

# COMMUNICATION POLICY AT THE CHALK FACE IN SCOTLAND AND JAMAICA: COMPLEXITY AS A NEW PARADIGM FOR UNDERSTANDING LANGUAGE POLICY INTERPRETATION AND IMPLEMENTATION

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## ABSTRACT

This article examines teachers classroom interaction with upper primary pupils and the implications for the implementation of stated language policy aims in two contexts where there are tensions between local community languages and the recognised language of the global marketplace, namely Scotland and Jamaica. Following Wertsch and Smolka (1993) the article argues that it is often in very subtle ways that teachers either encourage or restrict the amount of dialogue and exchange there can be in their classroom. Informal exchanges within the classroom can be vital for children to work through their own strategies for navigating their multi-lingual context. The article also illustrates that the metaphor of fractals derived from complexity sciences (Wolfram Research, 2003) can form a more sensitive and appropriate framework for discourse analysis.

In a fractured age, when cynicism is god, here is a possible heresy: we live by stories, we also live in them. One way or another we are living the stories planted in us early or along the way, or we are also living the stories we planted – knowingly or unknowingly – in ourselves. We live stories that either give our lives meaning or negate it with meaninglessness. If we change the stories we live by, quite possibly we change our lives. (Okri, 1997: 46)

## INTRODUCTION

In the effort to implement policies that increase access and foster inclusion communication is key. Whilst there are many different language policies around the commonwealth that address different facets of communication in differing contexts, some of the most crucial dynamics that make school communication either inclusive, engaging and rewarding or exclusive, inhibiting and ultimately discouraging are not mentioned at all in policy documents or are only vaguely alluded to in phrases about school ‘culture’. Similarly these same factors defy quantification and therefore remain difficult to detect in large-scale research methods which are inherently reliant on pre-defined categories of response, and therefore unsuitable for examining individual interpretation and adaptation to local practice which any policy decision ultimately must undergo in each classroom where it becomes practice.

An understanding of these communication dynamics is vital to pursue nevertheless. This understanding begins by recognising communication happens through three related but distinctly different spheres:

- The built infrastructure of schools and its relation to both the natural environment and its place in the larger built network communicate messages about how the pupil themselves is to relate to the larger network of society.
- The embodied physical routines, forms of discipline, and sanctioned forms of play communicate very strongly messages about who and how a learner is allowed to be.

- It is only in reference to, and very much shaped by these forms of communication, that the third form of communication—that of language textual and spoken—conveys its message.

The classroom teacher has a very complex role orchestrating and navigating the relationships that these messages form. Together they create the classroom culture and do much to determine what the learner's school experience will be. Often, in very subtle ways teachers signal their attitudes about this mix of messages, which message is to be stressed, how they are to be interpreted, and these subtle but crucial signals do much to indicate to learners how they themselves can view their own place in the flow of communication. Teachers can either in these moments serve as catalysts, modelling an ability to bridge gaps, or the opposite, they can build rigid walls and act as wardens patrolling the borders

To understand the teacher's role as either bridge builder or gatekeeper is to understand their choices in relation to the choices children must make. These choices take place in both the immediate context of school and within cultural dynamics on a larger scale. A word needs to be said about both the immediate and wider context before particular instances of teacher's language choices in Scotland and Jamaica are examined in detail, and the paradigm of complexity brought to bear on an analysis of their choices.

#### CHILDREN'S LANGUAGE CHOICES IN THE CONTEXT OF THE SOCIAL WORLD OF CHILDREN

At issue here is a central question Gee (2001) asks. Gee sees the school setting as having a distinct social language. Acquiring this social language entails at least a partial loss or relinquishment of the child's primary social language of home. This loss is greater when there are greater differences between the social language of home and school, and most difficult when the languages and the predominant messages and rules that shape home and school are experienced as being in actual opposition to each other:

The crucial question, then, is this: *Why would anyone—most especially a child in school—accept this loss?* My view is that people will accept this loss only if they see the gain as a gain. People can only see a new social language as a gain if they recognise and understand the sorts of socially-situated identities and activities that recruit the social language; if they value them or at least, understand why they are valued; and if they believe they (will) have real access to them or, at least (will) have access to meaningful versions of them. (Gee, 2001: 4)

To open up Gee's question for examination is to first note that this is not a matter of one choice but of many nested on-going choices, a polyphony of choices (Bakhtin 1986). Children's language use is complex and evidences an engagement with the complexity around them. Children choose to adopt different elements of school discourse to varying degrees in different situations. The shape of their individual oral communication and of the overall group discourse formed from these choices also varies, for a number of reasons, chief among them being their sense of how either open or closed the classroom culture was to inclusion of their ideas and identities. Increasingly children draw on cultural resources embedded within the context of globalised visual media to form and assert their identities.

#### CHOICES IN THE GLOBALISATION CONTEXT

Much has been written about what different forms of communication can mean or accomplish. The differences between "oral" and "literate" cultures have been

thoroughly contested and deconstructed (Serpell, 1993; Gee, 1994). Yet there is a third component, that of the increasing importance of reading and organising visual images that needs to also be taken into consideration. Video imaging is becoming centrally important in children's culture and forms a central part of their communication awareness and expertise. Grossberg's (1993) point that pop culture has been usurped by game culture is important to consider. What this means is that the predominant form through which cultural messages are conveyed is no longer that of a linear narrative or song lyric but of multiple, and to varying degrees, interchangeable potential scenarios or strategy fragments. Children are becoming much more adept at playing and thinking in the latter mode. Not surprisingly at the same time technology has made the transition from linear sequential storing of information to the more compressed and compact configuring of images or information made up of component clusters or bit maps. Children's narrative activities demonstrate that children are not only social agents but also cultural producers. The boundaries between consuming, recycling and producing culture are very permeable and fluid, and take on different meanings in the differing contexts. The impediments or constraints that children overcome, as well as the various forms of encouragement or inspiration they receive from various forms of adult culture, all shape their own cultural creations. The explosion of visual media across information technologies means that school literacy is not the same window on the world that it could once claim to be (Broadfoot 2000). What children are already competent at when they come to school, what competencies they can gain at school and how the interface between these competencies is to be negotiated is changing (New London Group, 1996). The interface as it exists is not understood as well as it should be, and is only growing more complex.

Yet within globalised popular culture there is much to cause concern. The powerful forces of globalisation can also be seen as a serious drain on resources, democratic, economic and cultural from localities that are already disadvantaged. As Louisy comments:

The fears that the tentacles of cultural globalisation will entrap the soul of the Caribbean people, especially the young, and make of them a new flood of cultural refugees seem well founded, unless the region makes a concerted effort to locate its culture, and its contributions as differentiated elements in the globalized environment (2001: 433).

The need to retain a sense of local cultural production is closely tied to that of language policy and classroom practice.

#### CONTRASTING COMMUNICATION: POLICY STATEMENTS AND CLASSROOM PRACTICE

The Scots Pairlament (sic) Cross Pairty Group on the Scots Language published on 19th of March 2003 a document entitled "Scots; A Statement o Principles". It calls for a recognition that

- the Scots language is integral an essential tae cultural an personal identity in Scotland
- that a knowledge o Scots is vital tae a knowledge o Scotland
- that Scots shuid be an essential pairt o the educational curriculum in Scotland at aw levels.

Summing up they argue:

Gin we in Scotland dinna staun up for the guid o the Scots language an its future at a time when we see the diversity o the world's tongues unner threat,

it will add ane mair leid tae the leet o language extinction an gar anither rich an distinctive idiom gang oot o the warld. Let us mak shair that the people o Scotland aye has the choice tae uise the Scots language. Juist as we seek tae gaird the earth's bio-diversity, sae we need tae gaird linguistic diversity. (2003: 15)

Similarly, across the Caribbean communities have also had to struggle with the legacy of having their local community languages beaten out of them and the standard language of the imperial power drummed into them. By 1993 the Standing Committee of Ministers Responsible for Education and Culture in the Caribbean where able to agree:

To recognise all the languages in each society as equally valid and to see multilingualism and multi-dialectalism as positive attributes (Bryan 2000: 6)

and to set as a goal for secondary school graduates the ability to "use and understand a linguistically valid script for representing the creole-related vernaculars of their communities" (Bryan 2000: 6).

