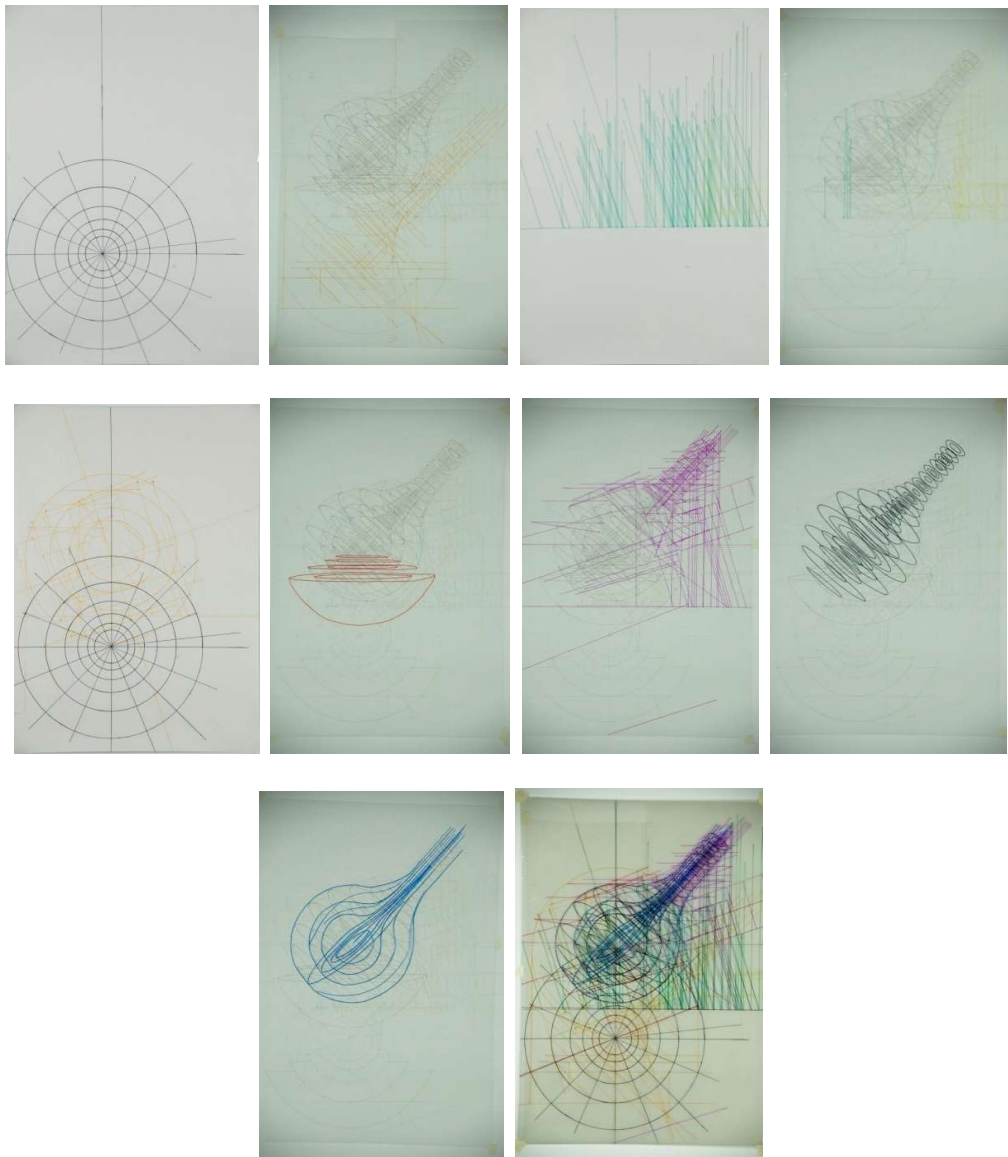
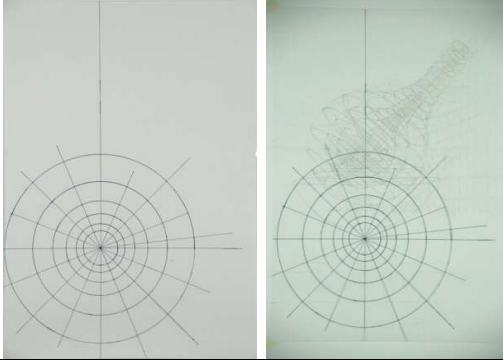
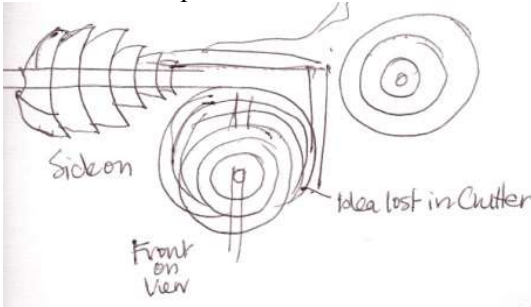


