CEPaLs Paper 04:

Rethinking education: the consequences of Chaos Theory

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In 2004 I gave this paper to the BELMAS Annual Conference. I have now revisited and updated it for publication as a CEPaLS paper. Much of what was written about the TSW project happened after this date (e.g. Butt and Gunter 2005, 2007) but it still holds up as a useful example to consider (a) the failure of instrumental models of change; and (b) the importance of examining practice.

Introduction

It is twenty five years since I sent off my first paper to a refereed journal. The paper was titled: "Jurassic Management: chaos theory and management development in educational institutions", and after revisions it was published in 1995 in the *Journal of Educational Administration* (Gunter 1995). Looking back from the vantage point of 2004 when I gave the paper it seems that the 1990s was a decade of chaos with much interest in how this theory can enable the field to know practice and to practice better. Certainly, researchers have continued to gain new insights into practice through beginning with complexity and context rather than prescription (Davies 2004, Morrison 2002). In 1997 the paper became a book, *Rethinking Education: the consequences of Jurassic Management* (Gunter 1997a), and it was both simultaneously acclaimed as "an excellent survey of the educational management field" (Hall 1999), and condemned as a "neo-marxist fantasy" (Jackson 1997) and "anti-management" (Caldwell and Spinks 1998). In this paper I do not intend moving into the area of symbolic capital and what it is we do when we write and read a text (see Gunter 1997b, 2004) but instead to re-examine what it means to use Chaos Theory in our work, what we gain and what we might lose. I intend to do this by examining why Chaos Theory is attractive to us and then use data from the evaluation of the *Transforming the School Workforce Pathfinder Project* (Thomas et al. 2004) to critically evaluate the theory.

Critical Thinking

The argument put forward through the metaphor of Jurassic Management is that the underlying knowledge claims on which much of the prescriptive "applied" models of best practice in leadership and management are overtly instrumental and intellectually impoverished. I argued

that the promotion of visioning, consensus value systems, proactively created teams and development planning, could do damage by conceptualising education and its institutions as a theme park. Furthermore, a whole industry was developing based on the production, marketing and training of 'management by ringbinder' through which the teacher was to be seduced by the rationality of the process. It seemed as if the field was unreflexively accepting of business models as if they were modernising and progressive. We seemed to be losing the values and meaning of "education" from the field of *educational* administration, management and leadership as illustrated through Baron and Taylor (1969) and Hughes, Ribbins and Thomas (1985). The intellectual work of authentic practice that we experience everyday within educational leadership seemed to be being stripped away, and I went on to argue that in Jurassic Park there is no history, theory is positivist where a cause and effect connection regarding impact is assumed, and research is about measuring such an impact.

Underlying this account is a wider issue of field development, and how the different positions of those who work on the macro policy of modernisation and on micro policy in the school or college led to a range of perspectives that were not fully aired until the ESRC Seminar series led by Les Bell, Ray Bolam, Tony Bush, Ron Glatter, and Peter Ribbins, gave the field the opportunity exam field development and knowledge production (Bush et al. 1999, Ribbins 1999). In retrospect, this seminar series contributed to the conditions through which Peter Ribbins and myself were able to develop an approach to mapping knowledge production within the field and to take an inclusive approach (Ribbins and Gunter 2002). What we have been able to do is to show the position and provide an account of the Education Management Industry, as well as to map other diverse positions in the field, that certainly were not a part of my analysis in 1995 and 1997. The critique of the field I made was not new (see Ozga 1992, Ball 1995) but it was being said at a time when leading field members were positioning around a review of history and purposes, and to develop a productive way forward.

