

# **‘MATHS WITH SAM AND ALEX’: A DISCUSSION OF CHOICE, CONTROL AND CONFIDENCE**

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I can only answer the question ‘what am I to do’? if I can answer the prior question ‘of what story or stories do I find myself part of’ (MacIntyre, 1981, p. 201).

*In this paper, I draw on poststructural and feminist epistemologies to analyse the narratives of two student teachers on a primary education degree. Specifically I look to discuss the competing discourses of the masculine mathematician and the feminine primary school teacher. The initial purpose of the paper is to deconstruct themes which are prevalent within mathematical discourse; a further aim is to explore the representation of narratives within educational texts.*

## **INTRODUCTION**

Over recent years many educational researchers have begun to question and thus to challenge the dominant discourses that bound their practice. With regards to mathematics, it has been noted that postmodernism (and poststructuralism) can serve to disarticulate the absolutist version of the subject that predominates current writing and potentially restricts movement around the subject (Walshaw, 2004; Walkerdine, 1990). The project which I discuss in this paper seeks to ‘open up spaces that allow us to think about how our world may be changed’ (Cotton, 2002, p. 1); specifically it builds on the work of Mendick (2005, 2006), Walshaw (2004, 2005) and Povey & Angier (2006) in its aim to explore both the mathematical discourse and the subsequent representation of student teachers’ narratives within educational texts. In particular the study seeks to delve into the discourse of primary school mathematics, and to use the competing notions of the feminine primary school teacher and the masculine mathematician as an arc of analysis; the ‘truths’ surrounding both gendered routines have been explored by Walkerdine (1989) though not solely from the perspective of the teachers. Thus I am discussing a topic (primary school mathematics) that, notwithstanding Walkerdine’s notable work, has been identified as a neglected area of research especially with regards to its underlying philosophies (Bibby 2002); furthermore as the primary school is UK pupils’ first point of exposure to compulsory education, I am engaging with research at the source, a fundamentally important space to explore.[1]

The two participants whose narratives I re-imagine in the discussion below were interviewed for approximately 30 minutes as part of an exploratory phase of a larger research project; these conversations took place during the first few months of a three

year Primary Education degree course which is based in a university in a city in the North of England. The reasons for choosing to discuss excerpts from these particular student teachers are two-fold; in the first instance both of their narratives demonstrate participation in apparent ‘truths’ of masculinity and of femininity, as such the different discourses provide a fascinating contrast as there are stark similarities between their narratives yet their ‘chosen’ positioning with mathematics is quite different. Secondly, there are many parallels between the participants’ backgrounds. Both Alex and Sam achieved a grade D at GCSE and as a consequence they both attended an access course in order to gain their place upon the degree course, furthermore they also come from very similar social backgrounds and are of a similar age; however there is at least one ‘important’ difference to note - their respective genders.[2]

In order to analyse their narratives I will follow such luminaries as Lacan, Derrida and Foucault and propose that meaning is ambiguous and is created through language (MacLure, 1994, 2003). In particular I borrow from the French ‘post-structural/post-modern’ philosophers Jacques Derrida and Michel Foucault where the term ‘discourse’ refers to ‘practices that systematically form the objects of which they speak’ (Foucault, 1972, p. 49). In this, I am viewing ‘self-conception not as an individual’s personal and private cognitive structure but as discourse about the self’ (Gergen, 2001, p. 247); and again ‘narratives do not reflect so much as they create the sense of what is true’ (Gergen, p. 249); though from a post-structural perspective ‘no single truth is possible because reality is neither singular nor regular’ (Taylor, 2001, p. 12).[3]