Fig.10 Nine key stages in Talbot's process outlined in acetate drawings together with a composite image.

I photographed each image separately and with the others to experiment with how each stage related to the others and incorporated these into a journal that instead of being hand-written was created as a table on the word processor.

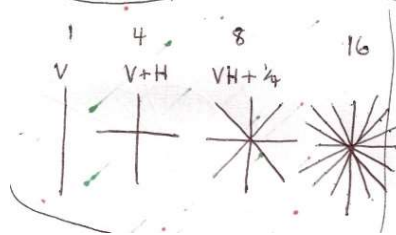
Whilst making the acetate drawings, it became evident that I would need an understanding of the conventions of perspective drawing if I was to assess whether Talbot was using this system conventionally or not. I had conversations with two architects at Glasgow School of Art to clarify aspects of perspective drawing because of my inexperience of using the system and added their comments to my journal. But it was the sketches that I made during our conversations to interpolate key points of Talbot's process into drawings that were particularly effective in explaining Talbot's process to others. I added these to the journal also.

My journal entry for stage one for instance indicates how Talbot was making decisive decisions about scale and proportion during the plan stage, but also used the forms that were created to leave a space open for opportunity, demonstrating that his thinking was also not fixed at this point (*Fig.11 below*):

Stage 1 : Plan - Creating a space of opportunities	Questions arising from the investigation
	
Purpose To create a base for the rest of the drawing	
Initial observations The forms are simple. The plan is made partially by machine (compass) and tool (ruler). Talbot has honed his concept to the abstract by using the outlines of five concentric circles as a starting point. This encapsulates his concept - five concentric circles inspired by a <i>Glass Armonica</i>. The plan represents the reduction of the 3-D object to a 2-D format but still retains a sense of the object. How else could this have been represented?  I think his idea is to develop the circles in a relational way.	What are the conventions of plan drawing? Does Talbot use the plan in a conventional way? <i>The way in which he's using the plan is appropriate in this context. It's a transcription of reality from which he's giving us a clear definition of facts rather than abstracts. It's quite factual.</i> What would happen if it was not so fixed or exact?
What kinds of decisions is Talbot making here? What are the key qualities? What is this stage doing in terms of thinking? What is his method?	

He's *setting up* - showing us his original idea. He's setting up a layout, base, site or anchor. His decisions are visually basic in nature. They involve putting down, plotting, measuring, emplacing, establishing. Creating a fixed anchor - some sort of holding place.

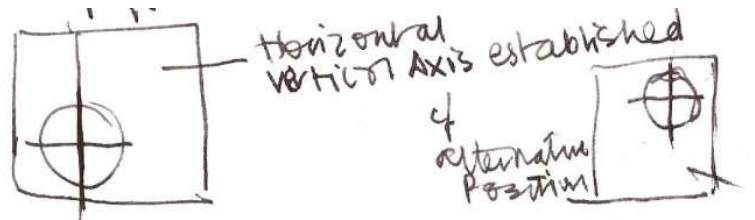
What is his methodology? His methodology involves the relationship between five circles. Each circle is divided into 16 parts with a ruler:



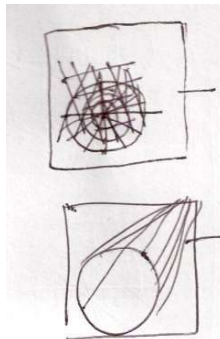
He uses pencil and line throughout the drawing. He makes parts of the plan more visible by making certain lines more tonally pronounced. The clarity of the geometry and the exactly measured lines convey the fixedness of his idea.

