An Unlikely Alliance: Mathematics Education, Poststructuralism and Potential Affirmation

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This paper engages current poststructural debates over knowledge and subjectivity for a discussion on teacher education. In doing so it takes seriously the claim that what we have come to know as teaching practice is now profoundly undermined by social theories of the postmodern. The task that it sets itself is to reinterpret the role of the teacher educator in such a way that this new form might confront the challenge that postmodernism has posed. It does this by exploring how 'modern' assumptions have shaped the self-understanding in terms of which many educators make sense of their work. Drawing on the philosophy of Foucault it then critiques these ideas and works to reconstruct them in order to meet the challenge posed by postmodernism.

What is an educational system, after all, if not a ritualisation of the word; if not a qualification of some fixing of roles for speakers; if not the constitution of a (diffuse) doctrinal group; if not a distribution and appropriation of discourse, with all its learning and powers? (Foucault, 1972, p. 127).

Introduction

It is almost a truism to suggest that writing cannot proceed without general agreement and substantial clarity between the reader and the writer about the object of study, even if this agreement is only tentative or conditional. In opening the writing with Foucault[1] I have already signified a transgression beyond the boundaries of what is sometimes taken as right and acceptable for mathematics education. It is a provocative move that may well initiate from the reader a defensive response arguing that Foucault's rewriting of the educational discourse is an issue for political and social theory with which to concern itself, outside the domain of mathematics educational practice and its justifying theory. But this stand evades the obvious point that there would clearly be something amiss with the wider project of formal education itself whose very expression requires the preexistence of the social world it claimed to help improve.

Given the contentious intellectual times in which we are now implicated it seems to me that such a discussion is timely. Once one seriously entertains that idea then entry into the discussion becomes conditional initially on an investigation into the nature and implications of key assumptions and assertions of those current ideas which underpin common sense notions of teaching practice, social meaning and

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[1]Foucault is one of a group of thinkers commonly associated with French poststructuralism. His commitment was to an anti-idealist programme and he maintained that 'truth is of this world'. But his interests extended beyond methodological concerns to a fascination with the mechanisms of power in modern society. His unique contribution to social theory lies in his capacity to ferret out the manifestations of power where few prior to him had thought to look.

ourselves, ideas which most educators take for granted. In other words, before we begin to consider the critique which Foucault has levelled at received definitions of education and the implications which ensue for teacher education, the orthodoxies which his critique contests must first be made explicit. Hence the first section of this paper will entail a consideration of the theoretical foundations on which the justification for teaching practice has been erected and the ways in which they have shaped how teachers make sense of and legitimate their practice.

The second section reconstructs the question of teacher education in mathematics by couching it within the terms of Foucault's theoretical position and asks what necessary shortcomings present in a teaching practice that is bound to modernity's assumptions. I offer a response by first introducing the main ideas of Foucault which have emerged as central to the theory of teaching practice. A full discussion of these themes is beyond the scope of this paper and I can only at best offer a brief interpretation of them. I use that interpretation to support a critique of current discourses on teacher education that reveal a commitment to rational autonomy through the development of human reason. I argue that on the basis of my interpretation of these ideas that the intellectual resources of modernity are no longer adequate for what we know as teacher education; that we need to look beyond the familiar view to a more robust conception of the reality of teacher education. My point is that the key assumptions and explanations fundamental to the familiar notion of teacher's work are currently untenable.

But this is not my whole point. My intention here is not simply to re-examine conventional understandings of teaching practice and the intellectual commitments which they invoke, nor merely to register the end of a secure foundation to what teachers can think and do in actual teaching practice. Instead I argue that engagement with pedagogy *can* exceed the constraints of modernity. Since the specific purpose of this paper is to make a case for an alliance between mathematics education and poststructuralism, I explore how Foucault's ideas, as they play out in teacher agency, both imply and demand a different stance towards existing practice. That is, my goal here is to draw together aspects of Foucault's thinking and follow their significance into the issue of teacher agency. I argue that the space opened up by Foucault's discursive moves is not a postmodern incitement to avoid acting in anything at all, but rather, it marks a radical theorisation of practice as a set of tools which teachers may appropriate in order to make sense of their everyday practice. My suggestion is that Foucault's position provides us with the intellectual resources for understanding the question: How can the teacher maintain and legitimise her own coherency in the postmodern era?