In the first instance, and explicitly drawing on Foucauldian analysis, I have sought to draw out themes from the data; subsequently I have examined these themes for overt and covert illustrations of power relations, throughout looking for absences and silences within the narratives (Carabine, 2001). The three themes I have chosen to analyse are control, choice and confidence. All have been discussed elsewhere with regards to mathematics (see for example Walkerdine 1989, Mendick 2006, Boaler 1997 or Hardy 2006) and all have been directly associated with masculinity and femininity. For example, when discussing power and conflict relations in the classroom, Walkerdine (1989, p. 36) comments that ‘this powerful illusion of choice and control over one’s destiny is therefore centrally implicated in the concept of rational argument’. Walkerdine is seeking to expose the ‘fantasy’ of choice and control and in doing so has highlighted not only their relation to masculinity, but also that these themes are particularly pertinent within poststructural analysis; it is this epistemological approach that can allow us to explore the power relations the student teacher will be both subject of and subjected to; i.e. the chooser and the chosen; the controller and the controlled. The final C word I have chosen to analyse is confidence which again is relevant to the arc of analysis under which I operate. The apparent ‘truth’ of the feminine lack of confidence has been well cited within various academic texts (Boaler, 1997) and furthermore ‘confidence’ is a word found deep

within current government educational discourse (Hardy, 2006); thus from a Foucauldian perspective, it is relevant to explore the use of this word within the current episteme.[4]

With regards to both the presentation and analysis of the text it is worth reiterating that I aim to work both inside and outside prominent discourse in order to ‘destabilise the old us/them oppositions’ (MacLure, 1994, p. 284). Thus some aspects of the discussion are presented in a recognisable format, such as structuring the paper around the three themes, whereas other aspects of the text are less familiar; for example the inclusion of endnotes and the absence of certain language from the text. It is this space which intends to offer the opportunity to ‘make us sceptical about beliefs concerning truth, knowledge, power, the self and language’ (Flax, 1990, p. 41).[5]

As a final point I wish to take note of my approach to conducting the interview and writing the analysis, as it was certainly not to be ‘objective’. To use Foucault’s language, I chose to reject ‘that... which gives absolute priority to the observing subject’ (Foucault, 1970: p. xv) and instead I draw on feminist epistemologies (Fontana & Frey 2005, Bryman 2004), and as far as I can, remove the ‘other’ from the interview situation. I attempt to do this by way of dissolving the inevitable asymmetrical relationship (MacLure, 1993) that arises from the hierarchical interview. Furthermore, I realise that as ‘I’ am always going to be ‘part’ of the interview and the analysis I will acknowledge my ‘self’ in its role where necessary and use endnotes to do this. Thus I could argue that the interviews I discuss in this text are valid and reliable, in the sense that the analysis is offered openly and honestly and invites questions and reanalysis of both the interviews and the interviewer, and accordingly not only are the stories of the participants told, in some respect, so is mine.[6]

## **MATHS AND CONTROL**

Alex: I seem to have a brilliant understanding of it and it wasn’t from my teachers, where did I get it from?...I’d have found my own way of doing maths and you know found my own way type of thing... If I do something I have to do it right and it better be the best and I push myself and I push myself and I think that’s what I did... I’d take my textbook home and try and look at things and I tried to teach myself things in the textbook that I haven’t covered.

Sam: I mean, don’t get me wrong, I tried hard but, erm, I got moved down from the top set to do, like, the intermediate paper rather than the higher. Erm, and I think when I got moved down I stopped trying...from my experiences within school it felt like recital, it felt like, erm ((sniffs)) remembering these facts to get through a test...I mean fair enough I did have to re-sit the exam

but I mean it was a lot of concepts that, erm, I'd never come across before grading or I hadn't come across for a long time

In the sense that the 'language installs the dimension of truth...even as it excludes all guarantee of truth' (Lacan, quoted in Spivak, 1976, p. 1xiii), it could be said that the above text implies that to 'do' mathematics is to be in 'control'. To explore this with specific illustrations I would first like to argue that a desire for understanding could be seen as a need for control, as devoid of understanding we no longer have ownership of the situation. Both Alex and Sam discuss the necessity of learning mathematics through understanding, which contrasts sharply to their school experiences which seem to be predominated by rote learning. It has been documented elsewhere that a 'quest for understanding' (Boaler, 1997, p. 111) is a familiar discourse surrounding mathematics (Mendick, 2006) and furthermore it has been spoken into being as a feminine trait (Boaler, 1997). In addition Sigurdson and Olsen (1992) and Sigurdson et al. (1994) have noted that teachers tend to rely upon procedural methods over proceptual thinking; many teachers in fact will over use rote teaching if they believe a child to lack mathematical understanding (Bibby, 2001). We should of course note that 'understanding' can have a variety of meanings (Watson, 2002). However here is not the place to define the word but to state that further exploration with Alex or Sam could lead to their definition of understanding; in this text, it is the need for it rather than what it is, that is relevant.[7]

