Why the culture of academic rigour matters to design research: or, putting your foot into the same mouth twice

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full paper ° abstract

Knowledge and Performative Rigour

For many people the concepts of "truth" and "knowledge" are intertwined. It would seem to make sense to say: "those things I hold to be true are also things that I would claim to know". And yet, we also have knowledge of things that are not true (lies and fantastic animals) and hold things to be true based on knowledge that we subsequently find to be false (Santa Claus). In our daily lives these matters are generally cause for mild concern, humour and occasional reflection. We play games with our eyes just to confirm that what we see and what is out there do not match in any final way. We tell fibs and forgive our deceptions of others with remarkable ease. We jump to wrong conclusions with gleeful regularity and anticipate that much of the time our understanding and knowledge of the world around us is radically faulty.

And yet, as soon as we enter our "serious" or "professional" worlds, our levels of inspection, assessment criteria and grounds for making claims shift from an everyday softness, to a special hardness or rigour. In our "serious" worlds, knowledge is a special category that is supported by special devices of inspection, certification and continuous assessment. The turner, at their lathe, does or does not perform the task; the comedian on stage either is or is not funny on the night; the academic either convinces through argument or does not. In this performative mode, we can establish the "can-do-ness" that is the very source of the word "know". What we "know" in this sense is what we "can do". This form of knowledge, in terms of its certification, is formal and frequently cruel. The high-jumper who raises the bar and fails the height is judged as not being able to do and hence as lacking the "knowledge" of that height. Just as the corpse is known to be a corpse by achieving its state of rigour, so the sportsperson is known to be a champion by achieving the state of knowledge that is undeniable: they did jump the height. The obvious proof by exception here is shown in our strong resistance to ambiguous outcomes in performative knowledge events: we call for replays; we argue for days; we seek to have the rules changed. We are very rigorous about our need to certify genuine knowledge about performances. We culturally pursue "cheats" to their grave and beyond. The headline on the *Newcastle Herald*, Monday, June 3, 2002, reads: "Death of a cheat - But Waugh says we should forgive Hansie". The story relates the death, in a plane crash, of Hansie Cronje, the disgraced former South African cricket captain.

In this sense, rigour, in terms of knowledge, arises out of our capacity and need to determine the actuality of actions as performances. That is, it is the "form" of "perform" that allows us to determine whether or not the state of can-do has been achieved: has the "form" been matched in the sense of completed (per); has the opera singer achieved the state of can-do that matches the form of opera? Within the active cultures of Australian Aboriginal people, there exist recent documented accounts of highly formalised critical performative knowledge practices. In one case, the funeral ceremony of a particular tribe was set against a parallel funeral ceremony in which another tribe that shared the same myths built a paradigm or comparative model against which the "real" ceremony was tested. The particular construction of each figure within the ceremony was investigated with great rigour. One figure was found to be faulty because the person making the figure did not display the true knowledge or "can-do" in his figure due to his lack of concentration bought about by his recent episodes of drunkenness. He had failed to carry the form all the way through to its completion or forming.

These cultural systems of rigour are universal in their implementation; wherever there is the

comprehension of action-as-forming, there is comprehension of a critical doxa or paradigm even if such critical/comparative forms are implicit or hidden in the gestures of rebuke of a master-craftsperson. In the case of Design, in its performative dimension, there is a vicious system of criticism that asserts a kind of inspection that tolerates very little diversion from the demands of the rigour of forms. The very effort to transcend forms and innovate indicates this circle of formal suspicion. For objects to "successfully" perform in the Design domain is an almost impossible task as the chattering designers-as-critics rush to question and probe the failure of an object to meet its form. The general way-out, of course, is that time-as-history will have the ultimate say in the performance of an object and hence the ultimate claim to can-do or knowledge is put off rather than sustained. This putting-off indicates the urgent need for the formalisation of the existing understandings of rigour within Design practice. That is, Design needs to make a text of its practice. The beginnings of such a text and formalisation of rigour in practice can be found in the long tradition of master and student which has left us as a series of prompts and responses leading to rigour. An example of such a moment of performative rigour can be seen in the following account of practice within the Bauhaus.

[A] student told Lothar Schreyer [Schreyer,1996, p. 120] that, believing abstract painting to be complete nonsense, he produced for Kandinsky a painting that consisted of nothing but a white area. "Master Kandinsky," he said politely, "I have finally succeeded in painting an absolute picture of absolutely nothing."

