哲学の道

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"Good morning, Paul (yes, you, not me; I rarely greet myself in this way if, indeed, at all). I find myself at白河今出川の交差点, the eastern end of 哲学の道 in 京都. It's a glorious spring day. 桜 is in full bloom—a pink and white aria; a baseline of black bark; a sky blue chorus—embarrassing the sullen 鯉 in the 琵琶湖疏水 below (their own reflections are on more grubby things). I'm going for a walk; perhaps you'll join me. We're not alone, of course. Our companions—in their hundreds, I guess—are, like me, pointing their cameras at the flowers, at the fish, at each other. The cameras range from high-end professional jobs, like mine (this is a boast), thru mid-range SLRs and micro digicams to mobile phones with megapixel ratings that quite possibly outrank my EOS 1D Mark III, though not, I think, my 5D Mark II (another one). The snaps flatten our walk in more ways than one, most tragically, perhaps, the flowers no longer sing in the light breeze; they are caught agape. Even the high-definition video facility of the 5D Mark II flattens, though in a different way: where is the warmth of the sun on my back (we snappers generally face away from the sun)? And, anyway, on another walk, on another day, the music will be different.

"I should have explained, 哲学の道 (*tetsugaku no michi*)—starting at the junction between *Shirakawa dori* and *Imadegawa dori* in *Kyoto*—is generally rendered in English as 'the philosopher's walk'. It follows a narrow canal that is lined with 桜 (*sakura*, cherry trees) and home to some oversized and rather lugubrious koi. The path is named for the daily meditational walks of the Kyoto University philosopher, 西田 幾多郎 (*Nishida Kitarō*, 1870-1945). I find Nishida's philosophy, insofar as I understand it from my brief research, rather appealing and not entirely unconnected with our walk in a conceptual way, but further exploration is perhaps best left for another walk, another day. Today, I'd like to start our walk with a quote from André Gide: 'Everything has been said before, but since nobody listens we have to keep going back and beginning all over again.'[1] Well, I think I know how he might have felt, but, to be blunt, everything hasn't already been said before and even if it has, saying the same thing on different occasions, in different contexts is saying something else. Not only that, but listening isn't an issue either, unless it is constituted as a potentially perfect reception and that's pie in the sky. So, everything may or may not have been said already, but everything nevertheless remains to be said.

"The key to all of this, in my formulation, is recontextualisation. I recall that you have made very productive use of this term in a paper on semiotics and mathematics published not so long ago (Ernest, 2006). I noticed that, in this paper, you made reference

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[1] See http://www.quotegarden.com/experience.html.

to an old article of mine (Dowling, 1989, 1991a).[2] The title of my paper is relevant to our walk, as will become clear, 'The contextualising of mathematics: towards a conceptual map.' In the paper I had attempted to construct a map of the contexts in which mathematical activity takes place. The map was very primitive. It seemed to propose that, for example, we could identify in some sociologically significant way, fields of production and recontextualisation, reproduction and acquisition of mathematical knowledge that roughly corresponded to the university, textbook and curriculum production, teacher and learner activity. I had rather distorted some of the ideas of Basil Bernstein—my mentor at the time. In your paper you constructed a resonant schema, but constituted as articulated semiotic systems as opposed to sociological fields, your schema identified transformations between mathematical theory, school mathematics topic, taught school mathematics topic, and mathematical topic as mastered by the learner. Now, shearing away the sociological (the category 'field' implicates agents as well as their practices) enabled you to deal with situations that presented theoretical conundrums for me. An example would be that 'most school mathematics topics are no longer part of academic (university) mathematics and thus figure in no contemporary academic textbooks' (Ernest, 2006; p. 73). Sociologically different contexts can certainly be described as recontextualising their respective practices, but historical transformations also effect recontextualisations; fields must be diachronically as well as synchronically contextualized. This being the case, I could not constitute the fields in my schema with any sociological integrity; not, that is, without constructing a map almost as complex as the 'reality' of the twenty to fifty thousand years (I think you implied) of the 'real' history of the mathematics curriculum.

"Semiotics is, of course, about meaning and so is able to background social relations, allowing a focus on aspects or dimensions of semiotic systems. This is exactly what you did in your paper, presenting analyses of historical, mathematical and developmental perspectives on number, counting and computation, without needing to claim exhaustion of the terrain, which, in a sense, the field approach must do, albeit at a necessarily high level of abstraction. The resulting three-dimensional view of mathematics presents an interesting and, I think, pedagogically useful resource. Your analysis also emphasises diachronic as well as synchronic texture. Does it, though, escape the flattening effect of the cameras on the philosopher's walk? Unfortunately, you are not in a position to answer right now and I will also defer my own answer to my own question. However, I must admit that I have frequently suppressed the diachronic in my analysis. Let me show you what I mean with some examples; I hope you won't mind if they tend to draw on illustrations that are not directly mathematical; the results are, in my view, all directly relevant to mathematics education.