Drawing on Chaos Theory was helpful because it enabled me to engage in critical evaluation rather than opposition. The approach I took at the time has been articulated and presented as:

- *Technical:* what is happening and does it work? How and why?
- *Illuminative:* what does it mean*?* How and why?
- *Critical*: what are the power dimensions? How and why?
- *Practical:* what improvements can we make? How and why?
- *Positional:* what are the networks that create and sustain knowing? How and why? (Gunter 2005)

Chaos Theory enabled me to show how technically there is a disjuncture between what was being promoted as effective management and what the realities of effective management are. I was able to illuminate meaning by showing that the cause and effect assumptions of 'management by ringbinder' were unfounded because interventions in social relationships are not linear. Chaos Theory is helpful in developing a critical engagement with power because it helped to look beneath the reality of the team to the existence of self-organisation. It also helped me to ask new questions about practice and how we improve what we do in ways that avoid the dangers of unreflexive prescription and the delusion of visioning. In particular, it stimulated me to think about the importance of human interactions and relationships which are the life blood of an organisation but can be located outside of the formal systems of an organisation located in line management charts, job descriptions and plans. Finally, it opened up the positional issue of how networks or epistemic communities grow up and create their work in particular ways, and to ask questions about purposes and labelling. You will recognise that much of this has informed and formed an agenda for my work over the past decade (update: and since) as I have begun to develop a deeper and richer understanding of the history of the field through field member biographies and outputs, and to examine the inter-relationship between theory and practice. My work with Peter Ribbins is core to this, and to how we as a field acknowledge the territory we are on and who are neighbours are (see in particular Gunter and Ribbins 2003).

What I want to focus on for a moment is the inter-relationship between theory and practice. In using Chaos Theory, we might ask what this means? Galbraith (2004) took myself and the other writers to task for *applying* Chaos Theory. He argues that not only have we not done it correctly but we should not be doing it in the first place, and we are criticised for the misapplication of the butterfly effect, and for associating non-linearity with the complexity of human systems. This is part of my reply and while lengthy it does outline my case:

> "I freely admit that I failed to apply Chaos Theory mainly because I did not set out to do this. I would want to argue that in social practice we do not apply theory in the positivistic sense but we use and produce it. Application, in the way that Galbraith uses it, is about model building and testing at a distance from real life practice, and so the actual activity of application (formulating a hypothesis, and identifying variables), and the actions taken (thinking, typing, seeing), is not affected by and does not impact on the complexities of real life. This scientific approach to application is one that the field in North America worked for up to the 1960s in the Theory Movement but this rapidly fell apart, particularly through the challenge of humanistic work by Greenfield. What has been the tradition in England is that of application that is sociological through recognition of agency and structure, with some knowledge workers giving more emphasis to one or the other. There are those who focus on the role of the state in determining practice in educational organisations and so are interested in how issues of social justice are worked through in schools and colleges, while there are those who are interested in enhancing the agency of the practitioner through management and leadership models of practice (Gunter 2001). Hence the tradition I am located in is one that seeks to understand within the realities of practice through the social sciences, and this is illustrated by Hughes et al. (1985) who introduce their text on educational management, which includes practitioners, in the following way:
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> > There is thus a basic paradox in the way in which we respond to the constantly recurring and legitimate challenge to relate theory to practice. On the one hand, this is a book which is theoretical, in the sense that its concern is to assist readers to reflect more critically upon their own management practice and that of others, and to use concepts and theories from the social sciences when doing so. On the other hand it is also practical in its intention, first that such reflection should contribute to better management practice, and second that practitioner experience and viewpoints should be taken into account to a substantial extent in the text, so tha the reader's critical reflection can have a broader practitioner base than it would have, and thus contribute more effectively to an appreciation of better managerial practice (xiii).
>
> When combined with an academic-practitioner habitus revealed through locating professional practice in a range of educational sites (schools, colleges, local government) in addition to the university, the field member in England has a strong orientation towards the description, understanding, and explanation of practice, and an embodied understanding of what it means to take responsibility for educational processes and outcomes" (34-35).

While Chaos Theory enabled me to engage with how we give recognition and meaning to practice it also had severe limitations. What was missing from the 1995 paper and also from the book was an explicit theory of power regarding knowledge production. I was on an intellectual

journey and this area of work and thinking was to unfold though my thinking with Bourdieu (Gunter 2002). At the time the critiques seem to read as border skirmishes where I had thrown over a grenade and someone decided to throw it back. The level of debate was not very developmental, and what did not happen (to my knowledge) was a fully fledged critical evaluation of my position in the way that Thrupp and Willmott (2003) have undertaken in their recent book.