Nevertheless, how this concern to protect or validate local languages translates into actual practice in classrooms has been characterised quite negatively. Addison (2001) characterises treatment of Scots dialect in schools as a "Tartan gesture". This gesture, made usually around the anniversary of Scotland's National Bard, is closely tied to images the tourist industry seeks to project of Scotland, much as Jamaican schools make selective use of Patwa in the form of poems by "Miss Lou" (Bennet 1966) to commemorate National Heroes Day in concert with Tourism's cultural development aims. Addison reports in confirmation of McClure (1980) that, "many classroom teachers, if they use Scots in literary terms do so in a way which is confined to the past and is unrecognisable for people living in modern urban communities" (2001:158). Addison found that the working class Scots, with which he worked, characterised their everyday speech as "just slang", not Scots, just as many Jamaicans would characterise their speech as "patter chat", or "chattin bad".

Some examples from two years of ethnographic fieldwork in both settings illustrates the day to day nuances in which language is used to either affirm or negate local community language practices.

Scots was permitted as the subject of a week's lesson preceding Robert Burns' birthday in both of the Scottish schools where ethnographic research was conducted. However a closer look at the teacher's own language use on a regular basis, reinforced very different messages about how the Robert Burns lessons should be seen in relation to the curriculum as a whole:

In the school I will refer to as Braeview, the teaching culture had a fortress mentality to it. Both the head teacher and senior teacher emphasised to me several times in the course of research that their task was to keep the norms and practices of the surrounding community at bay, and provide a markedly different culture within the school's boundaries. The school culture can be characterised by strict discipline and sharply defined roles for teachers and learners. This culture was maintained in Mr Ruhl's composite primary 6/7 class predominantly through linguistical means. Throughout the day Mr. Ruhl provided a running narrative of what the class had achieved, what they should achieve now and what rewards that would lead to by the end of the day. Behaviour that deviated from this scripts was often censored by use of the past conditional verb tense: "I would not have expected that of you", conveying the sense the act was unthinkable. I never heard children adopt this verb construction themselves. In fact this verb construction contrasted quite sharply to their standard Scots verb construction, "I wouldnae". In the weeks preceding Robert Burns' birthday Scots was officially allowed into the classroom and taught in the

same manner as all subjects. This excerpt comes from a lesson where Mr. Ruhl is commenting on a student's performance of a poem in Scots:

Mr. Ruhl: How does she pronounce tomorrow? (met with blank stares)  
How would she pronounce it on the playground?

Jackie: The morn?

Mr. Ruhl: That's right, very good, the morn.

Many students are inattentive. One is reading *Our Willie* which the teacher suddenly notices:

Mr. Ruhl: Ian McNiel, I am surprised at you reading that, you put it away so you are not tempted!

Ian was often the focus of Mr. Ruhl's censure. Often the use of Scots played a key role in their confrontations, which routinely took the form of Ian being made to stand at his place at the table and receive a telling off punctuated by rhetorical questions. Each question was designed to elicit from Ian compliance that implicated him in his own punishment. He was to agree that his behaviour was unacceptable. However, each question also offered a small opportunity to resist, one that was sometimes too tempting to pass up. Sometimes he offered his assent not in standard English but in Scots, saying "Aye". This was immediately met by Mr. Ruhl's raised, offended tone, "What did you say?!", effectively daring Ian to be more overt in his resistance, at which point he tactically retreated into English. Both participants in the interaction, perhaps intuitively drawing on several centuries of history to enact their roles, knew the use of Scots was definitely not viewed as a welcome part of the school culture. It should be noted that during these confrontations the other children in the class seem to be listening at their most attentive, particularly in the pauses before Ian decides to answer either Aye or Yes.