His decisions are fixed in some ways and open in others.

There is an exact sense of proportion housed in the plan in terms of the circle's shape and orientation on the page. This has consequences for the scale and space of what will be developed, but the orientation of the basic form is still left in abeyance - it could still go in any direction.



Talbot is making major decisions which affect the proportion and nature of things to come. Placing the plan on the paper is a decisive act which will affect the space and scale of subsequent developments. This creates particular spaces in which to develop the drawing - for example the space on top of the plan or the empty space above it.



Talbot is creating a space of opportunities. They are not fixed at this point but it is possible to begin to visualise opportunities by working with what has been put down in the plan. He's setting up the plan so that he can play with this space by reference to what is 'inside' and what is 'outside'.

When is Talbot likely to have made certain lines in the plan more visible and what purpose does this serve? Is it to clarify relationships or give 3-D depth? What are the qualities of these decisions?

(n.b. I want to look outside the drawing to check on my knowledge about perspective so that at least I have some idea of the basic building blocks I am playing with).

Fig.11 The Author's journal entry investigating the plan stage of Glass

Each stage was frayed at the edges because the beginning and end of the process was not immediately visible and was often couched in the projections of the previous or following task. Because of this it often felt as though I was searching for answers with my head rather than allowing the process of drawing to tell a story. By asking 'What is this stage doing in terms of thinking? What is his method? What kinds of decision is he making here?', I was trying to make sense of each stage through a conscious means as well as letting the action of drawing generate answers.

To re-enact Talbot's lines I needed like him, to interrupt the process with conscious thinking - his line *required* me to use my head in the experience of reproducing it. Talbot's mode of working or '*transformation-in-movement-in-the-line*' was the way in which he consciously intervened in the physical process of making his lines. This arose from the interactions between the conventions of perspective drawing and the independent decisions he made. By drawing out each stage, I had started to get a sense for myself of the decisions Talbot was taking and how the conventions of perspective limited his choices and imposed themselves as a physical presence with which to think or go against. Each stage showed me something about this relationship.

I had learnt that Talbot's process was to allow the conventions of perspective to build a framework for him, in which he could improvise with opportunities that arose as that space was being formed.

Narrative 4 - Mining the elements of Talbot's process through sketches

Having recognised that Talbot's moments of determinacy and indeterminacy would be better perceived along 'paths of observation' rather than points (Gibson in Ingold 2007), I decided to investigate where his opportunities lay in the continuum by moving through a drawn sequence of sketches. I explored these opportunities in a drawn narrative which incorporated an account of my own thinking process as I made the drawings.

I drew out Talbot's method to demonstrate his points of attention between something that was fixed or predictable and something that was generative or gestural. For instance his use of a circular plan perhaps appeared static because of the way it held a space in tension, but his circle became dynamic as soon as one added lines, because these created imbalances and invoked in me a response to put right what I saw (*Fig. 12*):