Received Notions of Teaching Practice

The historical story of modern educational practice has its beginnings in the intellectual, cultural, and political climate of an era commonly referred to as modernity. Thinking that derives from this era reveals a commitment to the ideals of the Enlightenment movement of the eighteeenth century which inaugurated European modernity. A movement always presupposes some purpose other than

mere nomenclature and the purpoe of the Enlightenment[2] was to apply the methods of the natural sciences to the organisation of social and political life. The dominant story of education in western social theory is centred around this practical task of the Enlightenment where today, as in its beginnings, its social significance and influence relates to the possibility of both progress and emancipation. But education's motivation extends beyond the need for social development to a desire to cultivate rational independent thought. Indeed the progressive development of human reason is seen to be the terminal gesture of the modern movement.

Thus, the story of educational practice unfolds as being deeply implicated in and organised around the two great legitimising narratives of modern knowledge: the political emancipation of Man, and the philosophical adventure of the speculative Mind (Lyotard, 1984). More than anything else, a history of the educational process shows how both these discourses of the Enlightenment have lent credibility to and sustained the idea of educational practice not only as a fundamentally progressive and emancipatory endeavour but, more importantly, the medium by which rational enlightened thought might be legitimated and realised. It is the belief in the possibility of humanity's advancement through the process of human emancipation that reflects the modal character of educational thought (Usher & Edwards, 1994). Moreover it is a commitment to the aims and values associated with the development of rational autonomy that has not only been regarded fundamental to emancipatory work, but also underwrites many practitioners' self-understandings of practice today. To be sure these educational aims and values have from time to time been articulated in various ways but they have always revealed a desire to develop in all people the universal power of reason and through this means to empower people to create collectively a better form of social life.

However there are assumptions embedded in this Enlightenment that need our serious consideration. This narrative about the progressive development of human reason is sketched around a notion of the human subject and around the ideals of pure objectivity and value-neutrality. It holds onto a grand design, with its systematising and tidy partitioning. This lends coherence to the advancing of a universal explanation of the world, a definitive point upon which judgments can be substantiated – judgments of the knowledges of knowers who are considered capable of achieving a 'view from nowhere'. Moreover, if reality assumes a fixed character, exhibiting certain qualities regardless of who is observing, then a polarity must exist between a knowing subject and a known-about objective world. Knowers are detached, neutral spectators, and the objects of knowledge are separate from them, functioning as inert items in the observational knowledge-gathering process. What emerges then from this discourse is a staging of 'truth', in which the knowing subject and reality are adversary notions and in which the concepts of objectivity and neutrality play a central role.

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[2]The underlying notion of Enlightenment was that of 'light'. The notion was seen as lighting the way of an emancipation from the dictates of superstition and ignorance brought about by the political and religious institutions of a redundant social order. The claim was that the progressive development of human reason would shine the light for humanity towards the conduct and organisation of a better social life.

Modernity's original justification for adopting this separation between the knowing subject and an objective world was the promise that this would lead to an improvement in the human condition. This promise of human emancipation could only be realised by placing the knowing subject at the centre as an independent and detached observing individual. It is this particular knowing subject which has dominated the educational narrative: the generic teacher and generic learner, both characterised by their capacity to exercise a particular kind of reason. The exercising of this kind of reason is dependent on its abstraction from everything that distorts or gets in the way of reason; more precisely, on its disembodied, de-passionate, de-particular nature. This conceptualisation of the rational autonomous individual prompts and sustains a belief in the existence of a universal, homogenous and 'essential' human nature that allows those in the educational process to put themselves in another's place and know his or her circumstances and interests in exactly the same way as she or he would know them.