Kandinsky took my picture completely seriously. He set it up in front of us and said: "The dimensions of the picture are right. You are aiming for earthliness. The earthly colour is red. Why did you choose white?" I replied: "Because the white plane represents nothingness." "Nothingness is a great deal," Kandinsky said, "God created the world from nothingness. So now we want . . . to create a little world from nothingness." He took brush and paint, set down on the white plane a red, a yellow and a blue spot and glazed on a bright green shadow by the side. Suddenly a picture was there, a proper picture, a magnificent picture. (Whitford, 1984, p. 98)

This example of performative rigour may be taken as an example of what John Wood describes as "opportunistic judgements". In his paper, "The culture of academic rigour: does design research really need it", Wood draws key distinctions between two knowledge worlds: one, the world of Crafts-guilds where knowledge is seen as "result-oriented" and task-based" facilitating "situated actions and judgements"; the other, the Monastic world where knowledge is seen as "text-based" and "truth-oriented" serving "to validate and to fortify belief" (Wood, 2000a, p. 45, fig.1). While it is always possible to define two worlds as if they were two fundamentally different worlds with different ontologies, such a definition would seem to be in the service of only one of the two worlds so defined. In the case of Wood's two worlds, the devices he uses to describe his two worlds are the devices of the Monastic world. That is, Wood seeks to use the rigour of the Monastic world to elevate and support the world that he has defined in opposition to the Monastic world. His arguments are aimed at the validation of the Crafts-guilds through the establishment of a particular truth value determined through the rigour of the Monastic world but located outside of the book world.

Historically, the culture of design education reflects an uneasy liaison between the medieval monastic ("Book") and the crafts guilds ("design studio") traditions. For this reason it has been difficult to integrate both modes of knowledge in design education. Common misunderstandings about "scholastic rigour" are symptomatic of this confusion. "Rigorous" writing is fundamentally rule-based and organisational, and can therefore be at odds with the situated, opportunistic judgements involved with much design practice. We should therefore re-design academic writing protocols for design education. (Wood, 2000a, p. 44)

Surely there is rigour in the Kandinsky example, and surely this rigour is open to being determined within the book world? The Kandinsky example certainly seems opportunistic in the sense that the opportunity arose, in the studio, for the display of mastery and the re-assignment of the identity of student to the would-be-master who dared to take up the master's broom. However opportunistic in terms of incidental this judgement-event may seem, the

formalisation of this moment should not be missed. Kandinsky cultivated just such a relationship of knowledge and knower and what might be known. His extravagant claims about abstract painting form a pathway to knowing that is readily understood as provocation. Such provocations are common not only to the world of the Design Studio, but also to the Academic Study. Each of these has a critical structure of formal rigour that sustains the reality of such a way of knowing, the possibility of such a way of knowing and the verification that such knowledge has been achieved. That is, the Monastery and Guild are alike in their determinations of rigour. However, just as the Monastery has elevated itself as a world of knowing with special features, so the Design Studio has elevated itself as a world of knowing with special features.

The Bauhaus, mythological in its importance, sounds much less auspicious when renamed "the making house". The same is true when we exchange the semi-magic term "studio" for its companion term "study". A study is a place where intellectual contemplation takes place; a studio is a place where artistic making takes place. One room is for theory and abstract matters, the other is for practice and sensory matters. We enter each space already disposed to construct things or contemplate ideas and yet in each room we are making. By attending to how we name our working spaces we are able to shift attention from expected purposes towards the possibility of new ways and understandings of practising. By colliding studio with study we can arrive at a composite making place: Studio Theoria. Here we may see ourselves work as we work. (Russell, 2000, n.p.)

Studio Theoria

Wood seems to be calling for something like a Studio Theoria in his elaborations on the kinds of knowledge he sees arising from a shift away from academic rigour towards studio rigour. In a reply by Wood to a posting by Ken Friedman on the DRS e-mail group, Wood proposes "that a radically revised process of 'viva' be used at the centre of [PhD] assessment. I am calling for the recognition and nourishment of a kind of shamanic/managerial wisdom that exists within the practice of design." Wood further proposes:

we recognise non-alphanumerically represented knowledge + performative judgements + outcomes as a more central aspect of the PhD. . . . I was also thinking of a more embodied notion of philosophy itself. This is not to refute western thinking in any absolute way, but is a faltering attempt to call for the development of a kind of dynamic logic that has been difficult, arguably, since Plato. (Wood, 2000b)

Plato is the exemplar of a "more embodied notion of philosophy" because of his general Socratic dislike of writing things down. Burnet, a Plato scholar, offers this instructive account:

As we know, Plato did not believe in books for serious purposes. In the Seventh Epistle he complains that, even in his lifetime, some of his hearers had published accounts of his doctrine of the Good, which, however, he repudiates. The passage is worth quoting. He says:

There is no writing of mine on this subject, nor ever shall be. It is not capable of expression like other branches of study; but, as the result of long intercourse and a common life spent upon the thing, a light is suddenly kindled as from a leaping spark, and when it has reached the soul, it thence-forward finds nutriment for itself. I know this, at any rate, that if these things were to be written down or stated at all, they would be better stated by myself than by others, and I know too that I should be the person to suffer most from their being badly set down in writing. If I thought they could be adequately written down and stated to the world, what finer occupation could I have had in life than to write what would be of great service to mankind, and to reveal Nature in the light of day to all men? But I do not even think the effort to attain this a good thing for men, except for the very few who can be enabled to discover these things themselves by means of a brief indication. The rest it would either fill with contempt in a manner by no means pleasing or with a lofty and vain presumption as though they had learnt something grand (241 c-e).