The second instance of control I wish to discuss plays upon another familiar narrative of the subject - 'to do mathematics is to be right'. Here Alex could be seen to be adopting a masculine discourse (Walkerdine, 1989, 1990; Mendick, 2006) since in addition to implying control 'to be right' proposes a subject that is proper, rational and precise as opposed to a subject which is erroneous, emotional or fuzzy. This use of oppositions within our narratives is something which I am deliberately recognising as they are not only natural to our spoken language but are also widespread within educational research and writing (MacLure, 2003) (the previous paragraph is also constructed around such a conflict); thus in acknowledging these binaries, I am seeking to use post-structuralist paradigms to deconstruct such prevalent representations of language. Furthermore, as a consequence of their popularity, it is these binaries that continue to perpetuate such constructions of mathematics as rational and masculine and thus othering irrationality (or emotion) as feminine and non-mathematician in the process. Walkerdine (1989, 1990) and Mendick (2006) have both thoroughly investigated such uses of oppositional language within mathematics and found the discourse to be highly gendered; their work justifies and epitomises the conviction that 'I can only answer the question 'what am I to do'? if I can answer the prior question 'of what story or stories do I find myself part of' (MacIntyre, 1981, p. 201). As a final point with regards to 'being right', it is worth noting that both of the participants' narratives appear to be constrained and consequently both are deficient of freedom and space; furthermore, and using Foucauldian principles, one could argue that the concept of constraint is prevalent

within mathematics as a subject, the teaching of mathematics and the government documentation concerning school mathematics (for example, the National Numeracy Strategy (DfEE, 1999)). Here I am not arguing that constraints remove power from the individual, but that the power is within the system and that by acting within constraints, we are in fact performing in a matter which is appropriate or 'right'. [8]

The final case within this section that I wish to draw attention to is where control is used to justify mathematical attainment; it could be said that both of the above narratives demonstrate this position, though for rather contrasting purposes. In stating that 'brilliant understanding ... wasn't from teachers' Alex seeks to remain in control by removing the teacher from the discourse, furthermore we see Alex frequently seeking ownership of the mathematics and constantly striving to 'finding my own way' (this is noted elsewhere in the transcript); Sam however attempts to stay in control of the situation by using the teacher (and the 'ability' grouped class) as a reason for 'failing' with mathematics. This again mirrors the discourse of mathematics, masculinity and the powerful, active, self (Walkerdine, 1989); if I do well it is down to me, but if I fail the fault lies with someone or something else. [9]

## MATHS AND CHOICE

Sam:           cos obviously you want to be seen as cool and things like that and you mess around at the best of them so I probably wouldn't have been as inclined in school to ask for help...I remember being challenged in the top group ((sniffs)), erm, but no, erm, the second group, it was easier to mess around because I sort of knew what I was doing work wise...I played quite a bit of sport as well at the time so maths wasn't really top of my agenda, erm, and neither was science to be fair, erm, I'm not very scientifically minded...it's not that I don't enjoy maths, I'm just, it's not my strong point, erm, I'm better with language and things like art and music and things like that.