Critical practice

Key questions for our field are: how do we understand practice? How do we work with those who practice in contradictory settings to improve that practice? This has led the field to focus on organisations and Chaos Theory provides an interesting perspective regarding conceptualisation. As Stacey (1996) states:

> "They are powerfully pulled towards stability by the force of integration, maintenance controls, human desires for security and certainty, and adaptation to the environment on the one hand. They are also powerfully pulled to the opposite extreme of unstable equilibrium by the forces of division and decentralisation, human desires for excitement and innovation, and isolation from the environment. If the organisation gives in to the pull to stability it fails because it becomes ossified and cannot change easily. If it gives in to the pull to instability it disintegrates. Success lies in the sustaining an organisation in the borders between stability and instability. This is a state of chaos, a difficult-to-maintain dissipative structure" (21).

We are able to bring to this analysis further ways of understanding social relationships, and of interest is self-organisation where behaviour patterns are shattered by:

> "…the spontaneous formation of interest groups and coalitions around specific issues, communication about those issues, co-operation and the formation of consensus on and commitment to a response to those issues" (Stacey 1993: 242).

It seems that the individual can be self-motivated and self-regulated in order to facilitate action rather than be automatically steered at a distance by policy structures and agencies. The individual can be motivated by intrinsic rewards such as wanting to make a contribution, a sense of achievement and feelings of self-worth rather than mainly by extrinsic rewards such as pay and promotion. As Stacey (1993) states:

> "People performing closely similar tasks always form informal social groups in which they discuss what they are doing and the environment they are doing it in. They gossip, repeat anecdotes, and tell war stories. They recount the difficulties they have experienced in carrying out particular tasks and others compare these with similar experiences they have

> had. What is going on when this happens is, however, far more important than pleasant social exchange. What is going on is in fact a vitally important form of learning" (348-349).

This very much resonates with work on distributed leadership where Peter Gronn has asked some serious questions about practice that takes place (a) without a direct connection to leaders "causal agents of work outcomes" (Gronn 2003: 278); and (b) is *concertive action* which is more than a numerical aggregation of "more hands make light work" and instead conceptualises distribution around 'spontaneity', 'intuitive understanding', and the existence of 'a variety of structural relations' (Gronn 2002: 429).

If we read data from this perspective then we can see how relationships form and fracture through the process of change, and with Steve Rayner (at Birmingham, not Stephen Rayner my current colleague at Manchester) I have been working on distributed practice within the data from the *Transforming the School Workforce Pathfinder Project* (Gunter and Rayner 2005). Here we have read the formal interview data from the eight case study schools (Thomas et al. 2004) and we have shown that while there are formal interconnections through change management teams it seems that change theory is not directly applied by those who are trained to do this. Rather change as a process and an outcome is achieved through working for and through ideas and tasks, where theory is used to think with.

Let us consider the following extracts from interviews with the workforce from the eight case study schools:

> *A mental shift in teachers was needed. They work long hours and are committed. Now because of the early opening of school we say: "unless you need to be here, take your lap top and go". It is important to do this because our work never finishes, it is constantly in your head* (*Meadow School - Senior Manager).*
>
> *Filling in the research diary has made me look at what I do. I do too much administration and not enough teaching… I restructured my time and it was a great exercise. I have started to adjust my time, and I am working at home on lighter work. I can avoid the traffic because I leave earlier (Meadow School - Diary debrief meeting).*
>
> *The success of the Project for me is that it's been about the team approach to problem solving and decision-making. It's not just for the Senior Management Team to make the decisions it's about all the staff being involved (Beacon Hall - Teacher).*

The ethos of change existed within the school previously, but it can be a risk putting diverse groups of staff together to solve problems. Usefully the staff soon realize that ideas for change need discussion, mean difficulties and call for hard talk! (Beacon Hall – Senior manager).

While the language can often show an acceptance of managerial labels such as vision, teams, and problem solving, there is underlying this a more complex practice of how we come to form working relationships. Often we witness people who have worked together create the opportunity to work differently, and in one of the case study schools the teaching Head gained 10 minutes per day because he had negotiated with the Teaching Assistant to mark the register and deal with early morning issues raised by the students. This shift in role and tasks is not a technical matter but is based on the trust and respect between two colleagues that has been built up over the years. At another school a Resources Room had been created where the new Resources Officer worked to produce teaching materials, and it became a room where the Teaching Assistants made a base for their work and their social interactions. It is in settings such as this that change is talked about, lived and worked through.