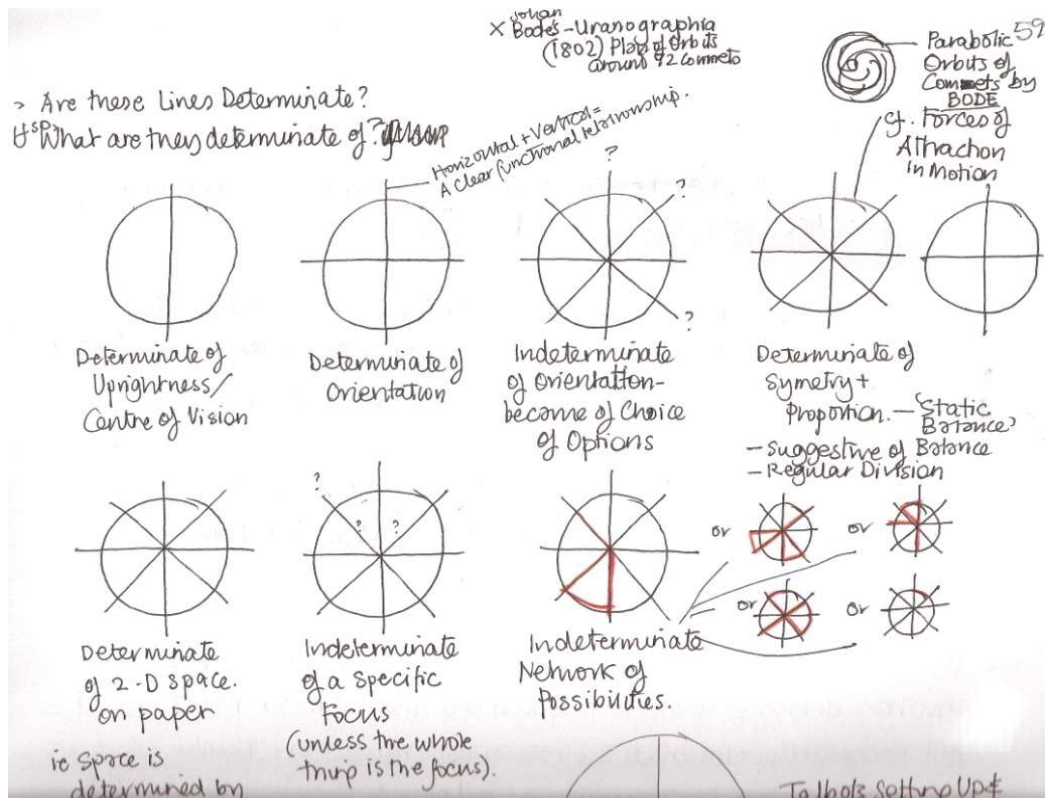


Fig.12 A sequence of determinate and indeterminate effects that come from intersecting a circle

Going beyond the rules of perspective, I experienced for myself what it was like to create the new space of unanticipated opportunity that occurred from the innocuous act of connecting points with lines. As I joined up the points in Talbot's plan, new spaces were immediately generated on top of (or below) the plan and this effectively changed the intervals, pattern and rhythm of the whole drawing (Fig.13):

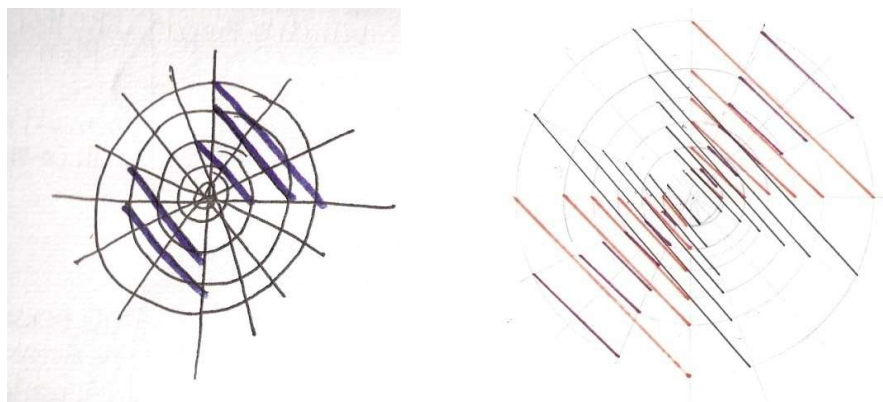


Fig.13 Creating new spaces from intersecting lines in the plan

I remembered from previous reading, how the psychologist Marion Milner, had in her own First Person account of learning to draw, described a similar experience of joining up lines and the effect this had on her as a result:

I found that to draw the line of one object with fully felt awareness of the line of a neighbouring one and of the patterns of space that they mutually created between them, seemed as potent an act as laying a wire across the terminals of a battery: and the resulting flash seemed to light a new world of possibilities (Milner 1971:12).

By experimenting with other ways of developing a drawing from a network of coordinates (Fig. 14), I started to question whether growth required a structure and if so, whether this had prompted Talbot's development of *Glass* even if he may not have been consciously aware of it.