"It seems that books made by monks in mediaeval scriptoria were a long way from calligraphic perfection. In one 'school for scribes', Cohen-Mushlin (2008), for example, has described the way in which the master would scribe a few lines to act as a model for his (sic) pupil, who would then take over the production of the book. Almost inevitably, however, the pupil's work was not up to scratch and the master would produce another

[2] I'm afraid you credited me with having published this work a little in advance of its actual publication; it was originally published in a microfiche journal in 1989 and subsequently in a collection in 1991, not in 1988 ;-).

exemplar. This might be repeated many times. As the pupil progressed, they would move to more challenging tasks, such as rubrication, again following the master's exemplars. Eventually, the pupil might himself (sic) become a master, but, in the meantime, the book that he had been working on would be finished, complete with all of his inadequate work and, quite probably, the inadequate work of other pupils, together with the (presumably) adequate work of various masters. Parchment was too costly and the time involved in scribing too extended to allow pupils to practice to perfection before putting their marks on what would be the final (and first) version of a book. The result would be something of a hotchpotch in terms of calligraphy.

"This is very different from the situation that obtains in respect of the apprenticeship of Japanese 民芸 potters (see Singleton, 1989). The apprentice, on initial entry to the pottery, is not allowed any involvement in the production process for quite an extended period of time, being limited to marginal activities, such as cleaning and making tea and, of course, watching. Eventually, the novice is allowed onto the wheel and told to make 一万個の酒杯 (ten thousand sake cups). Naturally, the apprentice's initial attempts are unworthy and so consigned to the bin to be recycled. Much later, some of his attempts will receive approval and be fired and sold in the shop—as seconds.

"Both of these modes of pedagogy take place in the context of production, which is to say, the scriptorium and the potter's workshop are the sites of the productive practices to which the novices are being apprenticed and their teachers are recognised practitioners of their respective crafts. However, there seems to be a fundamental difference. In the pottery, we have what looks like a traditional apprenticeship that, indeed, resembles Lave and Wenger's (1991) 'legitimate peripheral participation' model. The apprentice is not allowed to be involved in actual production until their performance reaches a satisfactory standard; nothing will go out of the pottery unless it meets this standard. In the scriptorium, on the other hand, it is not possible to wait until the pupil reaches mastery. Nevertheless, pedagogy continues during the productive process. Emphasis, here, seems to be more on the production of a community of competent practitioners; like the ideal of a perfect product, this is also unachievable to the extent that there will be a continuous influx of new novices. The distinction, then, is between the prevalence of strategies that stress competence—the scriptorium—and the prevalence of those emphasising performance—the pottery.

"Not all pedagogy takes place in the context of production. In the high school, for example, the nominal school subject is generally mediated by a curriculum and by a teacher, whose principal expertise is in teaching rather than in the discourse that they are relaying. The two dimensions of pedagogy that I have now introduced—what I shall call, 'transmitter focus' and 'mediation'—generate this strategic space (Figure 1).

| | Transmitter Focus | |
Mediation	Competence	Performance
Unmediated	*delegating*	*apprenticing*
Mediated	*teaching*	*instructing*

Figure 1. Transmission Strategies

"The construction of this space has involved looking—albeit in secondary and non-systematic ways—into an empirical space that reaches from mediaeval Germany to present day Japan, the various settings analysed by Lave and Wenger and, through my empirical observation on schooling, the UK. This is a very substantial chronotope that would defy an attempt at a totalising sociology. My schema, however, has flattened and constricted the chronotope in the construction of a perspective. The potential sociologies of the various settings that constitute the chronotope have been ignored or, rather, reduced to fundamental strategies in a move perhaps similar to your semiotic move. However, the schema is now available as a logically complete matrix of strategic possibilities from the perspective generated by taking the cross-product of transmitter focus and mediation. The central categories in this matrix—delegating, apprenticing, teaching, and instructing—do not totalise any pedagogic practice. We may reasonably speculate that any empirical transmitter will recruit more than one and possibly all of these strategies. For my present purposes, some explication of the terminology will suffice. The two modes that I have illustrated in the workshops are unmediated strategies. The novice potter is *apprenticed*, here, in the sense that the emphasis is on the perfection of performances to the extent that only perfect products can be sold with the master potter's mark and only performances that are adjudged to be sufficiently close to this can be sold even as seconds. In the traditional apprenticeship, the passage to the next phase is marked by the production of the 'masterpiece'; an affirmation of competence, to be sure, but emphasis, here, is also on the object—the performance. I have used the term, *delegation*, to signify the strategy that I have illustrated in the scriptorium because this strategy seems to me also to characterise pedagogic delegation of responsibility, for example, in succession planning; for the transmitter to correct, rather than model, the acquirer's performances may be to inhibit the development of competence, which, after all, may ultimately, take a different form from that of the transmitter.