Alex:           No, I've always enjoyed maths, always enjoyed maths, erm, I think it was just the actual day of my exam because I'd been predicted a much higher grade, erm, and I did the higher paper, erm and I, I know, roughly, I can't remember the exact, the exact exam but I know around the time of my GCSEs 'cos I was ill but I couldn't stay off, erm, and to be honest I didn't revise that much...[in reference to English] like I say, I can handle it and I don't mind it but just maths is, I feel as though there's more of a connection between me and maths and it seems to be easier for me to understand...I think a lot of it is like positive and negative, it's, I think some of it is in your attitude towards maths...everybody's certainly got the ability to be good at maths but it's whether they choose to or whether they choose not to. [10]

Building upon the notion of control, this section explores how in order to be successful at mathematics one has to 'choose' to 'do' it. Though from a Foucauldian perspective I wish to remain sceptical about the choices that people actually have; the

argument is that choice does not belong with the person, but within social systems and power relations (Foucault, 1978, 1980).

In the first instance both Alex and Sam describe opting out of mathematics and choosing not to achieve at it, Sam with the justification that ‘to do maths is to be unpopular’ (as explored in great depth by Mendick (2005, 2006)) and Alex in defence of the attainment of a grade D at GCSE; as discussed previously this may also imply their need to be in control of the situation. Sam takes the conception of ‘opting out’ further by identifying with a feminine discourse and defining sport, art, language and music as distinct from mathematics (all bar sport are discussed further by Mendick (2006)); Sam is relating to the non-mathematical discourse - the ‘other’, whereas Alex (the more ‘confident’ maths performer – see the next section) describes similar oppositions but through the narrative is placed in the opposing camp.[11]

The next point of interest I wish to draw attention to is that Alex theorises that everyone can be good at maths, ‘it’s whether they choose to’, thus we could argue that to achieve with mathematics, one must choose to ‘do’ it. The idea that ‘it is in your attitude’ serves as a contrast to Sam’s discourse of ‘maths people/non-maths people’ (Mendick, 2006, p. 60); however an alternative reading of the situation, which is possible in post-structural research, would be that as a self positioned person who is good at maths, Alex has become the norm, and thus is not placed as academically gifted or different.[12]

At this point, and drawing together this and my earlier analysis, I wish to note that the distinction between choice and control is rather fuzzy; in fact they can be directly linked by using the last line of Alex’s narrative. Here the implication is that we are ultimately in control of what we do, how we understand things and what we learn (not the teacher); it could suggest that (as before) this is where Alex wishes to be – a person who is in control and who makes the choices. Though to reiterate previous arguments, to accept as true that people have choice and control is no more or less than a powerful fantasy (Walkerline, 1989).[13]

## **MATHS AND CONFIDENCE**

Sam: I’ve got a D at GCSE and that’s it ((chuckles)), I’m not a very mathematical person...maths isn’t my strong point it’s something that I’m a bit, like, cautious of...[with reference to maths] I know that other subjects will be my stronger point but obviously as I progress through this course my confidence is going to grow with it.

Alex: I’m probably one of the few who really enjoy maths ((chuckles))...[in reference to maths lessons] Absolutely loved them! I was in group one, I was in group one in all of them and I loved maths. I was, I was a maths geek...[in describing the mathematics class on the access course] I felt as though I was able to be myself and there was just no judgement and that made a big difference because I did feel as though I was going to be

judged...with maths I'm constantly relating it to things and it's always in my head to be honest ((chuckles))

In this final section of analysis, I wish to emphasise the role that 'confidence' can play in shaping our mathematical 'identities'. It has been noted elsewhere that confidence seems to be the word du jour within government documentation and that the use of confidence is often confused with competence (Hardy, 2006); for example if we take the government statement that 'the best specialist teachers have a more confident command of mathematics' (DfEE, 1998, p. 72) we could easily replace the word confidence with competence, and furthermore perhaps this exchange may be more 'appropriate'. It is interesting that Sam has also attached importance to this intangible 'confidence' as in the narrative it appears to supersede an actual ability or attainment. From a Foucauldian perspective it is important to highlight this 'regime of truth... that is, the types of discourse it accepts and makes function as true' (Foucault, 1980, p. 31) and explore its relation to current educational practice; moreover from my poststructural position, it is essential to note that confidence is acting as neither a solely liberating nor oppressive power.[14]