This is not mystery-mongering, as has been said; it is simply a statement of the true theory of all higher education. To be of any use, philosophy must be a man's very own; it ceases to be philosophy if it is merely an echo of another's thought. The passage is also salutary warning to the interpreter of Plato. He may, in a measure, recover the dry bones of his deepest thought;

the spirit of it is less easy to reproduce. (Burnet, 1950, pp 221-22)

Plato offers one possibility that books may serve: "But I do not even think the effort to attain this a good thing for men, except for the very few who can be enabled to discover these things themselves by means of a brief indication." This brief indication is the real road to knowledge inasmuch as we expect understanding to be the companion of knowledge. We can go over and over the same ground in our studio teaching and still fail to realise understanding, through indication, in most of our students. This failure has nothing to do with books nor academic rigour. Rather it has to do with the absence of the moment of indication for the student. Such moments of indication are no more present or possible in any form of knowledge discourse. Zen may seek to focus just on the indication even to the point of trying to do away with the mediating indicator, but in doing so, Zen is benevolently indifferent to all forms of knowing as content. This means that Zen embraces all ways of knowing as ways of knowing even while privileging absurdity. In Zen, the spark is not so much transmitted as re-found, or found in its origin anew. The rigour required for this kind of knowledge is at a corrective extreme. The brief indications, for Zen, point everywhere and nowhere at the same time. Neither Western Monasteries nor Western Studios embrace this extreme as an operational model.

Zen and Knowledge

While the Western model of knowledge as performance may be gentler, it nonetheless shares with Zen the recognition that while knowledge can be formalised, it can not be handed on as a package. The spark that Plato talks about is not transmitted necessarily in any form of knowledge environment whether it be a studio or a book. It is always a someone who "discovers these things" whether they do so by themselves with or without a book (an unusual circumstance for Plato in the sense that entire epic poems were held in memory by individuals as were all the philosophical disputes of the ancients, including their question and answer sets; memory was the first muse) or whether they discover it within the rigour of the formal master-student relationship (where the content of the history of master-student relationships was know and repeated as a book). Plato is advocating the scholastic method of the academy ("school" meaning "leisure", "academy" being the name of a park where the Greek thinkers could think at leisure); he very definitely is not advocating the method of the craftsman's workshop. His stress, again, is on the indication or initiating moment of knowledge as we see in the famous *Meno* example of the slave coming to recover, through brief indications, the knowledge of how to double a square (we have to presume that Meno and Socrates and Plato and thousands of other Athenians knew the solution as if it were written in a book). To source such indications, outside of books, we can determine various forms of rhetoric, or discourse methodology that pre-date the written or bookised dialectic. Burnet again helps us by pointing out the origins of the dialectic in the ancient hurling of paradoxes made famous by Zeno:

It is clear, however, that Zeno, "the Eleatic Palamedes," had more influence on Sokrates than anyone. As Aristotle said, he was the real inventor of Dialectic [and not Parmenides], that is to say, the art of argument by question and answer. If the Periklean age had left any literature we should probably hear more about his work at Athens than we do, but the Athenians of the middle fifth century did not write books. We have traces enough, however, of the young Athenians who had been his associates, and it is recorded that Perikles himself "heard" him. We shall see that the Eleatic philosophy was sedulously cultivated at Megara, where its dialectical side was still further developed. Dialectic is literally the art of conversation or discussion, and its procedure is governed by strict rules. The "answerer" . . . is required to reply to the questioner . . . in the fewest possible words, and to answer the question exactly as it is put. He is not allowed to ask other questions or to boggle at the form of those put to him. (Burnet, 1950, p. 134)

This model of the dialectic is still found today, practised in various forms of wisdom school. Tibetan monks still hurl down problems and slap their thighs when the answerer fails to immediately answer. The Zen tradition of koans, with the hurling of absurd propositions, also offers its indications through this strict and persistent form of rigour. (For more extensive accounts of these aspects, especially in relation to problem-based learning, see Russell, 1999.)

Such rigour can be determined within the rigour of Studio Theoria and it can be determined within the discourse of academic writing when such writing or book culture is freed of the ambiguous over-determinations of both its advocates and detractors. That is, the uses or affordances ("is for") of book culture are the real target of Wood's critique. Wisdom schools might have run without a written-down or book-account of their discourse at some time in history. At no time in history have they run without a discourse or formal understanding of their own running (which amounts to their book). The brief glimpses of historical times of knowledge-novelty are suggestive, at their best, that novelty is neither more or less present at any time, precisely because novelty is always taken up as a moment within all discourse. Such novelty is written down, in the Zen tradition, in the form of haiku.

The Haiku as Discourse

These Zen indications of knowledge may seem to go beyond the form of Platonic indications already discussed. However, the Zen moments are know to us in our everyday worlds as parents and the children we were. Just as the child turns to its parent in surprise and delight, only to discover the parent does not see what the child sees, even though the parent placed the child where the child would see what it now sees, so the reader (as student) of a haiku finds only its own awareness in the place fixed for it by the poet (as master). Imagine that the parent raises the child onto the parent's shoulders so that the child can now see over the high fence that the parent can not see over. Imagine that behind the fence is an elephant and that the parent knows that there is an elephant behind the fence, then you are in the place of the haiku.