Scots has a very different place in a nearby school, I will call Forest Hill, as does children's home culture. Both are seen as less of a threat and are therefore permitted much more widely throughout the school day. One teacher, Mr. Irvine, in particular, very mindful of his own working class roots with a very politicised conception of his motivation for teaching, uses Scots consistently throughout his teaching day. He has a reputation amongst students as a very demanding teacher, but is also often described, particularly by the boys, after a moment of thought and a shrug of the shoulders, as, "well, cool". Often I heard him berate his class for not thinking or being their best, but never by setting himself apart by using a distinctly complex verb form as Mr. Ruhl and many teachers do. Over the course of eight months' research never once did I hear him tell his students they should do something because they should submit to the authority of their teacher. His appeal was always to their own intelligence, the need to sharpen their wits, figure things out for themselves.

Although the class is pushed quite hard to complete assignments, and progress through the curriculum ahead of schedule, there is a constant use of humour in the class, all of it, thoroughly unapologetically in working class Scots much of it centring upon many of the boys' support for a rival football team to that of the teacher. This on-going slugging match played out across all three spheres of communication. Boys brought their team's colours in, wearing them under their uniform, or their trainers, or on their pencil cases or bags. They decorated the pencil holders they made for the tabletops as a class project with team insignia. These symbols, worked into the infrastructure of the day, were then alluded to in side comments by the teacher. These quips barely audible, paradoxically built rapport and established a camaraderie within the class that meant boys stay involved and included in the classroom and accessed a range of skills, foremost among them IT skills, that they might otherwise

have not take up so keenly. Although the slagging match was not part of the school's policy, in fact, could be seen as contrary to the stated aims of positive regard for everyone, it actually brought into the school arena children's expertise and interests that female teachers can react to as foreign and threatening, and often act to exclude, albeit without ever directly criticising them.

It is important to note that through this use of male culture, Mr. Irvine does not make all boys equally welcome. It is only one kind of masculine identity among others (Mac an Ghaill, 1994) The point is not that all teachers should adopt this strategy but to highlight this as one particular choice to access common cultural values. Although the focus of this article is on language, these excerpts also reveal important differences in how each of these male primary teachers approaches gender dynamics in the classroom. Each chooses a different way of being masculine and asserting masculine authority and thereby presents a different set of choices to which pupils make their gendered responses or accommodations. It is also interesting to note that in the two Scottish settings the girls are often positioned as a passive audience to displays of male authority and resistance.

These observations illustrate that it is not so much in the overt teaching of a language lesson but in the more engrained everyday patterns of teacher-student interaction that different school cultures are created, either ones that prohibit children's home language, carrier that it is of their home culture, or is receptive to it. Similar contrasts can be drawn from the Jamaican data.

In Jamaica there was a more prevalent, ingrained, adept use of oral culture. In a number of ways, there was school and community encouragement for children to see themselves as legitimate, accomplished producers of culture in the Jamaican context, whereas in Scotland, for a host of reasons, largely to do with how they are positioned as socio-economic consumers of culture, this encouragement was subdued or constrained.

For a formidable host of reasons teacher education in Jamaica for many teachers is inaccessible, and so teachers teach the way they were taught, which often relies on rote repetitive lessons, often with the aid of a switch (Evans, 2001). In this kind of lesson language curriculum does not draw upon oral and physical performance skills, rather curriculum exchanges required a lack of sophistication, and a blanket acceptance of received texts regardless of relevance or meaning. The cultural expertise of children is not drawn upon to interpret the curriculum content.