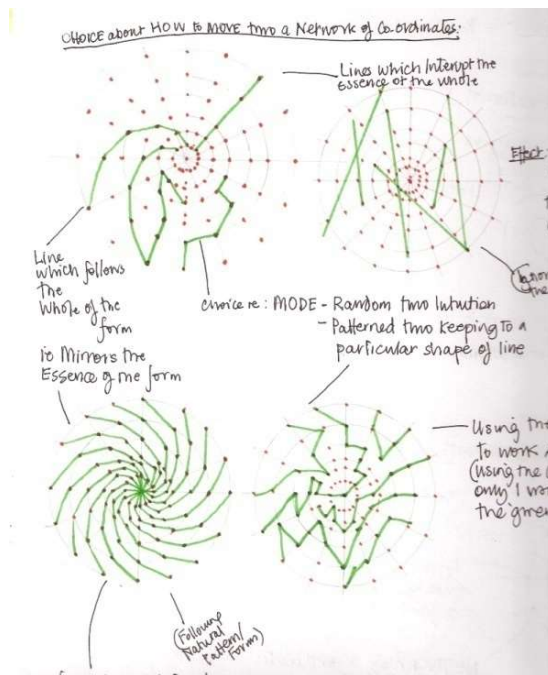


Fig. 14 Alternative ways to intersect points of a circle

Different senses of development could be experienced when one experimented with organised and random ways of developing a structure (Fig.15).

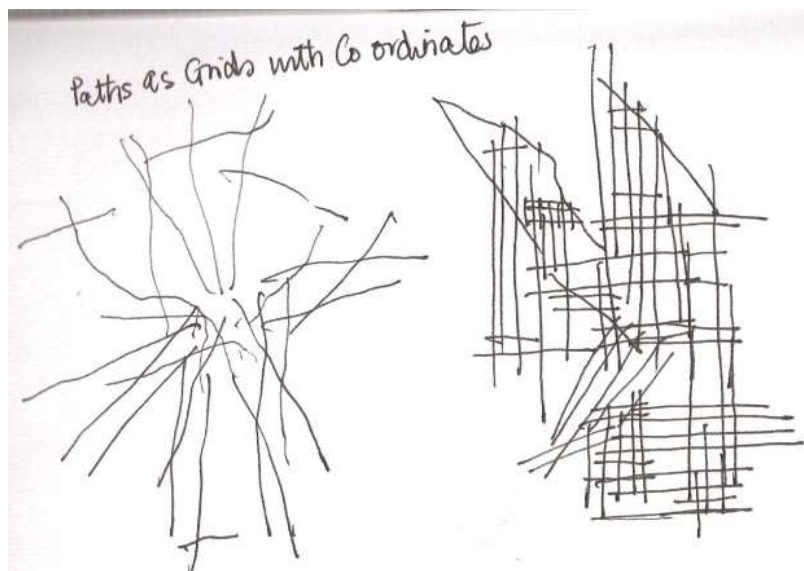


Fig.15 Visual differences between grids made by organised and random methods

If I used a random process, it was as if there was nothing to react against when making the marks. Developing lines in a more coordinated way somehow allowed me to gauge more clearly how the development was evolving whilst it was evolving and I felt as though I was somehow putting things in order by doing this⁴. I began to consider that *chance* might play a part in the evolution of a drawing whether or not one felt in control of one's process, but that aspects of this might only be recognised if one provided a framework through which to identify this:

...this suggests...that chance operates within the fence we throw around it. Outside of that fence, the concept of chance is, in fact, meaningless. To say that everything in the universe happens by total chance is to say nothing at all (Flint in Walwin & Krostatis 2006:20).