While seeing an elephant, the child also sees that the parent sees that the child sees that the parent does not see what the child sees. This doubling of the vision within the rhetoric on which it is founded establishes the separateness of the participants in the structure of knowledge that holds between parent and child and in the structure that holds between master and student. An example of this is found in a Basho haiku (Basho, 1962) which has a clear speaker and listener:

You light the fire;
I'll show you something nice,
- A great ball of snow!

Here the master is "setting-up" the student while asking the student to set up the fire. While engaged in one activity, the student is experiencing anticipation that excites "seeking and contriving"; the student is looking for the unexpected. The moment of revelation is the entry of the unexpected into the consciousness of the student. The ball of snow appears as an object and not as a metaphor or symbol of the process of revelation; its appearance within the imagination of the reader is the moment of imaginative revelation: the object has been manifested in consciousness through the rhetoric of the master. (This account is taken from Russell, 1990, p. 251-52.)

In the case of the most famous haiku of all time, again, by Basho, we can see a clear origin within the master-student relationship. This origin, and the rhetorical devices used to transmit an academic form of the origin, indicate that the rigour of the immediate circumstances of a knowledge indication are no more or less open or closed by the attendance of the Monastic book culture.

According to D.T. Suzuki. the haiku arose as part of a Zen catechism; Basho was being questioned by his Zen master Buccho. The series of questions goes as follows:

Buccho: "How are you getting on these days?"
Basho: "After the recent rain the moss has grown greener than ever."
Buccho: "What Buddhism is there even before the moss has grown greener?"
Basho: "A frog jumps into the water, and hear the sound!"
(Suzuki, 1970, p. 239)

This discourse has been re-made as a haiku. The version given here is by Suzuki:

"The old pond, ah!
A frog jumps in:
The water's sound!"
(Suzuki, 1970, p. 238)

The pond was added to make the poem scan, or so it is reported. A rather more attractive version (in keeping with Suzuki's frequent practice of kindly deception) is that the pond was added precisely in order to account for the stages within the movement of consciousness that the poem performs. This addition then makes the haiku portable or autonomous; it is freed from its original discourse because it has incorporated this discourse within its rhetoric. This haiku does not engage the reader through being incomplete but rather because the assumption of the aesthetics of haiku is that the reader will complete the rhetoric. This rhetoric includes the lost parts of the agon that are, like the speaker, very present in their absence. (This account is taken from Russell, 1990, p. 254-59.)

Limits and Little Rigour

Being expected to bring such understandings of formal rhetoric to the book world of the academy may seem beyond the scope of the Design world. Indeed, Wood allows that the uses for such a book world fall in the pragmatic or rather practical and corrective margins of academic concern. Rather than apprehending a mindset that includes a subtle and sophisticated rhetoric that can bridge both presence and absence, Wood see the academic world as an enabling programme at best, and a usurping mode of knowing at worst:

. . . this paper reminds us that without the monastic culture of writing, designers would be less well informed. Specifically, they may be disabled by a lack of critical and strategic thinking. If they cannot reflect deeply they will be unable see the consequences of their actions and if they do not understand what they are doing we cannot expect them to take responsibility for it. Whilst my paper stresses the educational importance of writing and reading it also identifies serious limitations to the scholastic mindset that informs it. For example, in traditional doctoral research projects there has been too much emphasis on the form and the importance of the thesis itself. This approach has given us assessment criteria in which written and "source-remote" information eventually assumes the status of a body of knowledge in its own right. Here, writing, rather than the candidate's wisdom, remains the principal site of appraisal, albeit supplemented by a relatively brief viva voce examination.
(Wood, 2000a, p. 45)

The reader by now has potentially become aware of the unusual usage of quotations or long extracts in this paper. More common to current Design research papers is the social science method of mere citation. Instead of the open approach of contextualised information common to the traditional humanities, this paper might have employed the social science system of mere mention. This form of "little rigour" (Judo is the "little way") leads to skilful displays of dubious merit. Such "little rigour" is the proper target of an inclusive account of the ways of knowing open to Design and opened-up by Design. That is, Design has fallen into the pit of its own digging in its presumption that any knowledge, from a book or not, can be had as a tool of "critical and strategic thinking" without understanding of the grounds of such thinking being a requirement: no indication, no spark, no knowledge. This pit of profound ignorance has taken many un-thought-hours to dig. Just as the learning of law is insufficient for the practice of Law, so it needs to be understood that the learning of design is radically insufficient to the practice of Design. The wisdom of candidates is a strange and marvellous thing not to be looked at for too long for fear that the glaring pit of ignorance will open and swallow candidate and supervisor alike. Much more writing by the candidate would reveal the inadequacy of the existing method, not less.

Here we might ask for an example of rigour, in "monastic" terms, that does something other than confuse the gentle reader long practiced in the subtle art of thinking short of the target. That is, what use is there in all this talk? Wood, in his over-determination of the concept of rigour, offers the follow eight names. For the sake of brevity we will follow one. Which is not to deny the errors in each are similarly illuminating.