The understanding that rationality is shared by all individuals, irrespective of historical or cultural circumstances, is the basis of emancipatory demands for equality of opportunity and the right to self-determination. It is the task of the educator to cultivate a capacity of rational enlightened thought in the individual in order that he/she might deliberate, judge and choose on the basis of rational self-reflections. However to engage the idea that it is possible to achieve self-determination through rational enlightened thought is to make an assumption of a coherent and already existing subjectivity which awaits expression. It is also to assume the transparency of language. These central tenets that presuppose language to be transparent and subjectivity to be fixed carry considerable rhetorical weight because the potential access to truth which they offer provides a sense of certainty and security in life.

These ideas persist right to this very moment to inform conceptions of what it means to educate, what it means to be a learner, and what it means to know. Educational notions which circulate as captions, for example, 'a better life for our students', or 'personal fulfilment and self-expression through education' are founded on a set of assumptions about knowledge and the knowing subject, assumptions which equate reason with progress, and knowledge with emancipation. In this discourse human reason becomes the central concept of human nature and rational autonomy is a prime political and social aim. It is these notions, together with the support and authentication they receive from institutions and social practices, that fashion the 'reality' of the classroom and offer educators appropriate ways of being and behaving and of personal satisfaction for everyday teaching practice.

This is not to say that there haven't been dissenting discourses. Some educators working to escape from this logic, have argued for the concept of *difference*. Indeed there is a growing presence of this theme, along with the pluralistic desire to make a space for diversity, in mathematics educational scholarly writing and research (Ernest, 1994). Although their educational aims and values are articulated in unique ways, those who promote the valorisation of difference have a common interest in emancipation through the transformation of an unjust social system into one that is more democratic. However the methods of emancipatory-minded educators

troubled by a maldistrubution of power should not be considered as merely academic conversations across demaracted societal lines. They are also said to be empowering in that they aim to give voice and priority to learners who are disenfranchised and disempowered through the social markers such as race, class, gender and hierarchy in the classroom.

Both constructivist and recent feminist perspectives, seeking to provide a place and power for students, ask that we focus on differences. In these perspectives the starting point is that the universe is *not* objectively knowable. Rather it is the learner who constructs the world. In the constructivist discourse on teaching in which the learner is reified the intent is for the individual to construct personally and socially viable theories of the ways in which the world works. These personal constructions must take place within the bounds of prior, socially-developed knowledge. In this theorising the individual is unified and stable, possessing a unique essence of human nature. In the feminist discourse the intent is also for the individual to construct personally and socially viable theories of the ways in which the world works, but this construction must be in opposition to male ways of knowing.

In both these discourses of mathematics education voice functions as a metaphor for the learner's self-expressions. The particular stance taken towards existing educational arrangements of necessity varies between these two separate discourses but what remains constant are the intellectual commitments to educational aims and values that figure in the development of rational autonomy. Learners are said to be empowered when they are facilitated by the teacher to release and give voice to their subjugated knowledges. Through the elevation of their personalised and localised knowledge, constructivist and female learners become authors of their own mathematical world. Their self-definitions generate not only visibility but also are said to offer agency in terms of identity and position from which they might act for change.

Foucault

Foucault belongs to a group of French thinkers whose diverse set of postmodern initiatives in social and philosophical thought has been labelled as 'poststructuralism',[3] a theory of modernism in the process of becoming redundant. This theory developed in a period of decline and uncertainty in response to the legitimation crisis which followed the devastation of two world wars, the end of empires and the threat of ecological collapse during this century. Along with other poststructuralists, Foucault claims that the Enlightenment values, assumptions and explanations are no longer adequate nor even desirable. His theorising analyses the limits and limitations of modernism – its unrealisable ambitions and the dilemmas that arise with the loss of modernism's progressivist discourse. But his theorising

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[3]Foucault would query this categorisation of himself. He is said to have proclaimed that he did not know what the terms 'poststructuralism' or 'postmodernism' meant or what problems these terms were meant to address. "None of these descriptions is important by itself; taken together, on the other hand, they mean something. And I must admit that I rather like what they mean" (as cited in Usher & Edwards, 1994, p. 82). Despite Foucault's own resistance most texts refer to him as a poststructuralist.

is about a different philosophy that is not based on the idea of propounding some truths to close off discussion; rather the aim is to keep the conversation going.