Though this may be the case far too often, there are those teachers who find room for a different kind of pedagogy. I found this to be the case at the school I will refer to as Caledonia Heights, situated in a rural highland Jamaican community within commuting distance of two of Jamaica's urban centres. Like Mr. Irvine, Mr. Lewis pushed his class to stay ahead of curriculum. All the blackboards were usually full of assignments, which children stayed into lunch hour and after school to copy. However, he found time within the school day to literally take the children outside the echoing confines of the building. He did this routinely to listen to them read and for religious education lessons, a strong component of the Jamaican curriculum. It was in these lessons that Mr. Lewis drew on local, salient cultural practices and values, thereby signalling to students that they could and should re-examine and contextualise information, as the excerpt below illustrates:

Mr. Lewis accepts girls' performance of the song, "Jesus is a Friend" in response to his question, what kind of a person was Jesus?". While the girls sing, the boys beat a steady rhythm on their Bibles. As the song concludes with "Amen", Mr. Lewis pushes the critical thinking possibilities of the topic further:

Mr. Lewis: How do you know that Jesus was born on Christmas?

The girls' reaction is confusion.

Mr. Lewis continues, suggesting in a hypothetical narrative how they might think about this topic, “Have you ever posed the question at Sunday School?”

He looks to see their reaction, “So why you don’t do that?”

He explains in narrative form what this process of inquiry might mean: “You go to Adventists, maybe Adventists have one view, maybe Leah’s church have another view. I’m not claiming to be an authority. I have my views, which may be different from others. So, Nicholas, you’re going to ask whosoever is knowledgeable when he was born. We want some feedback next Monday.”

Someone pipes up: “Sir, we can’t.”

Another person claims: “Sir, mi naw go to church.”

But this is countered: “He go to church.”

Meanwhile, Mr. Lewis continues building a possible narrative that the students’ exploration can join: “Some say he was born in September cause it took that long for the wise men to get there. Don’t ask lickle people ask the elders”

Leah: “Sir, you ask them if he was born at Christmas, they say yes, you must ask them how they know?”

Mr. Lewis: “There’s one school of thought. Some believe he wasn’t born while shepherds watched their flocks by night. Shepherds couldn’t be out in field in winter. Some that they could have a fire.”

A discussion about time and different ways of measuring it begins to surface. One girl reports to Mr. Lewis that, “Sir, Nicholas, say the months start at April.” That different points of the globe might have different ways of orienting their measurement of time to suit the agricultural seasons pulls powerfully away from the reinforcement of the imperial centre that the language texts present.

Ruth is saying to her neighbour in a quiet voice, “If you watch the news they are fighting over Jerusalem and Palestine, both claim it as their capital. They’re at war over that lickle piece of land.” A boy breaks in, “It’s Israel’s!”

Ruth: “you chat too much, you listen!”

This side conversation is overlaid by Mr. Lewis’ continued encouragement, which I record imperfectly as, “We’ve talked about this, you can learn everything...”

Another girl raises her hand, still unsure of the permissible boundaries that Mr. Lewis is suggesting, “Sir, suppose Nicholas came with a different answer to Sarah?”

Mr. Lewis: “That’s what we want, so we can draw our own conclusions.”

I record another nearby girl a little more confident in switching to this different discourse style, Esther: “Yes, you see!”

Mr. Lewis continues explaining: “When you grow up and go to high school or if you go to university, you can’t go to one book; you have to look at four or five books.”

There are several things to notice about this excerpt. Some of the most confident girls in the class had difficulty believing they can collect different valid answers to the same

question, it's an indication that they had difficulty believing such an activity can be allowed within school discourse. However, one is quite willing to believe this.

Throughout the class discussion Mr. Lewis switched between Standard English, a quite complex command of it, and at key points of encouragement, Patwa pronunciation. When students' responses indicated some thought on their part he responds, often including some use of Patwa to signal his acceptance. When students respond by using strategies that belong to the rote drill of the classroom, he deftly discouraged this by simply ignoring it and waiting for something more intelligent from them. He modelled code switching and strategy switching and at the same time gave them the space to practice doing so themselves. It is my estimation that it is the single most crucial communication skill a child in Jamaica needs to learn to master.