Errors of detail must have had an immense significance in the closeted medieval monasteries where scribes painstakingly copied books by hand, and it is hard for universities to be aloof from such ideas when they have to administer "scrupulously fair" systems of assessment and to steep themselves in today's rule-based culture of the law and "quality assurance". One possible reason for the idea of "rigour as perfection" is the Christian belief system that incorporated the practice of writing into medieval monastic life. Panofsky (1968, p. 35) argues that the idealised form of the Book was assumed to be homologous with the architectural form of cathedrals. Behind this morphology is the idea of the body of Christ as the prototype for truth. Hence the "perfect" - i. e. completed book had qualities that can still be found in the classical structure of the modern scholastic thesis, with its emphasis on such familiar features as: (1) perfection (2) consistency, (3) comprehensiveness, (4) unsituatedness (authorial remoteness), (5) linearity, (6) objectivity, (7) explicitness. Many of these qualities have also emerged within a Western framework of (8) philosophical scepticism. Here, we shall examine each of the above attributes in turn. (Wood, 200a, pp. 48-49)

The Broom of Wisdom and the Ideal of Perfection

We can taker instruction from the extensive critique that Wood offers for each of his eight forms of rigour. However, in doing so, we need to also allow for the re-determination of the possible alternative eight forms of rigour, a project that is possibly better undertaken in an active discourse where response follows response, or a dialectic is established; or, in Studio terms, it may best be done face-to-face over a week of argument where the merits of propositions can be exhausted in public. Which is not to suggest that something otherwise, in book form, might not be also done. The following account, or "perfection" will attempt, like the haiku, to include in its rhetoric the absent speaker and distant reader. Wood's accounts will be given first, followed by a critique.

1) The Book's rigour as "perfection"

In this context we may understand rigour as a teleological idea of human actions, rather than as a quality of the world's natural "becoming". Hence a striving for perfection may be said to require rigour because we always assume that there is an ideal outcome (e. g. the Platonic ideal form to which craftspersons may aspire in vain). The Western idea of perfection therefore refers mainly to a state of final accomplishment. This idea carries with it the notion of skill and our capacity to complete tasks without leaving any blemish or flaw. However, such an idea only makes sense within a previously agreed context and therefore is a managerial idea that raises aesthetic and other subjective questions. In today's research era, although automatic spell-checking, "cut-and-paste", and grammar guidance have altered our idea of "perfection" there is still a residual academic suspicion that typographical errors must be symptomatic of a fundamentally flawed piece of work. (Wood, 2000a, p. 48)

In writing things down it becomes possible to reflect in ways that reveal knowledge that is otherwise difficult if not impossible to derive. For example, no where in Wood's paper is any account of "text" given except as the mere content of a book, or the product of an author. By way of contrast, "context" is used over and over as if context were self-justifying as the more significant of the two terms "text" and "context". That is, certain words have already had values attached in rhetorical ways typical of the academic use of language for persuasion that we tolerate in conversation because we trust that meaning will be determined forward and that the opportunity for clarification always exists while the conversation continues. We trust to the discourse because we are party to the grounds of the discourse. That is, we could interrupt if we wished.

More importantly for our immediate purposes, the absence of any account of "book" as "text" means that the significant differences that attend books as texts are avoided. "Text" takes its meaning from weaving such that a "texture" is formed. Weaving is the highly formalised interrelationship of structural elements leading to a coherent whole that evidences patterns in its surface that are evidence of patterns in its structure. That is, the "texture" is the "text". (The

"wholeness" or "completeness" aspects will be looked at below.)

Not all books contain texts and not all texts are in books. "Book" in its origins, means a "writing tablet". It does not mean the writing on the tablet, such that we can still call a book a book even when all its pages are blank. A text is a different matter; it relates to a formal organisation, like a weaving. It may or may not be written down. In this sense, the master-student discourse is a text (implicit or explicit) whether it is or is not written down. Wood takes account of some of these issues when he approaches the boogie-man of "printed writing".

Objections to the invention of writing are legendary, and in a litigious world riddled with libel and copyright laws we may sympathise with Clement of Alexandria who complained (in 200 AD): "To write all things in a book is to leave a sword in the hands of a child" [Borges, 1964, p.117]. Poster [1990, p. 84] comments that writing promotes forms of spoken grammar such as lists, formulas and recipes, and that these forms are rare and less conducive to reason, freedom, and equality than speech. He quotes anthropologist Jack Goody's description of alphabetical writing that "tends to arrange terms in (linear) rows and (hierarchical) columns in such a way that each item is allocated a single position, where it stands in a definite, permanent, and unambiguous relationship to the others" [Goody, 1977, from Poster, 1990, p. 84]. From a similar perspective, Baudrillard [quoted in Poster, 1990 no page provided] observes that the culture of writing has an alienating effect upon the writers and readers themselves: "Speech constitutes subjects as members of a community by solidifying the ties between individuals. Print constitutes subjects as rational, autonomous egos as stable interpreters of culture who, in isolation; make logical connections from linear symbols." From this perspective we might see bureaucracy as an example of a rational culture ossified by text. (Wood, 2000a, pp. 46-47)

Many systems of order allow for further systems of order such as the placing of the legs of a chair in an ordered pattern allows for the distribution of forces in an ordered pattern. We may yearn for a rustic chair with unevenly spaced legs of uneven length because we have grown weary of the levels of order that threaten to take over our world and impose on us ordered sitting such that we now find ourselves as egos where before we were members of a community of souls innocent about such ordered worlds. We may yearn to knit like children with uneven tensions and dropped stitches, just to prove that we will not be constituted as "rational".