"The lower row of the schema is constituted by mediated transmission strategies and perhaps the most familiar is mediation in the school classroom. Here, most commonly, performances are of no lasting value in respect of the activity of *teaching*, they are there purely as indicators of competence. The use of aegrotat or compensatory assessment, where the significance of the performance indicator is modified in the light of contingent circumstances is a prime example of the *teaching* strategy. *Instruction* strategies are particularly prevalent in sets of instructions for particular performances that are generally unlikely to be repeated very often: instructions for the assembly of furniture delivered unassembled; emergency procedures or instructions for the use of the TV or telephone system in hotel rooms; instructions for adjusting your servo-powered seat in business class aircraft cabins. Of interest, here, is the tendency, in some circumstances, for schooling to distribute teaching and instruction to the most and least competent respectively (see Dowling (1990, 1998) in respect of school mathematics). Insofar as schooling constitutes mediated pedagogy, which is to say, the transmission of a recontextualised discourse (cf Bernstein, 1990, Dowling, 1989, 1990, 1998, 2009, and Ernest 2006), this would tend to leave the least competent dependent on instruction in

respect of a mythical practice. The tendency of schooling to recognise competence on the basis of social class[3] renders this all the more poignant.

"My use of the terms, transmitter and acquirer, may concern you, given your reflections on teaching and learning in your paper (Ernest 2006). However, I too reject the notion of simple transmission and acquisition. My approach understands pedagogic strategies and identities as being constituted contingently and in interaction (and its subsequent reflective recontextualisation), a view that owes its origins to interactive sociology (for example, Goffman, 1974, 1990; Strauss, 1997) and ethnomethodology (Garfinkel, 1967). The categories that I am introducing are strategies, not states, plays, not results. Their genealogies in specific contexts are not at issue here[4], but, again, my schema enables the mapping in strategic terms of educational contexts at different levels of analysis. Again, the categories do not totalise any empirical setting—though the use of specific settings as illustrations may tend to make it appear that they do—nor does the schema itself totalise any setting, rather it provides an empirically derived, but logically exhaustive space for the announcement of strategies in and only in its own terms. This is a snap (for the time being), but one that may aid further description.

"When presenting the schema, transmitter strategies', I am generally asked whether I've thought about acquirer strategies as well. In fact, I had reflected on this side of pedagogy before looking at transmitter strategies. In 1996 and 1997, Andrew Brown (you know him, my co-author in Brown & Dowling, 1998 and Dowling & Brown, 2009a amongst other collaborations) and I visited some high schools in the Western Cape area of South Africa.[5] We have presented an account and analysis of these visits in Dowling and Brown, 2009b. On this walk I want to refer to a single finding. In two of the schools, students whom we interviewed were unanimous in their opinion that school knowledge had little or no value beyond the school. School success was important in giving access to higher education, which was, in turn, important in giving access to valued career opportunities. At a third school, however, we encountered a very different view, an astonishing view, perhaps; here is Andrew Brown speaking with students at the school (English is not the students' first language, possibly not their second or third):

> AB ... is matriculation important for the careers that you have chosen.
>
> P1 Yes I think it is important because, to me I say the base of, if you got no matric you can't do anything because each, each, anything that I'm going to do, the base of it would be a matric. So I say it is important to have a matric and then going to do [...] The base is matric and then take your career and then [...]
>
> ...
>
> AB ... if I said that, OK, I've got some matriculation certificates here and I'll just write one for each of you and give them out.
>
> P2 [...] it wouldn't count, you must have the base.

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[3] See, for example, Bernstein, 1977; Bourdieu & Passeron, 1977; Dowling, 1991b, 1991c, 1998; Sharp & Green, 1975; the work of the seventies in this exemplary list is dated, but should not be forgotten.