Continuing to explore the use of confidence and 'approach(ing) language as a topic' (Taylor, 2001, p. 15), I wish to argue that the narrative implies that Alex is confident, Alex belongs to mathematics and Alex is a maths person; moreover the phrase 'one of the few', suggests Alex as different or special, which is often how mathematicians are positioned within discourse (Mendick, 2006). This contradicts an earlier analysis in this piece of writing where Alex has been positioned as the norm, however this reading of the situation does highlight the instability and ambiguity that exists within language (MacLure, 2003) and the 'multiplicity of meanings' (MacLure, 2003, p. 12) that can be produced. As a further point, I do not believe that this reading entirely contradicts the analysis in the previous section where I have suggested that Alex implies that everyone can be good at mathematics, as according to the narrative it is the attitude (or possibly the subsequent success) and not the ability that makes someone different or special. A further reading of both situations could be that in the former text, Alex takes a feminine position as somebody who is 'nothing special', as perhaps this is the discourse that it is socially acceptable to produce, however in the narrative above Alex is identifying with the strong, successful and masculine mathematician; a position that Alex can also perform and who is special after all. To use Gergen's description of conceptions of self, we can say that Alex has been 'storied' into several positions with regards to the learning of mathematics, or to paraphrase Walkerdine (1989, 1990), Alex has taken up various roles in multiple fantasies or fictions.[15]

In contrast to Alex, Sam is cautious of mathematics and is placed outside of the subject (as discussed in the previous section); the position of non-maths person is taken, and as a consequence an unhelpful opposition is created. Hence it could be written that 'confidence' (and thus masculinity) is present within Alex's narrative but

it is absent from Sam's; furthermore we could declare that the former status may be as a result of Alex's self-positioning as good at mathematics (or vice versa); though we should also note that being placed in a top set is probably something which Alex had neither choice in nor control over; as discussed earlier 'individuals are the vehicles of power and not its point of application' (Foucault, 1980, p. 98). For Sam of course we could apply the converse arguments and assign the performance to a feminine position.[16]

Another interpretation to consider is that Alex further demonstrates the value of confidence through the frequent references to judgement. To be seen to be allowed to 'be myself' appears to be an important state of being within the narrative and could imply that currently (and probably since attending the access course) Alex is experiencing the feeling of acceptance, or the space for acceptance is present; as a consequence Alex could be said to possess a confidence from within. It may also suggest that previously there has been a period when there has not been this space or acceptance within the mathematics classroom; (other dialogue from the interview implies that at times this was the situation during school).[17]

Finally, the notion that confidence (or any conception) is not stable is further demonstrated in Sam's belief that 'my confidence is going to grow'; thus Sam is currently 'outside' of the 'confident maths person' but with space to manoeuvre. Alternatively, perhaps this text is simply Sam producing a socially acceptable position with regards to masculinity; though conversely the narrative still has its feminine positioning, as once again it attaches importance to confidence and not competence. As before this demonstrates the various roles that we perform within multiple fantasies or fictions (Walkerdine, 1989, 1990).

## **CONCLUSION**

In the text above I have chosen to explore discourses of mathematics; in doing so I have attempted to force open a space within language and text, particularly with regards to gendered ways of being. My purpose was to highlight that as we act within various fictions (Walkerdine 1989, 1990), 'anyone' can perform as masculine or as feminine. I have demonstrated this through the narratives of Alex and Sam as they both position themselves within various gendered constructs, as they work within the competing discourses of the masculine mathematician and the feminine primary school teacher.[18]

Throughout, I have also sought to show that control, choice and confidence are all themes which are very much bound to mathematical discourses and performances, and that these themes are neither oppressive nor liberating. In doing so, I have intentionally not only discussed the differences but also the similarities that are spoken into being within the two participants' narratives; this is an attempt to work outside of educational discourse that in the past has relied upon using the apparent



differences between data to formulate arguments and conjectures (Walkerdine, 1989).[19]