It was as if one's development could only be understood through a structure of one sort or another, and I began to consider whether the framework for understanding change might have to be designed by oneself because only by doing this would one understand what one recognised as a new development by reference to one's current knowledge. More fundamentally, I came to see how Talbot's underlying motivation could be said to be to establish some kind of eventual equilibrium from his own part in the processes which developed between the known and the unknown. The line cannot help but interact with the space about it because it is an individual *in relation to* other things i.e. it always relates to something else even if this might only be space around it. What Talbot seems to be creating is a framework in which he can play with this very concept: a process through which he can play with the balance of oppositions to form an equilibrium

It seemed as though by using perspective, Talbot might have found a way of safely inviting in the unknown on *his* terms and self-managing a mechanism through which he could engage with the unknown. I wondered about his ability to control an experience as he engaged in it, making it safe for himself in so doing. I thought about how relevant it is for artists to develop the ability to live through the experience of creative change safely, so that we can emerge relatively unscathed yet knowing ourselves better

I had pushed each of my findings by drawing them out to probe them further and by so doing , had extended the method of copying away from its reliance on an artefact, to rigorously explore processes of development instead. By going back to basics in the sketchbook and 'listening to the line', I started to see how relationships between drawn elements were formed and how another person could establish new narratives or spaces and account for the moments of

⁴ I was reminded by this of the scientific notion of chaos which describes dynamic behaviour in deterministic systems, and how unpredictable complex structures emerged from divergent but constrained trajectories. I wondered if this might also be used to describe processes in drawing practice.

getting new ideas. From this furtherance, I was also able to reflect on my own practices in new ways.

5. Wall drawings - taking what I 'knew' back into my own practice

The final part of my exploration of *Glass* involved taking what I had 'bodily' come to know from the ways I had re-enacted *Glass* back into my own practice of drawing. Almost as an afterthought, I decided to see what would happen if without thinking or planning I started drawing, developing aspects of what I had physically done whilst interrogating *Glass*. I produced a series of 'wall drawings' so called because of the technique I borrowed from my own practice of displaying each piece of work on the studio wall as it was completed in order to visually absorb what I had done.

This was not a matter of taking what I had learnt into my *own* drawing practice on my own terms, but extending the interrogation of Talbot's methods by remaining on *his* terms and seeing what developed. The important thing was not to think about things too much but to play. This was hard to do after the intensity of the sketchbook exploration because it was difficult to locate an unintentional mindset at a time when I was required to conclude my enquiry for reasons of time.

I experienced a hopeful anticipation that what I had learnt from re-enacting Talbot's process would have somehow become bodily encased in me and would miraculously become evident in these drawings (*Figs. 16-18*). At the stage of my enquiry I found the most difficult in a personal sense, I discovered that although I had spent my enquiry focussing on Talbot, the real object of my investigation had been to discover aspects about *my own process of thinking* through my understandings about those of Talbot (*Fig. 19*):