[4] But see Hunter (1994) for an interesting genealogy of the school.

[5] These visits were made possible by an Overseas Development Agency funded link between Brown and myself and the universities of Cape Town and the Western Cape.

School knowledge is here being constituted as vital in respect of the development of a competence that has value in respect of, well, all of the competences that are to follow and, in particular, to the most valued life opportunities relating to a 'career'. The irony of such earnestness is all the more apparent if I announce the nature of the schools. The first two were, respectively, an elite, primarily White school catering for the children of professionals and a dual medium (English and Afrikaans) school in a Coloured suburb, attended by children from a wide range of backgrounds, but including professionals. The third school was situated in an African informal settlement inhabited, primarily by casual labourers and school students, often living apart from their parents. The students speaking in the above extract were in a class for the 16-17 age group, but only the girls in this class were of this age; these students were men of between 22 and 33 years old who had returned to school after saving money to support themselves and, in one case, a wife and three children.

"Of course, all of the students have to acquire an appropriate level of competence in the practices that are their school subjects if they are to succeed, whether that success is understood as being based on certification or the knowledge itself. However, the strategies deployed differ between the first two and the third schools. The emphasis in the former settings is on what Bourdieu (1991) would refer to as symbolic capital, an objectified form, which, once acquired, may be 'exchanged' for other forms, in particular economic capital.[6] In the third school, however, what seems to be important is a to-be-embodied habitus.[7] This distinction in strategies is presented in the first of the central columns in the schema below (Figure 2).

Culture	Acquirer Focus	
	Practice	Relations
Embodied	*habitus*	*hub*
Objectified	*symbols*	*network*

Figure 2. Acquirer Strategies (From Dowling, 2009)

"The final column of this schema distinguishes between strategies that focus not on the practice to be acquired, but on relations between participants. I do not have appropriate data to discuss these categories in relation to the schools, but I can draw on personal experience that I would imagine we share. So, I suggest that we both constitute certain relations as of value for themselves: close family members and friends, lovers, and so forth. The totality of this kind of relation places us at the hub of a radial sociogram; these relations are, in a sense, embodied as they materially impose on us. Less imposing relations are generally valued not in themselves, but rather for what they

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[6] I have always had a problem with Bourdieu's metaphor of capital exchange; after all, it is only economic capital that actually circulates (see Dowling, 2009).

[7] I am clearly stretching Bourdieu's (and Mauss's, 1979) use of this term, here and I will 'misread' more of his sociology below. This, however, is intended to be a productive misreading (see Bloom, 1973; Dowling, 2009).

actually or potentially provide access to; in this sense, it is the objectified rather than embodied relations that are of value. The sociogram, here, is a network.

"This schema describes, but again in its own way, strategies that relate to Bourdieu's (1991) cultural and social capital that may be deployed by acquirers. As with the transmitter schema, I would expect individual acquirers and groups of acquirers to deploy more than one and potentially all of these strategies: students from the first two schools mentioned above must clearly be concerned with the development of habitus, even though they may consider the value of this embodied practice to be short-lived; students from the third school explicitly mention 'matric[ulation]', which is the symbolic form of the practice. Similarly, I have certainly relied on members of my hub (parents, partners, friends) to gain access to other relations and network relations have occasionally developed into embodied ones. As with the transmitter schema, the acquirer schema constitutes a logically complete, relational system that can be used to map specific pedagogic settings. They may also be used to identify confluences and antagonisms in such settings. Empirically, for example, doctoral research takes place substantially in the context of knowledge production and, as a doctoral thesis supervisor, I have often attempted to deploy *delegation*. My intention has been to provide an exemplar of, say, the analysis of empirical data in the hope that the student will be inspired to develop their own approaches that, whilst analytically competent, are not identical with my own. Sometimes this works: I like to think that it worked in the context of my own mentor (Basil Bernstein) and myself and indeed my own work now stands in (constructively) critical relationship to his. Sometimes, however, it does not work, because the student seems to understand my pedagogic action as *apprenticing*, limiting their own analytic activities to attempts to generalise my conceptual sketches that would, of course, have been based on a very restricted view of their data; they try to match performance rather than acquire competence. In other areas of doctoral work it may be appropriate to adopt *teaching* strategies. Attempts to develop competence in the use of statistical methods or in the interpretation of key theoretical works, for example. Then again, *instruction* is probably appropriate in respect of the formal production of the thesis document, entry to the examination and so forth.