In order to proceed beyond the intellectual parameters in which the Enlightenment project is grounded, what Foucault and others have tried to do has been to develop a different language. Instead of talking about 'individuals', Foucault proposes code words such as subjectivity, language, power and resistance. It is through his use of these concepts that he is able to undermine and discredit the philosophical foundations on which modernism was first erected: *a priori* and absolute reason, and the disembodied rational autonomous subject separated from an objective world.

Foucault proposes that there is no core essential subject. By this he means that there is no central definitional quality that makes humans human. Through his critique of the modern ideal of the self-fashioning individual, Foucault erases the transcendent knowing, willing and judging subject of the Enlightenment project. His archaeological analysis shows that the notion of a subject who exists prior to language and is the origin of all meaning has to be a fiction generated by the structural rules that govern discursive formations that govern all thought and speech. By laying bare these deep seated rules that constitute the condition of possibility of thought, Foucault undermines not only the notion of an originary subject but also associated notions of truth and progress. He presents instead the subject as unbounded and decentred in the social field. Unlike the subject of the constructivist and feminist project who is a highly rational, situated self, the 'subject' in Foucault's terms is not sovereign but is theorised with a double-valence, assuming both the status of agent and one who is acted upon. Given this, the subject is internally contradictory, and neither unitary nor homogeneous.

Part of Foucault's strategy here is to think of subjectivity as a *process*, rather than a fixed state or condition. Subjectivity becomes a complex constellation of processes. For Foucault there is no originary moment establishing pure identity which can be rationally unpacked, but only a flux of experiences continuously being shaped into new wholes, reproduced through new vocabularies and new stories. Thus subjects are heterogeneous, conflicted in multiple places at one time and are constituted by processes which are socially variable and differentially evaluated between subjects and over time. It is these societal valuations, known as discourses, which provide a range of modes of subjectivity.

For Foucault the term 'discourse' quite clearly refers not simply to language or social interaction but to relatively well-bounded areas of social knowledge. Discourses do not merely reflect or represent social entities and relations, they construct or constitute them. Different discourses constitute key entitites (e.g., 'gifted', 'slow learner', 'irrational thinker', 'progressive teaching') in different ways and position people in different ways as social subjects (e.g., teacher, learner). Discourses are more than ways of giving meaning to the world; they imply forms of social organisation and social practices which structure institutions and constitute individuals as thinking, feeling and acting subjects. For the teacher, constituted by her relationships, among others, with her students, their parents, her school, and the wider community, discourses provide taken-for-granted ideas and ways of practice

that come before any views she might have about herself as teacher. Her access to subjectivity is not completely open but is governed by historically specific social factors and forms of social power. Thus discourses are powerful in the sense that they function as sets of rules constraining and enabling what the teacher might say, write about, think of, or imagine at a given moment.

One of the insights that Foucault 's work offers is a complex view of power, one which allows the teacher to maintain an opposition to regulatory operations of all kinds at the same time that that opposition is itself conceived as part of power. Power-regimes are formed and sustained through certain radical erasures and constitutive exclusions, and this is nowhere more evident in teaching practice than in those hierarchical educational regimes constructed through the subordination and exclusion of the learner. On the one hand the learner is excluded and erased from such a system, and on the other she is everywhere recirculated within that system as an object of educational investment. The learner is then both outside the very system but at the same time is a highly invested commodity within the system.

To accept the poststructuralist critique of the Enlightenment's undifferentiated human nature, universal human reason, and the ideal of objectivity, demands a serious look at the philosophical foundations upon which the constructivist and recent feminist discourses have been erected. Both these discourses which promote the expression of subjugated knowledges insist that the learner is disengaged from the world and is the source of self-knowledge and of knowledge of the world. A poststructuralist response would take exception to the underlying notions of objectivity and pose the question of mathematical knowledge within the terms of its constitution and its strategic position which it holds within the broader social field of relations of power. Such a response would argue that constructivist and feminist discourses both function as a mode of exchange constituted in hierarchy. By this I mean that self-expression of mathematical knowledge is circumscribed by a set of rules that define what can be written about, thought or spoken. There are quasi-structuralist rules of formation, of which both the teacher and learner may be unmindful, which regulate and determine the spectrum of what can be seriously said about school mathematics at any given historical moment. Mathematical knowledge is *not* constituted by the learner herself, but is an effect of a primarily linguistic discursive formation.