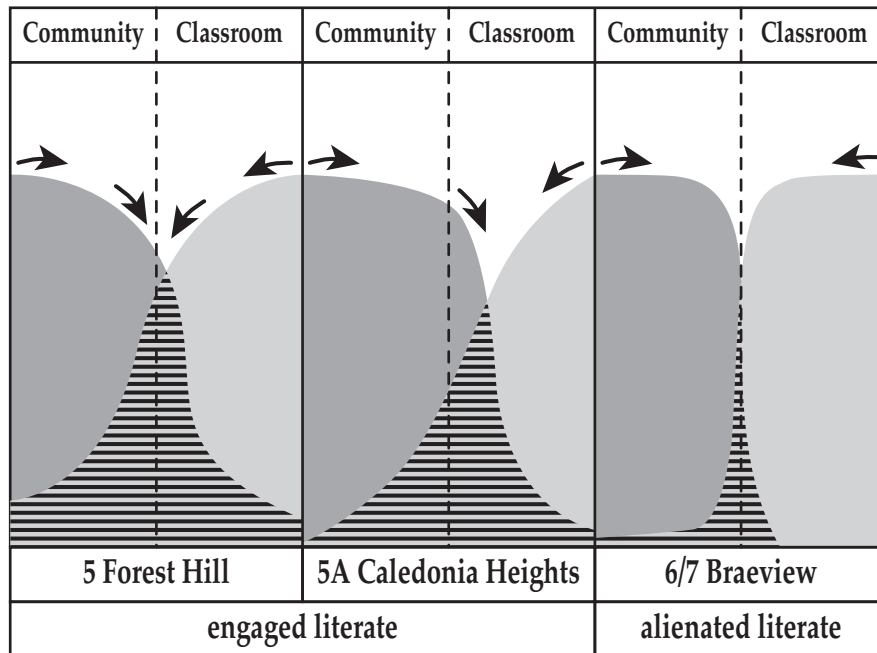
#### ANALYSIS OF TEACHERS' COMPLEX CHOICES IN COMPLEX CONTESTS

The starting point for analysis of these excerpts is to highlight that the teachers themselves across all settings pointed out that teacher training had not prepared them to help children make important communication transitions or to deal with other language issues the teachers themselves described as crucial to their work. Were these issues not covered, or were they presented in such a way as to be unrecognisable or seem irrelevant? I offer below a few new ways of seeing and thereby discussing what the issues may be.

This point can be encapsulated in a diagram or map in the sense of social cartography (Paultson, 1997). The curve starting from the left of each map represents children's degree of fluency in home language and discourse styles and the extent to which this discourse is permitted in the classroom. The curve starting from the right of each map represents the standard discourse and the degree to which it overlaps or becomes integrated with children's home discourse. What becomes evident is that in the model of classroom interaction depicted in the first two maps there is a greater mix between discourses, which I would argue allows for greater degrees of engaged literacy. These maps are a visual interpretation or representation of observation, not the result of inputting quantified data into a graph. What I am trying to depict here is that where there is a lack of intermediate forms and experimentation that can act as a bridge, there is also a lack of standard proficiency attainment. It is important to stress the presence of intermediate bridging discourse is not solely the responsibility of the teacher but is affected by a combination of factors, these factors are embedded in the built infrastructure and the physical routines as much if not more so than they are communicated verbally: children's disposition to school, the proximity of their home language style to standard styles, the overall community culture and its similarities with or differences to the school's culture, the existence of other sites of literacy within the community and children's involvement with them.



Figure 1: Maps of dialect interaction in the classroom



The dynamics depicted here contribute to two very different forms of literacy: engaged literacy, in which forms are learned and integrated into children's purposeful use of language; and alienated literacy (Cambourne, 1988), in which the forms are dutifully learned but not applied to on-going life tasks or choices.