The complaints of Clement and Poster and Goody and Baudrillard are examples of technological determinism writ large. Computer code, as basic as HTML, needs to be written in an ordered form. It does not, however, need to be written with the eloquence of order that attends the coding of many HTML authors. The added levels of order are mechanically possible. This possibility of order is taken up to assist with error checking, to assist with re-writing and, to mark the effort and style of individuals. This possibility, in the case of written language, is taken up by poets who seek to include the surplus or excess possibilities of order to establish, through redundancy and vacancy that more connections might be made than are made. This space opened up by formal language, especially in its written forms, is a space for the re-determination of subject-relations based precisely on the possibilities of grammar (the rule-set) being implemented as its own transformation (syntactics). Syntax is not the breaking of grammar, it is the revelation of the order within order. The opposite of "grammar" is "glamour". The l/r transformation is an example of the concept of "glamour" as the mis-use of a rule-set such as performed by witches who speak strange gibberish that sounds like the true language of community turned on itself. Part of the social function of written language is to expose glamour through the rigour of grammar. That is, writing offers to expose the falsehood of spoken argument and to make available levels of cognitive consistency that permit orders of cognition not available directly in speech.

The outcome of such a system of order may be implicated in the re-determination of individuality through the level of inspection of subjectivity opened up. To baulk at the prospect of needing to further determine self in a world now containing "fixed" images of self

is a form of protest best described as "innocent". This innocence can be seen, in its philosophical nudity, in the argument raise by Wood when he asserts: "In this context [the book's rigour as perfection] we may understand rigour as a teleological idea of human actions, rather than as a quality of the world's natural 'becoming'". It is interesting to note that "performance" and "perfection" have much the same meaning, that of a completed making/ doing. "Perfect printing" is then simply the completion of the printing process such that both side of the paper have been printed. A flower, to follow Wood's distinction, can achieve its perfection in different modes of becoming such that it is now open and therefore perfectly in the mode of being open. Beyond this completion stage or performative aspect, Wood is aligning the book, presumably as text, as a thing not only finished as in "completed", but a thing finished as in "without blemish or flaw".

Fabrica del Dom

In raising the cathedral as an example of the book-as-perfection, Wood reveals the fragility of his teleological propositions. Man-made objects notoriously raise the finished/becoming dialectic. The building of very very large things seems to fascinate, the non-philosopher, in an innocent way (Papanek allows that they may have spiritual values where refrigerators do not: "There can be no transcendental refrigerator, no righteous chair, no moral tea kettle" (1995, p 49)). Such innocence does not attach to those directly involved in the work of making and daily re-making through use of a book, or a cathedral.

. . . the Duomo Cathedral [Milano], begun in 1386 under the Visconti Dukedom, stands as a forerunner for the World Wide Web as it seeks to out display even its own story. Thumb nail after thumb nail begs to be clicked on with the promise of revealing another anecdote in the travail of man and his god. Here power is invested in a concretion that appears to be that of a coral reef: more and more is added on each turn of the head. Indeed, this model of accretion is the very source of the building. (Russell, 2001, p. 90)

Hundreds of years in the making (it is still not "completed"), the Cathedral and its continuous building have become the source of the vernacular expression "la fabrica del dom". For the Milanese:

. . . every major undertaking is likened to the "fabrica del dom". There will be states of advancement and guarantees of continuity, however the result will always be provisional. Not provisional in a sadly ephemeral, but in an eternally provisional way, since the result is constantly in progress. (Rossi, c. 1989, p. 71)

Sartre points to the central agony involved in this dialectic of the finished but "eternally provisional" nature of things that we make. For those who make books-as-text, the book-as-text aspires to achieve a provisional status while avoiding the "sadly ephemeral" qualities of much, but not all, conversation. It is a very innocent person who would think otherwise about books or bikes or very very large buildings.

To possess a bicycle is to be able first to look at it, then touch it. But touching is revealed as being insufficient; what is necessary is to be able to get on the bicycle and take a ride. But this gratuitous ride is likewise insufficient; it would be necessary to use the bicycle to go on some errands. And this refers us to longer uses and more complete, to longer trips across France. But these trips themselves disintegrate into a thousand appropriative behaviour patterns, each of which refers to others. . . . the recognition that it is impossible to possess an object involves [f]or the for-itself a violent urge to destroy it. To destroy is to reabsorb into myself; it is to enter along with the being-in-itself of the destroyed object into a relation as profound as that of creation. . . . Destruction realises appropriation perhaps more keenly than creation does, for the object destroyed is no longer there to show itself impenetrable. (Sartre, 1953, pp. 100-101)