"In mathematics education it seems to me that the optimistic introduction of 'investigations' into the school curriculum in the 1980s had the appearance of *delegation*. But can delegation ever be realised within the school? The rhetoric of investigations suggested that they involved the production of knowledge and that students were to act as mathematicians. Unfortunately, the only way that the knowledge that was produced could be legitimated was through its bureaucratic assessment against what were, in essence, behavioural objectives; this tended to push *delegation* to *instruction*.

"In a similar way, the acquirer schema might suggest that students focusing on *symbolic* acquisition may tend to view cynically teacher attempts to sell mathematics in terms of its potential use-value in diverse, non-school-mathematical contexts, thus emphasising *habitus* acquisition. My own analysis of school mathematics texts (for example, Dowling, 1998, 2007a) has revealed the torture that is generally (I think I would say always) necessary in the recontextualising of quotidian practiced in the formulation of what I refer to as the 'public domain' of school mathematics practice. The effects of such recontextualisation is the constitution of, for example, mythologised domestic practices that one would expect are easily recognised as such by students. If they are not

recognised and if the students do buy into the public domain then they are duped by the lure of, shall we say, false habitus.

"The two schemas that I have introduced here have both been achieved via a flattening of an empirical chronotope; they are snaps that construct particular perspectives, just as a photograph constructs the camera position. However, the schemas also constitutes a method for the construction of further analyses of settings other than their original empirical chronotopes as I have suggested here. Diachronic analyses or narratives are, of course, possible. Are such analyses also flat? In your three-dimensional analysis of number and counting you have emphasised both synchronic and diachronic axes. Perhaps I can now return to the question that I asked earlier: does this escape the flattening effect of the camera? Well, perhaps it does, but only in a fictional kind of way. A narrative is, after all, a completed text, it installs an inevitability in what is presented as an unpredictable walk. To borrow from Coleridge, I am able to suspend my disbelief in the implausibility of the narrative—which is to say its constructedness. In a good deal of academic analysis I am aided in this by the conventional elision of any representation of the self-awareness of the authorial voice—the method of the construction (I am not accusing you of this, by the way, though it would hardly be a pejorative observation were I to be doing so). Should I stray from the path that has been prepared for me, I am chivvied back on course by (what I refer to as, Dowling, 2009) traditional authority strategies, references to learned works that would assure me that any cynicism on my part would place me in an unsophisticated minority. In such works, the reticence of the self-awareness of the authorial voice renders narratives somewhat akin to Foucault's (1980) strategies without subjects. I want to put the subject back into the game. My subject begins with a very simple—I say, 'low discursive saturation' (DS^-)—'internal language' that asserts, basically, that the sociocultural is to be understood as comprising autopoietic[8], strategic action relating to the formation, maintenance and destabilising of alliances and oppositions, the visibility of which is emergent upon the totality of such action. My own analytic action then proceeds via the transaction of this internal language with empirical chronotopes. The outcomes of such transactions are, firstly, a highly complex, high discursive saturation (DS^+) external language and, secondly, commentaries—snaps—of the chronotopes. That the external language consists largely of binary variables (and not, for example, digital or analogue spectra) is a consequence of the emphasis in my internal language or alliances and oppositions. The snaps are thus digitisings of the chronotopes. The articulation of DS^- internal language and DS^+ external language constitutes my method. I have introduced elements of this method here in the two schemas that I have presented and in some of my other terminology. This terminology is generally associated with other schemas that are most fully represented in Dowling, 2009. In this work an organisational language of more than two hundred terms is established theoretically and empirically. Essentially, I guess, I boast about my cameras, not in any attempt to escape from their flattening effects—they are digital recontextualising machines the outputs of which are always further recontextualised in Photoshop—but in order to make explicit that which cannot be recovered from my

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[8] I borrow this term from Maturana & Varela (1991), though with a less developed interpretation.

snaps.[9] Where else might we point the camera?