The realities of change can be troublesome and the following illustrate some issues:

At the end of every Change Management Team (CMT) meeting we had union meetings. The LEA was involved through the co-option of a representative to the CMT. This was partly political but also to keep the LEA informed. There was also co-option of a member of the governing body. This was important as the active involvement of a school governor reporting to the governing body was felt to be essential (Park Vale – School Manager).

…it has to be acknowledged that our approach has seen an increase in pressure and added workload. This was reinforced by the generation of some very complex issues related to our change strategy (e.g. the re-structuring of the professional status of the Special Needs Assistant) (Park Vale – School Manager).

It was a shock to have the change plan proposal to re-structure the school year accepted in July and then rejected. This gap between the instruction to think 'blue sky', then face a 'grey mass of rain' was very disappointing. To some extent, this was made worse by the DfES pushing for regular reports of progress, making it seem as if we were being asked to 'dig up the seed every week to check for growth'. There was an obvious need for trust and a little show of belief in the school. Above all, the pace and time frame of the Project meant we were often pushing against the grain (Park Vale – School Manager).

Furthermore, operational and political considerations externally imposed by the DfES saw the speed of the Project being forced: some perceived the pace as so intense that they commented: 'there is a danger of losing some people along the way and of change fatigue' (Beacon Hall -

Support Staff 3), particularly since an increase in workload for some staff, particularly senior and support staff, was needed to make the Project work. What is evident in these extracts is that there are tensions in working relationships and in some there were fractures regarding change. In one school the library had been changed into a computer learning area where students could be sent if a teacher was away. The network could hold learning activities put on there by the teacher if there is a planned absence, and a range of software meant that heads of department could schedule work for unplanned absences. This meant that teachers did not have to do cover and so their non-contact time was protected. However, removing the books and the change in the use of the library caused distress, and only one teaching assistant was available to support the learning of potentially 114 students if all the computers were occupied at one time. The school had appointed a security company to walk around the room and ensure that the students did not damage the equipment. While teachers had made gains in regard to cover time, relationships fractured over the meaning and experience of learning for students who could spend more than one lesson a day work on the computer.

Summary

Engaging with Chaos Theory helped to undertake a critical evaluation of particular trends in the field in the 1990s, and in particular it helped to think through the knowledge claims underlying the education management industry. Knowledge production was rapidly becoming factory production with 'ringbinders' containing the solution to our problems. Chaos Theory helped to gain perspective on this, and to enable the experience of practice to be foregrounded. The emphasis on relationships and how our interventions in practice are part of a complex process enabled the field to re-connect with its roots from the 1960s within the legacy of educational administration. In particular, the inter-relationship between theory and practice was made overt where the intellectual origins of theories and how they can help to describe, understand, and explain practice, in ways that enable the agent within context to develop strategies for improvement, put the emphasis on conceptual development. Furthermore, humanistic approaches where practitioners are offered the space to articulate their experiences enables theorising in context

where we work for change rather than install non-educational procedures and processes to secure change. When we combine this with learning within a higher education setting, with an emphasis on research and development, then theory and practice can be talked through, it can be accepted, rejected, and fudged. What such encounters can show, and certainly the extracts above illustrate, is the importance of locating the field within the social sciences and in particular drawing on theories of power. While in 1997 I did begin to work on this, it was not until I begun to map the field in more detail (Gunter 2001) that issues of the power dimensions of the field as a field of knowledge, knowing and knowers began to emerge as a stronger feature. It was through Bourdieu's theory of practice that I was able to think through the issues of practice and relationships in ways that enabled me to conceptualise self-organisation as a field of struggle where our habitus or dispositions are revealed. While Chaos Theory helps us to recognise human interactions and patterns, it does not provide us with a theory of power that is social and socialising, and which helps us to explain the rich inter-play between agency and structure in context.

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