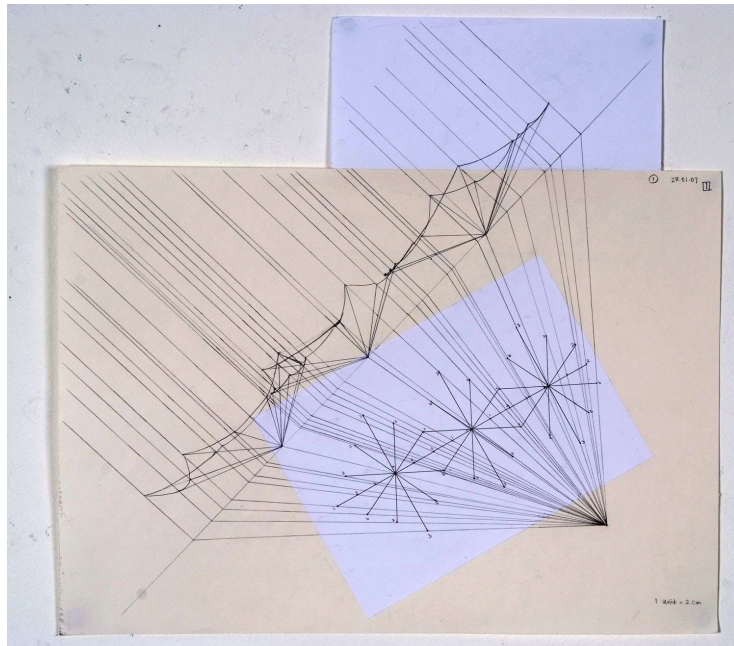


Fig.16 Wall Drawing 1

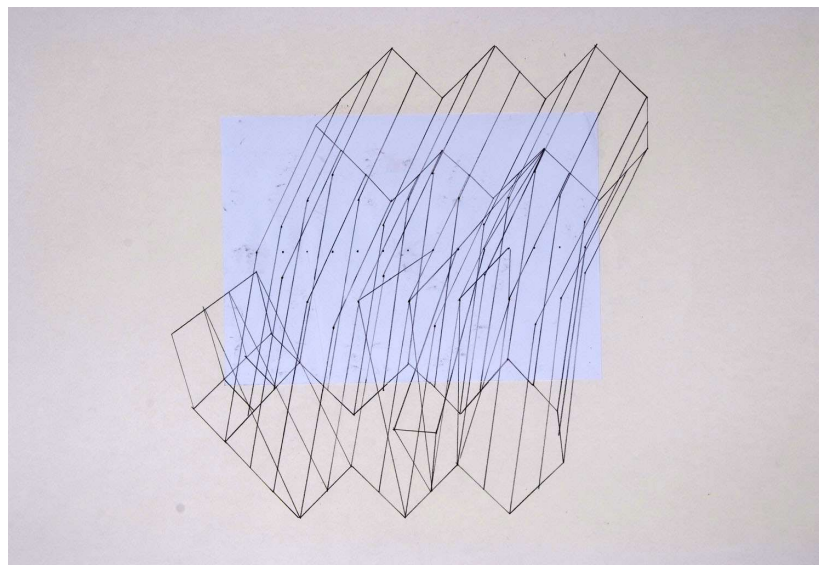


Fig.17 Wall Drawing 5

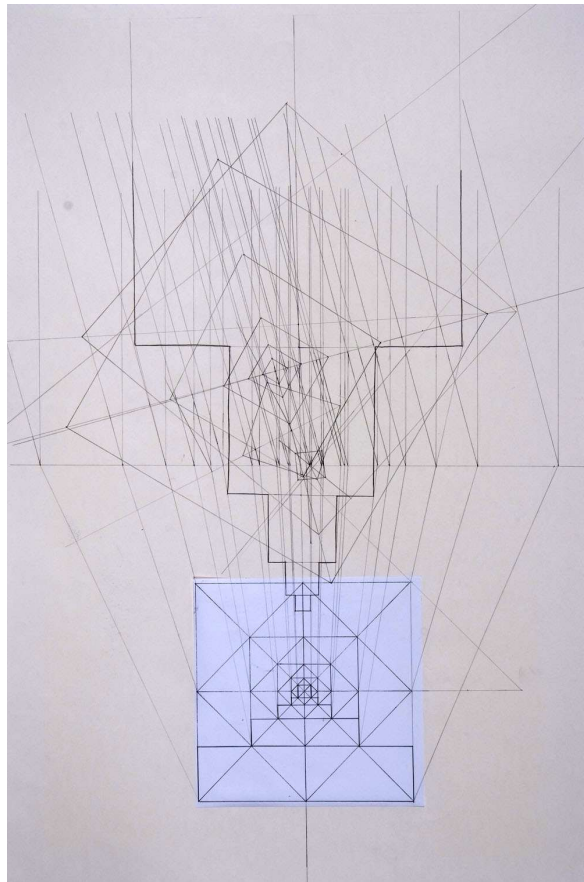


Fig.18 Wall Drawing 16

I have struggled to find what it is that I 'know' about Talbot. It is hard to tell what has been physically transferred. Although my focus has been on what Talbot does, I've not concentrated closely enough in endeavouring to follow his path. This is the same problem I had when I began to copy - struggling with the impulse to make something my own - veering from somebody else's path to follow my own terms instead of his.

It feels like I've been going 'wrong' in these drawings. I've not got the same type of concentration Talbot uses: my mind is all over the place. It's not so much that I can't apply myself: I just keep going off on a different tangent. This whole process is pressurised by the requirements and time constraints of my research. This has been the lowest point of the research for me. The problem comes from expecting some sort of result but quite obviously, contemplative playing is at odds with producing outcomes.