"I mentioned earlier that the title of the early paper of mine that you cited was relevant to the theme of our walk; it's the word 'map' that is significant. I have often referred to the schemas such as the ones introduced here as maps, but they're not, are they. I've recently had my faith in maps shaken by a reminder about the navigation techniques of Pacific islanders provided by David Turnbull (2000). This, by the way, is a really wonderful book that I found very hard to put down and, on finishing it, I experienced the loss that I more usually associate with the finishing of good novels (the solace of Kermode's (1967/2000) 'sense of an ending' notwithstanding). Before saying more about Pacific navigation (and I don't intend to say very much here anyway) I want to offer an observation about the invisibility to the expert of embodied expertise—knowledge or skill. This is beautifully expressed in Wallace Stevens' poem, The Snow Man; I'll read it to you.[10]

> One must have a mind of winter
> To regard the frost and the boughs
> Of the pine-trees crusted with snow;
>
> And have been cold a long time
> To behold the junipers shagged with ice,
> The spruces rough in the distant glitter
>
> Of the January sun; and not to think
> Of any misery in the sound of the wind,
> In the sound of a few leaves,
>
> Which is the sound of the land
> Full of the same wind
> That is blowing in the same bare place
>
> For the listener, who listens in the snow,
> And, nothing himself, beholds
> Nothing that is not there and the nothing that is.
>
> (Stevens, 2001; p. 11)

Need I say more; let's read it again, it's worth the diversion, I think, especially because of the contradiction between its setting and that of our philosophers' walk in the warm spring sun in which trees are not so much shagged with ice as frothed with blossom: does Stevens wipe the smiles from our faces or have we not yet been warm for long enough; just what is the nature of the walk from spring to winter and how is it to be navigated?

"Andrew Brown and I have recently been giving some thought to so-called professional conversion programmes (PCPs). These are adult education schemes that

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[9] I am only an amateur and not very skilled photographer, but it seems to me that many camera features and settings—such as the focal length of the lens, focusing point, aperture, shutter speed, white balance setting and so forth—cannot be inferred from the photograph alone without further knowledge or assumptions about the setting within which the snap was taken. Inference of other features—lens quality, perhaps—might be made primarily on the basis of a knowledge of cameras.

[10] I was introduced to Stevens' poetry by Soh-young Chung, who uses poetry—including this poem—methodologically in her thesis (in preparation) on the sociology of literary studies.

are intended to facilitate the re-skilling of people who have an expertise, the demand for which is currently on the wane, by training them in high-demand areas. The approach that has been generally adopted in the design of such programmes has been to attempt to identify generic skills; skills that trainees already have that will be useable in the target occupation and additional skills that they need to acquire. Conceptualised in this way, the walk from one occupation to another would seem to involve a simple process of packing up, before leaving, what will continue to be needed and collecting new baggage en route. The curriculum designer has the job of providing the road map, sketched out in terms of the generic skills required and (presumably) providing shortcuts where a particular trainee has already acquired a particular skill in the context of their original area of expertise. But then there's the problem of recontextualisation. We have three categories of participant here. Firstly, there is the trainee, who has expertise in a redundant activity. As a 'snow man' in that activity, he is not in a position to be explicit about his expertise. Secondly, we have the 'snow man' of the target expertise, who is in a similar, though healthier, position. Finally, we have the curriculum designer, who has expertise (we might hope) in curriculum design (though, given the snow man effect, not to the extent that s/he is able to render it in explicit form), but not in either the trainee's original practice or the target practice. Three viewpoints, but what do they look at?

"I was reminded of a diagram in Turnbull's chapter that he borrowed from Edwin Hutchins. I can't really show it to you here, while we're walking, but I can attempt to describe it. It seems that Micronesian navigators keep the star paths in their heads, wherever they go; this constitutes a kind of 'star compass'. When going for a 'walk' in the Pacific they identify a 'reference island' and establish the position of this *etak* in terms of the star compass at the beginning of the 'walk', that is, they position it in relation to the rising and setting points of the stars in the compass. Of course, in 'walking' to a known destination, they also know the position of the *etak*—again in terms of the star compass—from there. The 'walk' is then conceptualised (and navigated) as the regression of the *etak* position in terms of the star compass; the navigator himself (sic) is considered, in this sense, to remain stationary. This seems to me (and, apparently, to Turnbull) to be a radical alternative to the 'god's eye view' (I think this is Donna Haraway's (1991) expression) of maps that seems to us to be such an obvious requirement for (or product of) almost any kind of walk, though de Certeau's (1984) *flaneur*—not really a navigator—is aso suggestive of this alternative. The Pacific navigator/*flaneur* strategy is also consistent with my preference for getting inside the game, describing transmitter and acquirer strategies rather than states of interaction. It is also not irrelevant that I seem to need to introduce god's eye maps to the introduction of my strategic schemas.