Here the object that would pretend to completion, the purchased bicycle, is not only found to be provisional in its origins (mere touch does not make it (as the in-itself) sufficient as completed in the relationship) but it is determined as an object in and of an appropriative pattern that re-confirms that all objects, as they are determined as objects in consciousness, are determined as provisional, propositional and inherently hypothetical. The problem here, in

the case of Wood's fixation on the book, is his general avoidance of the continuity between the conditions he describes for the book-as-knowledge and the conditions he does not describe for Design-as-knowledge. The objects of design and designing, have no general escape-clause from the conditions of knowledge that pertain to all objects of knowledge. Indeed, the complains that Wood makes, about the book-as-rigour, relate more directly to an unwritten critique of the objects of design knowing as objects. The teleological presumptions that attend all design-outcomes, at whatever moment of form or completion, arise within a dialectic of becoming and being that has a presumption that being is the moment to be celebrated. That is, within the discourse of Design, the positive moment (materially mediated outcome as a state or stage of completion) is the moment that is celebrated, pointed to and claimed (even the toilet brush shines with its positive claim). This positive moment is celebrated by designers:

There is a sense of wonder, a feeling of completion in design that is lacking in many other fields. Designers have the chance to make something new, or to remake something so that it is better. Design gives the deep satisfaction that comes only from carrying an idea all the way through to completion and actual performance. It can be compared to the emotions aroused by making a kite and then being able to fly it in the sky: a feeling of closure, pleasure and achievement. This enriches us both professionally and as human beings and provides us with a joyous affirmation of what we do. (Papanek, 1995, p 7)

The negative moment in the discourse is the moment which haunts language, especially written language such that the openness to becoming is never closed in writing. The form of the book-as-text, like the cathedral, is that of an object that confirms its central agony of being merely propositional. Its special claim, if it has one, is that the self-reflexive recognition of its propositional nature allows for the articulation of consciousness in a moment of self-awareness that is denied to the objects of human making in-as-much as their being is fixed as a formed content of consciousness (the toilet brush that I see). Sartre's liberation of the appropriated object, into the discourse of the phenomenology of use, is a liberation that seeks to destroy the very object that would claim to be impenetrable. This destruction seems to have been much of the purpose of Wood's compliant against books. However, in the case of Wood, the absence of a recognition of his own underlying hypothesis (that objects are a special case except for special objects which are books) leaves his critique fundamentally wanting. His two worlds already meet in this absent hypothesis.

Need for Hypothesis

Umberto Eco bashes around logics in this confused domain with the purpose of correcting the anti-hypothetical quest of those who would have their world one way and another and sleep better in their confusion. In working through Heidegger's special claims about poets, Eco offers to re-confirm the normal status of texts in their proper function within academic discourse. According to Eco, Heidegger offers two irreconcilable aesthetics:

The first affords a glimpse of an orphic realism (something outside us that tells us how things really are); the second celebrates the triumph of questioning and hermeneutics. But the second aesthetic does not tell us that being is revealed in the discourse of the Poets. It tells us that the discourse of the Poets does not replace our questioning of being but sustains and encourages it. It tells us that precisely by destroying our consolidated certainties, by reminding us to consider things from an unusual point of view, by inviting us to submit to the encounter with the concrete and to the impact with an individual in which the fragile framework of our universals crumbles. Through this continuous reinvention of language, the Poets are inviting us to take up again the task of questioning and reconstructing the World and of the horizon of the entities in which we calmly and continuously thought we lived, without anxieties, without reservations, without any further reappearance (as Peirce would have put it) of continuous facts that cannot be ascribed to known laws.

In this case the experience of art is not something radically different from the experience of talking about Something, in philosophy, in science, in everyday discourse. It is at once a

moment and a permanent corrective. As such it repeats to us that there is no divorce between Seiende and Sein. Here we are still, talking about Something, asking ourselves how we talk about it and if there can be a moment in which the discourse stops. The implicit answer is no, for no discourse stops only because we say to it, "You are beautiful." On the contrary, it is precisely at this point that that discourse asks us to be taken up again in the work of interpretation. (Eco, 2000, pp. 35)

No discourse stops because the production line has now produced the designed bicycle or boot regardless of the managerial decision to say that now the object is made "we will cease the discourse". No opening or closing the book, no binding the book, no putting the book into a series of bound books in a shelf of organised books will stop the discourse. Unless of course we aim to pretend that form is other than forming. Equally, and potentially more important to this particular discourse, we need to recall that the determination of form is part of the rigour of all knowledge and claims to knowledge. In the case of the shift from the circular text of ancient paradoxes to the hypothetical structure of post-Platonic thought and dialectic, we need to remind ourselves of the central function of the claims to rigour that we self-impose as part of our culture of questioning and answering made most evident in the Academy.