Thus, mathematical knowledge is an issue of the social, historical and political conditions under which writing, speaking and thinking about it come to count as true and false. The constructivist teacher carries her own pedagogical history into the classroom imposing names, categories, conceptual schemes and theories upon the unknowable. She is implicated by her hierarchical privilege. And since a paradigm which privileges rationality and reason has always governed and authorised her own subjectivity she cannot avoid bringing the principles of rational justification to bear on her students' mathematical constructions, ensuring that personalised student knowledge is founded upon reason and that any theories developed by the student comply with the logic of rationalism.

The feminists' reconstruction of mathematics education locates the question of learning within the hierarchical binary opposition man/woman to offer a 'bigendered' conception of the individual in mathematics. In this discourse the

female learner has an essential core, an essentialism which is on the one hand prior to the social field, pronouncing her as autonomous, disembodied, coherent, and stable, and on the other, inscribed in a masculinist construction of the individual. As a rational autonomous subject whose identity must be renegotiated she is the essence of individuality. By fashioning the learner in this way the binary logic of Descartes' legacy remains intact.

These are important and valuable projects because they bring critique to bear on what are perceived as arbitrary forms of power. In a similar way that is what the Enlightenment was about, fighting against something – religious and political institutions of the old despotic social order – that were seen to have too much unaccountable power. And that is what the feminist and constructivist project is about – fighting against power: for the feminist, patriarchal power and for the constructivist, hierarchical power. What they both do is give oppression a new form in the name of 'difference'.

But there can be no concept of 'difference' if there is no concept of 'same'. Talking about difference is simply to reconstruct the language that seems to be so problematic. The question at stake here is not so much that constructivist and feminist discourses have developed enunciative strategies in relation to their emancipatory visions, but that their underlying logic which is bound to reason cannot realise its promise – the promise of a development of self-knowledge and knowledge of the world free from coercion or hierarchical power. The problem is that these two discourses which purport to be emancipatory and authenticating in fact monitor, categorise and regulate learning.

How Can Teachers Act?

Foucault's critique of inherited structures of belief and convention plays a central role in the counter-enlightenment movement of our times. His whole *oeuvre* is a challenge of epistemological positions and hierarchies which offers conceptual options that are, in their radicality, at variance with the Enlightenment idea of emancipation. This move against the vision of emancipatory politics per se receives its clearest expression in his unpacking and subsequent reappraisal of the status of reason and its embodiment in the autonomous subject.

Without a doubt Foucault's set of rhetorical and generic gestures is a useful strategy for rewriting the story of modernity. It is also a useful device upon which to draw in philosophical debates about the meaning of mathematics education since these terms work very well for debating the functioning of the binary logic – both the hierarchies it engenders and the identity it assumes. However, this is not to say that it is coextensive with the task of classroom teaching and it is not quite so clear what would be gained by moving Foucault's ideas onto concrete social and cultural issues of teaching practice. And unless we as mathematics educators are able to locate Foucault's theoretical constructs within actual classroom practice, his poststructuralist theorising will continue to operate at a high level of abstraction which fails to engage with crucial issues surrounding teaching practice. The issue that arises is: is it possible to think about teaching practice which puts Foucault's ideas to work? What becomes of a politics of agency when there is no core subject?

There are two possible approaches to these questions: nihilism and reconstruction. The former approach adopts a complacent paranoia, claiming that Foucault's theoretical flourishes leave us with nothing to say. The claim is that Foucault's theoretical position with its stress on power relations, its constant deferral of meaning and its precarious subjectivity are undoubtedly all helpful moves beyond a position which attempts to identify one true and universal meaning. But this approach slides the crisis of subjectivity into a void of irretrievable fragmentation of subject positions and leaves us as educators with no motivation for intervening in anything educational whatsoever. The free play of meaning that this engenders leaves practitioners questioning their ability to exert any influence and offers no alternative but a retreat from political engagement. This transforms the issue of teacher education into an aestheticised self-absorption to the extent that sight of the original educational concern is invariably lost. The practice that originally seemed so in need of realising, renewing or securing tends to disappear into its own deconstructionist irresolution.