"I want to draw attention to the Turnbull/Hutchins description of the stationary navigator. Of course, the acting subject is always a 'snow man'. We might, then, consider the PCP trainee to be experiencing a changing horizon rather than as collecting generic skills and knowledges marked out on a map.[11] Would the provision

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[11] Given that the skills and knowledges are constructed by individuals other than s/he, perhaps a computer game avatar searching out concealed ammo and medpacks on their murderous adventure might provide a better metaphor for the traditional programme.

of an *etak* help? What do we have in lieu of a star compass? At this point I have to confess that my thinking has not advanced very far in addressing the problem; possibly it's insoluble in a map-culture. However, we might, at least, focus our attention on the production of perspectives rather than movable skills. We do have reference points, in a sense: the practices at the point of original and target expertise. We also have three perspectives: that of the trainee, that of the practitioner in the target practice, and that of the curriculum designer; the latter is necessary as the motivator for the journey. Does this empirical chronotope provide us with the basis for the construction of a useable 'star compass'? This, of course, is an empirical question that I hope to be able to answer if and when Andrew and I complete our proposed research project. I would, though, very much appreciate your views and suggestions.

"Where does all of this leave us? Well, perhaps it might enable us to propose another set of alliances and oppositions in terms of analytic strategy. In that old paper of mine that you cited—'Towards a conceptual map', I think I wanted to establish exactly that, a map, a god's eye view, an objectivity. This certainly seems to characterise the products of my former mentor, Basil Bernstein. However, as I've tried to make clear during our walk this morning, I now try to get inside the game that I am watching to construct a subjectivity. Strategies, for me, have subjects that need to be identified in respect of their strategic action. This is not, of course, to claim that I avoid objectifying action—we are all snappers—but rather to suggest that I attempt a method that sees through the (objectified) eyes of the agents in my theorised chronotope. The 'maps' that may emerge from the accumulative development and deployment of my analytic schemas are analogous, perhaps, to the patterns of alliances and oppositions that are emergent upon agents' autopoietic action. In both my the earlier and later versions I am driven to make explicit the analytic apparatus that emerges from my transactions with the empirical chronotope, subsequently to be redeployed within it. In other words, I try to develop a DS^+ external language. In your 2006 article you certainly render explicit an analytic apparatus in terms of your discussion of semiotic systems. However, I want to propose that this operates more at the level of an internal than an external language, that is, that this apparatus puts comparatively little pressure on the substantive analysis of the empirical chronotope. There is a sense, then, in which your approach is the opposite from mine: I have a weakly developed (DS^-) internal language and a well-developed (DS^+) external language; your internal language is DS^+ and your external language DS. I (Dowling, 2009) refer to your kind of configuration as a metaphoric apparatus; Bernstein also worked in this way. Your analysis, I think, fairly clearly objectifies the number and counting system (shall we say) from 'above', which also marks it as distinct from my approach. I have established two analytic strategies, which is sufficient to enable me to present another schema; here it is (Figure 3).

	External Language	
Perspective	DS^+	DS^-
Subjective	*navigator*	*flaneur*
Objective	*cartographer*	*narrator*

Figure 3.Strategies of Analysis

"So, you are primarily a narrator and I am primarily a navigator. Clearly I am stretching the metaphorical use of the terms, somewhat, but they'll do for now. As I've mentioned before, these schemas are not intended to be totalising, so please don't feel that I'm trying to imprison you in a singular category and, anyway, my objectification of your analytic strategy serves purely as a pedagogic illustration. The flaneur strategy I have also referred to above. This strategy would seem to describe certain literary strategies, the strategy used by Geoffrey Hartman, for example, in his 'mildly deconstructive reading' (1987; p. 159) of three words ('a timely utterance') from Wordsworth's Ode (see also Dowling, 2005, 2009). Now the cartographers, who are they? Well, I suppose the modernist psychologists might fit in here, Freud (most obviously, 1976) of course, and also Piaget (let's use 1953) and Luria (1976). In each case, their well-developed internal language is augmented by an external language that is constituted by what Andrew and I (Brown & Dowling, 1998; Dowling & Brown, 2009a) describe as 'elaborated description'; they argue their walks from their internal languages to their empirical chronotopes and their arguments comprise their DS^+ external languages.

"Now, I wasn't going to mention this next schema, but I've already alluded to it and it articulates in a potentially interesting way with the previous one. It is constructed by crossing internal and external languages, again scaled in terms of DS. You'll recognise it because it was presented in a contribution to your journal (Dowling, 2007b, see also Dowling, 2009). Here it is (Figure 4).