The notion was to go off and play but this part of the experiment has had so much less structure than the others. There's a huge difference between the parameters given by the orthodox method of copying and being free enough to make this kind of work. Making

these wall drawings is the nearest I've come to letting myself go but I somehow feel as though I'm avoiding the main point, whatever that is....

I feel frustrated and that I've been wasting my precious time. The things I am learning are more about my own capabilities than Talbot's principles. I am coming to see that what I have been doing is not so much learning about Talbot, as learning something about myself. I have been trying to discover aspects about him but I'm actually showing things about *myself* through him. Is this the nature of embodied thinking?

Perhaps I should just accept that I'm looking at my own creative process. At each stage I have shown myself about my own process *through* my own process. Perhaps as I continue, I need to be aware that my focus is about trying to understand myself.

In relation to these wall drawings then, it's not relevant that they go off the point - they go straight *to* the point if the subject matter is myself because this shows the nature of my own embodied thinking - the angle of my enquiry changes - it's not about 'can I perceive *his* embodied thinking?' but 'can I perceive *my own* embodied thinking?' The question becomes '*What have I learnt?*'

Fig. 19 Excerpt from the Author's journal

Conclusion

The end goal is to acquire "a style individual to yourself", but it must be carefully nurtured (Ceninni 1960:15).

My initial thoughts about *Glass* - that it looked like a brilliant technical drawing of various perspectival views of a real object having re-made, it were replaced by the notion that Talbot had been engaged in a speculative and elaborate fantasy based on an object in the real world. It wasn't until I had done this that I started to get an understanding for myself about the way in which his *process* had contributed to its final form. I wasn't drawing a real object: I was drawing the way in which Talbot evolved and managed his processes in this constructive undertaking. I started to question how something so apparently 'representational' was not about what I had imagined, and was persuaded to see that *Glass* was a drawing about a drawing.

As I made these narratives I realised that I had formed these understandings by using drawing as a means of reflection. My understanding of what each narrative means comes from

recognising the differences ways in which I reflect as I draw. At this point I became able to distinguish between the content of the reflective act (i.e. *what* I knew about the relations between the lines) from the reflective act itself (i.e. *how* I was watching myself making comparisons as part of the drawing process drawing). Writing journal entries assisted me to create *narratives* in which I constructively interpreted how I made sense of my experience and the judgements I made about my own learning in so doing. This involved 'making difficult events meaningful by putting them into an interpretive sequence' (Reismann 1993:v) in which I become part of the emergent text.

I am well aware that my findings are applicable to me in these specific circumstances. But I am beginning to see from this example how this methodology might work: the benefit of putting myself through this type of examination has shown me how it may be possible to interrogate each drawing in a unique way according to the individual and his or her singular circumstances. Like Varela have tried to develop a 'skill of phenomenological description' (Depraz et al. 2003).

In the model of *enactive copying* learning is demonstrated in the way in which the practitioner evolves methods that (s)he perceives as being insightful. Each stage is built on previous stages. Methods change in response to the findings which emerge from those changes: what is learned is tied equally to both as a whole. My findings about Talbot developed alongside the methods I used to investigate his process. My understandings evolved through the circular relationship between these two: *what* I know is bounded by *how* I know it and this I suggest, exemplifies the nature of experiential knowledge.

Physically re-enacting these processes can demonstrate what it means to engage in the particular qualities of this inter-subjective conversation because the structure of the experience gives meaning to one's findings. What is meaningful is formed in the inter-relations between what one does and one's understandings of this. The value of this lies not in analysing the drawings of others but in *embodying learning*. From this we make connections not previously recognised before, moving further to make sense of other unconnected situations:

As an individual becomes conscious of the relational laws in drawing, he will begin to take notice of similar relationships in experience. The course of the stream works both ways; experience in drawing - arranging line, creativity form and space, relating parts, exploring various materials - will slowly act upon the vision of the sensitive individual affecting how he sees, even what he sees. Conversely, natural experience, as the ability to absorb and to see is developed, will give insight into the internal nature of the picture (Hill 1966:36).

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