To summarise the parallels and variations, the difference that is most striking is Alex's self-positioning as a 'maths person' whilst Sam's placing is outside of the discourse of 'maths person'; this is of course regardless of their similar actual mathematical attainment. In fact we could maintain that Alex has chosen to opt into mathematics, whilst Sam is currently opting out, perhaps through some unstable conception of confidence. However with regards to similarities both participants seek to be in control of mathematics, which is demonstrated firstly by their desire to learn through understanding, but also through their relationship between their perceived levels of control over their own mathematical achievement.[20]

Another purpose of my work is that it invites exploration and further analysis, particularly with regards to my style of writing. In the first instance the themes of control, choice and confidence, clearly overlap and whether my presentation limits or enhances the analysis and writing is certainly open for debate; moreover the first two constructs (choice and control) perhaps could have been analysed as one or even presented in their own paper aside from confidence. In addition, and returning to the subject of gender, you may have noticed the absence of gender specific pronouns from the text. By ignoring the gender of the participant I have attempted to force open the gender of the situation, as influenced by Mendick (2006) who drew on the work of Connell (1987), I am using gender as a verb as opposed to a noun. Whether such 'tricks' inhibit or liberate the participants, the analysis, or the construction of meaning is another point that exposes itself for contestation. You may for example choose to argue that I have 'subtracted the feminine' (as discourse has previously done, Walkerdine (1989)) as I have also chosen to ignore the gender of the majority of academics from which I have drawn reference and inspiration.[21]

To conclude, it is worth reiterating the purpose of this paper. As I state in the opening paragraph, it was always my intention to 'explore both the mathematical discourse and the subsequent representation of student teachers' narratives within educational texts'; it was my aim to 'work both inside and outside the hegemonic discourse' (MacLure, 1994, p. 291) as I 'insist on occupying the ground that one knows not to exist' (MacLure, 1994, p. 291); whether those aims are at all met is a question with which I leave the reader.[22]

## NOTES

1. I always find the first paragraph one of the most difficult to write; I struggle to find the words to begin, words which efficiently and intelligently state the purpose of my project and justify its being. The words have a point to prove and yet I still get sucked into the pleasure of playing with language, 'delve into discourse', and 'arc of analysis' being two examples of my playful intentions. This paragraph also contains the names of many influential mathematical educators from whom I both borrow and admire; perhaps I felt the need to get these names in early, especially as they may

be the people stood in front of me when (or if) I come to make this presentation. Moving on from this cynicism, I use 'I' frequently in this paragraph which is deliberate (and quite feminist) of course. It turned out to be one of my favourite paragraphs in the end.

2. I love the use of the word 're-imagine' and intensely dislike the use of the word 'two-fold', thus I am unsure why I have left the latter in – discuss? In this paragraph I also begin shrouding certain words in scare quotes - 'truths', 'chosen' and 'important'; this is of course to contest the meaning of these words. The ambiguity of 'truth' and 'chosen' fit fairly straightforwardly into poststructural paradigms, whereas 'important' is shrouded because I am asking the reader to decide if it is actually important or not. Notice of course that I have chosen the pseudonyms Alex and Sam for the reason that these could be male or female names; this paragraph is where the gender games begin.

3. Here I wish to note the distinction I give Derrida and Foucault; I even give them first names and gender identities. The only other person, who has a gender identity throughout the text is me (though I did consider writing under non gender specific pseudonyms or masculine anagrams of my own name). In the end I thought it better to own up to who I am.

4. I dislike spelling out how I conducted the research as in reality it was quite subtle and never felt over controlled or contrived, yet literally spelling out my actions does; I also think the reader should be able to find their own way on some matters – so I have given some guidance, though perhaps not enough for some tastes. Again I am aware of the language I use, such as 'the final C word'. I guess it's quite silly to use all C words as your themes; I have become a tabloid journalist. Also in terms of language I begin to use my favourite connecting words and phrases: in the first instance subsequently; furthermore etc, these are all over my writing.

5. Three important things to note: inside and outside; the reference to MacLure; the mention of space.

6. Note the use of 'attempt' here, as that is all I can do. 'Other' and 'I' are important throughout and so is the notion of my 'self' – of course this again plays on the use of English language, something which I seem to insist on doing. As an aside I am particularly fond of the last sentence.