	Internal Language	
External Language	DS^+	DS^-
DS^+	*metonymic apparatus*	*method*
DS^-	*metaphoric apparatus*	*fiction*

Figure 4. Grammatical Modes (Adapted from Dowling, 2007b, 2009)

I think it should be clear why I've referred to your approach as broadly characteristic of a metaphoric apparatus and mine as a method; again, we seem to be in opposition, but only when viewed from these perspectives. I have also described the cartographers, Freud, Piaget and Luria in a way that renders their approaches with the metonymic

apparatus strategy and possibly Hartman deploys something more akin to fiction.[12] This schema arose out of an engagement with Bernstein that is elaborated in Dowling, 2009; I think I'll not further discuss it this morning, if that's OK, but its interaction with the analysis strategies schema, with which it shares a dimension, might prove productive.

"The four schemas that I've introduced this morning are not maps. They are not really snaps either. If I'm going to pick a metaphor, then I guess I'd have to say that they represent different configurations of my cameras; they are used to produce snaps. My introduction is intended as a kind of users' manual. As a navigator, my intention is to try to make my navigational apparatus as visible, as explicit as possible. Now I've done most the talking on our walk, but I think I can hear the beginnings of a protest. On the one hand, I seem to be privileging an approach that makes its method explicit but, on the other, I have asserted—with the help of Wallace Stevens—that genuine expertise cannot speak about itself. However, perhaps the camera metaphor helps here if we compare the photographer with the (recontextualised) watercolourist: the photographer deploys a highly complex apparatus, the watercolourist a simple one. This says nothing at all about the relative quality of the images they respectively produce. My analytic action is analogous not simply to the photographer, but to photographer and camera designer. My approach has the advantage of producing not only comentaries on the empirical chronotope, but apparatus cabable of being recruited in the production of more commentaries by other analysts. In other words, my approach incorporates a form of pedagogy.

"Many of our companions on our walk are using the camera facility of mobile phones. I suspect that some of them will transmit their snaps using their phones' email facilities and some of these will be saying something like, 'this is how it is here', eliding the recontextualising and flattening effects of both camera and photographer. Some cartographers and navigators do likewise. The grounded theorists, for example (perhaps especially Barney Glaser, 1992) have provided us with very sophisticated apparatuses for the analysis of qualitative data the correct use of which, we are told, will enable theory to emerge from the empirical chronotope. They are, though, suspiciously silent on the nature of the subject that is to wield this apparatus. The critical discourse analysts—here I'm thinking of Norman Fairclough (1995; Chouliaraki & Fairclough, 1999) again present a highly sophisticated apparatus, which is essentially linguistic, but they really want to bring us truths about the effects of power in society. Language and power are mediated, in their schemes, by the categories discourse and genre, I recall this from Fairclough:

> There are no definitive lists of genres, discourses, or any of the other categories I have distinguished for analysts to refer to, and no automatic procedures for deciding what genres etc. are operative in a given text. Intertextual analysis is an interpretive art which depends upon the analyst's judgement and experience. (Fairclough, 1995; p. 77)

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[12] Not all literary criticism is like this. Louis Montrose (1989), for example and others that Chung (in preparation) describes as 'theorists' are more appropriately described as deploying metaphoric apparatuses.

Well, I would be perfectly happy about this were it not for my suspicion that they had made up their minds what they wanted to say about power before they opened their linguistic camera bag. Maybe I do them an injustice, but I do wonder if they are ever surprised by their own commentaries; perhaps I'm deceiving myself: perhaps none of us is every really surprised.

"So I'm a camera toting snow man (hope I don't melt in the sun) who likes to boast about his cameras and explain their workings to anyone who'll listen. I think Nishida would have approved of the openness of this position, so wouldn't object to us trespassing on his path. I'm still a little worried, though, about Gide's remark; has this all been said before? Well, I'm rather attracted to Foucault's comment on commentary (all of this, after all, is a commentary on something—the philosopher's walk, perhaps):[13]

> Commentary's role […] is to say at last what was silently articulated 'beyond' the text. By a paradox which it always displaces but which it never escapes, the commentary must say for the first time, what had, nonetheless, already been said, and must tirelessly repeat what had, however, never been said. (Foucault, 1981; p. 58)

Perhaps all of this has been said before, but it hasn't been said here.

"I understand it's your birthday soon: お誕生日おめでとうございます. Thanks for joining me this morning; please feel free to borrow one of the cameras anytime you think it might be useful; I'd be happy for you to disassemble and reassemble it, make some improvements, perhaps. You know, it really is a beautiful day for a walk. But then it almost always is, don't you find."

Those encountered on the walk (some underfoot, but not trampled)

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[13] I was reminded of this extract by Soh-young Chung.

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