A more productive approach is to take as a starting point Foucault's important theoretical and political arguments in order to produce a new attitude towards mathematics educational practice: one that relates to actual concrete modern conditions yet is not constrained by modernist thinking. What this demands is not merely that we make those modern foundations more transparent and potentially problematic since critical reflection has not much negotiable currency beyond itself. We need to describe a transformed discourse of teaching practice as a mode of action – one that reworks the key ideas of Foucault's poststructuralism for a reconceptualisation of agency and the emancipatory vision; one that meets the intellectual and cultural conditions of our times yet is neither sceptical nor arbitrary in its pronoucements.

Posing the question of poststructuralism's utility in this way is to argue in the first place that it is impossible to sustain the presumption of essentialism that is central to standard notions of agency: the presumption of a universal essence of human nature upon which the rational autonomous subject was founded. Teachers are social selves and these social selves are not essential, but historically variable. A poststructuralist approach has no need to think in terms of the teacher who uses reason progressively to discover the truth about the world of mathematics teaching. It would hold that this way of thinking is approached through the wrong questions. Teaching practice cannot be viewed as an enclosed category, for it is always interwoven with the sociopolitical locations of gender, class, race, and ethnicity, to name a few.

If we formulate practice around a non-essentialist notion of the subject, then agency cannot be seen as the embodiment of a universally valid social order, meeting universal standards that guarantee its success. Teachers are constituted as subjects in discourses, and disciplinary practices and also knowingly or not, contribute themselves to the process of turning themselves into particular kinds of subjects. Thus, teaching practice becomes a contingent human project, socially constructed through discourses, and no longer mandated through an appeal to *a priori* foundations. It is best conceived of as a profoundly complex constellation of historical, political, sociocultural and knowledge power relations, some of which are connected, some of which are mutually exclusive. From these multiple locations and

from diverse intersections with specificities other than institutional setting and student composition which these structures of power and dominance play into, the world of teaching figures quite differently from one teacher to another.

Second, abandoning the Enlightenment concept of an undifferentiated human nature and of human reason is not necessarily to argue for a rejection of the idea of agency. Rather it is to acknowledge that a commitment to the aims and values which derive from the idea even today continues to be the most appropriate we have for mathematics education. It is, however, to argue for a redefinition of agency relevant to contemporary life in the classroom. Formulating agency around a non-essentialist notion of the subject enables us to rework the concept beyond its purely descriptive category to one that acknowledges that teachers' work is produced in relations of power. In its redefinition agency assumes an analytic function through which to explore the way in which teachers act and give meaning to their experiences and activities. It is to shift the question from asking 'what can be done' to one that examines the constituting social relationships in operation. As Valerie Walkerdine (1990) maintains, "teachers are not unitary subjects uniquely positioned but are produced as a nexus of subjectivities in relations of power which are constantly shifting, rendering them at one moment powerful and at another powerless" (p. 3).

Shifting the question would yield an investigation that looks closely at technologies (or practices) of the self – those rules of conduct the individual practitioner sets herself intentionally and voluntarily. Conceiving agency as contingent and 'multi-centred' allows teachers to render problematic their most firmly held assumptions while still acting in the world. In other words, in formulating agency in this way a critical investigation of the teacher's socio-cultural situation is able to be married with a capacity for self-governance. But thinking of agency in these terms is not merely to talk about exercising critical judgment of the discourse of mathematics education in both its structural and processual forms. In no way does it imply that the teacher cannot resist discourses. What presents is the possibility of finding a new impetus for the undefined work of freedom – *the possibility of transforming political relations through the production of new discourses and new forms of power and new forms of teaching practice.*

Clearly it is not very helpful to think of agency in terms of emancipation from oppression. An understanding of the teacher does not demand an investigation of 'oppression' but requires an analysis of the processes (both internal and in relationship to others) and the discourses that come to bear to constitute her as teacher. It also requires that we focus on making the existing relationship between mathematics education and society more transparent, and on exposing the tensions and contradictions between current practice and the discursive and material changes we consider necessary. The emphasis is on first laying bare and then disrupting established patterns of meaning and power relationships.