7. Note the use of language, e.g. 'spoken into being' 'do', 'surrounding'; – quite deliberate (as it is throughout). I should also note that I have a particular interest in understanding and rote learning; one of the most frustrating parts of my job (as a PGCE Secondary Mathematics Tutor) is trying to convince students that their pupils may benefit from being given the opportunity to understand the mathematics.

8. The link between 'control' and to 'be right' is perhaps open for contestation, as you can probably be in control of something without actually being right and vice versa. Perhaps the last section relating to constraints is worthy of more discussion and exploration. I start my binary crusade in this paragraph also.

9. The beginning and ending of this paragraph are worth noting. 'The final case I wish to...' I realise that there are endless cases you could analyse; this is just where I stop. I finish the section with quite a simple and direct use of language, perhaps to make a prominent statement. I should also note that 'finding my own way' is probably something I can relate to, or have had to relate to in my own studies.

10. I should note that I reversed the order of Sam and Alex's transcripts, so as not to give either participant priority.

11. I could have gone into more detail with regards to the unpopular image of maths.

12. I guess I relate to Alex here. I would like to believe that everyone can be good at maths and in my self-deprecating manner I would never have defined myself as special, even if I recognised that not many people seem to be good at maths.

13. This is the shortest section of the three themes – which may perhaps suggest that I should have written about control and choice together. I love the word fuzzy here – it conjures up all sort of images or even emotions. The 'no more or less' is interesting, as throughout I try to say that something is not better or worse than anything else.

14. 'presented confidently' – what value do these statements? I don't care whether you think I am confident - 'was it good', 'was it weak'? If confident is what I have to be, I'm afraid I'm screwed! Some personal history there. Moving on to other things, 'appropriate' – I use this word tentatively. 'Du jour' – I'm trying to learn to speak French. 'Intangible' – I like this; again it shows my contempt for the value attached to confidence.

15. I felt it was important to highlight possible contradictions in my work, and to let these stay in the text – after all I am not searching for a 'single truth'. Other people may disagree and feel it devalues the analysis. 'I do not believe' stating firmly that it is my opinion. There is also some interesting analysis about what is socially acceptable and again this could have been explored more.

16. 'Cautious of maths' – I really like this phrase.

17. Again I can relate to Alex here. I intensely dislike feeling as if I am being judged by people, or not being given the opportunity to 'be myself' – whatever that is (in a poststructural multiple self type of way).

18. 'Force open a space' – I like this phrase. 'Anyone' is used tentatively as I am questioning the use of the word.

19. 'Bound' – nice word.

20. I'm not sure if this paragraph should be in the conclusion; as it is a summary of the analysis maybe it belongs in the main body of work. Oh and for the record, I have a degree in mathematics but I wouldn't class myself as a maths person. 'Parallel' – nice maths word slipped in there – hold on a minute, what about the declaration in my previous sentence; I might have just contradicted myself in this endnote.

21. Re-analysis and further exploration is of course invited; multiple readings of the text are very much encouraged. This paragraph is also the first time that I am explicit about the lack of reference to the gender of the participants, though it was alluded to in the opening paragraph, and was specifically mentioned in an earlier endnote. There is an argument that I should have been upfront about this from the start; I left this declaration until the end as I wondered whether it would be noticed and I wondered whether the reader would find the language too disjointed (as writing without reference to gendered pronouns will have restricted the language that I can use). It may simply be a 'trick', though it does highlight the power of language.

22. Endings are difficult as well as beginnings (refer to endnote 1), thus I attempt to reconnect with the reader. I also felt it was quite fitting to use references from MacLure, whose work was influential in forming the analysis and writing behind this paper. Overall I have enjoyed writing these endnotes; it has been a pleasant experience to deliberately write without reference or academic rigour and feels akin to a film director's DVD commentary (which you can of course turn off if you choose). I seem to have used the endnotes to write myself into the work and to critique the writing, which I hope the reader has welcomed (if not just turn it off).

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