Of course, the thesis that the new forms of knowledge had their roots in the character of Greek political and social life has been expressed many times. However, such assertions tend to postulate a leap from one form of human activity to another that differs greatly. Some underestimate the difference between the agora or court debates and scientific discussion, others regard the theories of the first philosophers as the direct projection of political changes. But when I say that proof comes from the demand for proof, this is already speaking in terms of behavior and interrelations. When I say that the method of consistent reasoning about the nature was discovered by Thales in anticipation of a critical discussion, we see that a particular form of interpersonal relations, a particular form of human interaction, is impressed into the very logic of theoretical inquiry. (Panchenko, 1993, pp. 412)

Foot in Mouth

The "logic of theoretical inquiry" neither inhabits the book nor the studio. Equally it is to be found where it is to be found by those who would apply its rigour. This current argument, of course is not complete, nor can it be completed. But is it formed? Is this a moment in its forming and re-forming that constitutes, for consciousness, a potential indication of knowledge-as-understanding? Wood may have wanted Heracleitus to say it, but he did not as far as the evidence can be trusted: "If it is true, then it cannot be stated." What he did say was that Zeus both did and did not allow himself to be call Zeus ("The wise is one only. It is willing and unwilling to be called by the name of Zeus." (frag. 65) R.P. 40 quoted here from Burnet, 1930, p. 138). Heracleitus here affirms that language is able to both refer to and announce at one and the same time. Looked at from one perspective, language fails to accommodate the reality of a world in flux: its limits of expression mean that any statement is, of logical necessity, a false account; looked at from another perspective; equally, any and all statements are true accounts of themselves as expressions - just as every flower is a true instance of itself in its time/space process. Academic rigour allows us to form and hold this paradox (or speaking beside) in our minds without the need to leap in faith towards any one extreme as happens with the student of Heracleitus, Cratylus, who is remembered as saying: "you cannot put your foot into the same river once" (Wood, 2000a, p.48).

Heracleitus claimed correctly, in terms of human understanding, that you cannot put your foot in the same river twice. Heracleitus was pointing to the variability of the world, as presented to consciousness. Flux can only be discerned, by consciousness, as a feature present to consciousness. To add to this rich mixture, we can quote another poet/philosopher/mystic, William Blake. In the concluding poem to Songs of Innocence, "The Voice of the Ancient Bard", the new dawn announces a new view of reality as it drives out the mis-thinkings of night:

Doubt is fled, & clouds of reason,

Dark disputes & artful teazing.
Folly is an endless maze,
Tangled roots perplex her ways.
How many have fallen here!
(Blake, 1969, p.126)

That is, doubt (companion of reason) is a feature of consciousness, just as flux is a feature made known to consciousness (the new dawn). Objects may be seen to evidence complexity (flux - appearing as one thing for a time, and then another thing at another time); humans however, experience perplexity because, along with their powers of reason, they also have the capacity to doubt. Daylight may dispel darkness, but it also implicates further darkness. In the case of flux, we may grant that this feature is discerned as an aspect of reality: objects can be discerned as having the characteristics of complexity as an effect. In the case of doubt, we may grant this feature is an aspect of consciousness itself as an affect. Hence we can establish a ratio: doubt is to consciousness as flux is to reality. We are free to doubt about our foot and rivers as much as we wish; this freedom does not change feet or rivers. Understanding, in a moment of consciousness, that the world is in flux, requires us to be stable while understanding (even if only by not doubting at the same time as being). That is, we can reflect on an instance of reflection but not while engaged in that particular instance of reflecting. We can recognise flux but not while our consciousness is in flux. So called "stream of consciousness" events, when written down (or recorded in any form) clearly indicate the failure of the exercise. Logical connections, repetitions, grammatical regularities, phonetic patterns, all accumulate with a rapidity that quickly defeats all efforts to simulate chaos in language. It is easier to attempt to generate random numbers. Stream of consciousness efforts are really efforts to explore hypothetical links between conscious and semi-conscious states of mind. In as much as language exceeds all users and all instances of its use, language pretends to take consciousness into structures that exceed consciousness. This feature of language (excess) accounts for novelty of expression and possibility of new ideas being formed in language. It does not overpower consciousness or everyday logic.

Concluding Provocation

The idea that nothing is the same as itself is not the implication of Heracleitus' fragment. The fact that everything is in flux is not offered, by Heracleitus as an account of consciousness. Process philosophy (in the case of Hegel) is not this silly thing. There are positive or fixed (in the moment of consciousness) states that are then the ground for their own subversion (in consciousness). There is no permanent position except that all positions are experienced in their objectification. I cannot know except that I know the object of consciousness as an object, intended by consciousness. Such knowing does not permit the wilful unthinking of the object intended by consciousness except I lie. Subversion is not simply a matter of denying the positivity of the object intended by consciousness. We can take a quotation from Hegel to help establish the ramifications of this positive feature of the dialectic:

Not until consciousness has given up hope of overcoming that alienation [the alienation experienced by the "torpid Self" in relation "with the alien content of its consciousness"] in an external, i.e., alien manner does it return to itself, because the overcoming of that alienation is the return into self-consciousness; not until then does it turn to its own present world and discover it as its property, thus taking the first step towards coming down out of the intellectual world, or rather towards quickening the abstract element of that world with the actual Self. (Hegel, 1977, p. 488)

Have I been rigorous or rigorous enough? Look a wattle bird?

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