To make sense of our lives as educators engaging with issues central to the poststructuralist project in mathematics education is to fight against a conception of teaching practice as static and recognise that our work experiences and the histories which are brought to bear on them are partial realities, always open to contestation. It is to fight against hierarchical imposition in our relationships with others and be prepared to challenge the configurations of power that traditionally have existed

between teacher educators, teachers, pre-service teachers and students. Concretising the possibilities for change in our schools is to construct classroom practices that do not impose a rigid and disciplinary set of values on students, but instead recognise the dangers of imposition and allow others to feature as privileged speakers. It is to make a commitment to engage in political struggle in the meaning of teaching itself, while simultaneously acknowledging that to speak of transformative social change is to question the very meanings of empowerment and liberty. It is to create a practice that transgresses and exceeds a knowable order.

If classroom life is to be affirmed as that which exceeds the efforts by which it is rationalised, constrained and subordinated to some higher goal, then teaching can be the seat of an affirmative power that opposes regulation. The intellectual task is to understand what structures of power inhere in what is conventionally known as teaching. That is, the task is to understand the way in which teaching is managed, crafted, extended and controlled; to understand how it is determined within the dense web of educational power regimes and to distinguish between disciplinary modes of power and the kinds of resistances that they occasion and spawn. But above all, the task of the teacher is to question the practice by which she willingly accepts questionable limits of knowing and acting, and to replace this acceptance with a sense of her own power to make decisions in the face of the educational apparatus and its discursive regimes that seek to deny her any sense of agency. Putting agency to strategic use in this way cannot be seen as some sort of free-floating idealism but an evaluation that refers to and derives from the political discourse of mathematics education; one which is continually open for revision.

Conclusion

Poststructuralist discourses of teaching practice embody complicated theoretical understandings of the nature of educational life at the end of the twentieth century. The challenge of poststructuralist thinking, like that of Foucault's, is that theory becomes grounded not in absolute truth claims, but in the politics of historically specific situations. But, as I have argued, Foucault's theorising is also able to create a politically constructive moment for teachers' work in the classroom. It is not a question of ascertaining the truth about the mathematics teacher. For Foucault, human nature is not a hidden essence waiting to be discovered, but an artifact. His theorising enables us to understand that the political possibilities for mathematics education are centred on the individual as both the site for a range of possible forms of subjectivity, and subjected at any particular moment to the regime of meaning of a particular discourse, and which enables her to act. It asks: What formative events have brought this present situation about? How are teachers constituted as subjects of their own knowledge? How are they constituted as subjects who exercise and/or submit to power relations?

From the perspective of teacher education, a whole new space for critical reflection on the scope and limits of freedom becomes available. What is laid bare is the possibility of moving beyond one's current self, and what one might be doing or thinking in concrete teaching situations. In other words, Foucault's theorising provides the conceptual tools for a project of freedom, of going beyond the 'limits'

that circumscribe one's own particular historical situation and circumstances. It enables points to be grasped where change is possible and desirable, and the determination of the precise form this change should take. It gives new direction to the undefined work of agency to be achieved by working at the limits that have been imposed on us. It is this which permits a more productive approach to the articulation and extension of the work of teachers. For in a perspective in which the individual practitioner is seen as not simply constituted but also invested and traversed by often uneven and inequitable relations of power-knowledge, then what becomes possible in relation to practice is something more than a history of a 'construction': it is rather the possibility of a history of a strategic intervention through a commitment to social and educational change.

References

Ernest, P. (Ed.). (1994). *Mathematics, education and philosophy: An international perspective.* Washington, DC: Falmer Press.

Foucault, M. (1972). *The archaeology of knowledge and the discourse of language* (A. Sheridan, Trans.). New York: Pantheon.

Lyotard, J-F. (1984). *The postmodern condition.* (G. Bennington & B. Massumi, Trans.). Minneapolis, MN: University of Minnesota Press.

Usher, R., & Edwards, R. (1994). *Postmodernism and education.* London, UK: Routledge.

Walkerdine, V. (1990). *Schoolgirl fictions.* London: Verso.

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