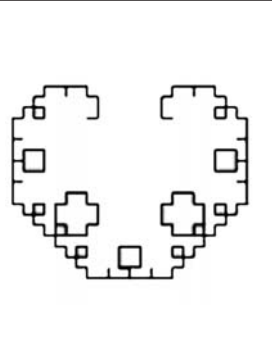
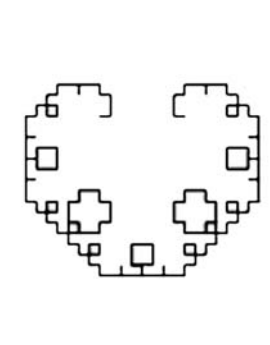
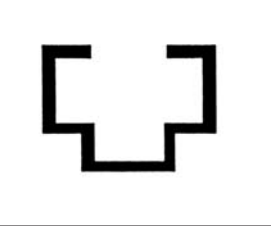
#### CLASSROOM AS SEEDBED OF FRACTALS

The possibility of intermediate forms and opportunities for interpretation when dialogue is permitted in class can be represented in terms of richness of fractal reiteration. Fractals are the building blocks of some of the most complex structures we see around us, from trees to clouds, to the bronchial tubing in our lungs and network of nerves signalling in the brain as this text is read. The mathematics that generates fractals contains a very interesting analogous process to conversation, which makes fractals a compelling metaphor to use in discourse analysis. Equations that generate fractals are non-linear, that is, they do not resolve to one discrete answer. The relationship between variables is such that in the process of solving for "y", the original term "x" is changed. Once a quantity for "y" is determined, one must resolve the equation with the altered "x". Each attempt to solve the equation is known as an iteration of the equation. They also serve as visual representations for how the hermeneutic situation can be said to be more than a circle, and what perhaps Bohlman can mean by a use of language that is enabling in which interpretations are "comparative" and open to a "public process of constant revision" (1991: 118). If the dialogic exchanges where each interlocutor contributes to the other's interpretation are visualised as the iteration of a fractal equation, a visual metaphor quickly emerges for the richness involved in cultural interaction. In figure 2 the shape of the first iteration of a fractal equation is used to represent Mr. Ruhl's discourse at Braeview which stand apart and above the dispersed elements of his pupil's discourse. The shape generated by eight iterations of the same equation are used to represent

the richer interaction of the classrooms at Forest Hill and Caledonia Heights. As the dialogue continues the understanding of each other's position, concepts, and perspectives grows more intricate. Each exchange can be visualised as a further iteration of the fractal equation. Thus third and fourth iterations of the same fractal equations quickly come to correspond to the intricacy of real life shapes.

If only the teacher's voice or discourse is allowed, as in Mr. Ruhl's class, the components of fractal reiteration remain separate and do not integrate into a pattern. When both teacher and student voices can engage with each other, the exchange can be represented as fractal components coming together in a pattern, that grows richer and more detailed the longer the interaction is sustained. What the fractal reiteration can also be used to depict is the tendency for good conversations not to end but to bifurcate, generating further side discussions forming a network of interpretation and re-interpretation.

Figure 2: Conversation Possibilities in the Classroom Depicted as Fractals

		
5 Forest Hill	5A Caledonia Heights	6/7 Braeview
engaged literate		alienated literate

The classrooms can also be likened to complex adaptive systems. The study of complex systems has revealed that in a system where there is either too much order or too much chaos, very little that is adaptive or innovative happens. The in-between, flexible state, of complexity, though not predictable, is the one capable of creating transformation. Drawing on this complexity model, I would liken Mr. Ruhl's P6/7 composite class to a system where there is too much order for innovation. Mr. Lewis' class in Jamaica is like the border situation between chaos and order where complexity becomes active, where a tolerance for random or unpredictable activity does generate new learning and communication possibilities.

In this article, detailed accounts of actual classroom practice are juxtaposed against complex theory to generate the following questions: how might an increased appreciation of complexity, its more detailed use as a metaphor, help the teacher in each classroom better respond to their classroom context? Can it empower, or encourage them to view "chaos" as potential creativity? Can it increase their sensitivity to the complexity children bring to the classroom? Can it help them develop an "education for uncertainty" (King quoted in Louisy, 2001: 426) that will better help their students cope with the globalisation era?

Children explore metaphor, analogy and symbolism in complex ways that can build critical thinking and problem solving skills, however, there need to be modes

to translate this from one context to another. The importance and the intricacy of the translation process should not be underestimated. If valued and encouraged in the school setting, children's engagement with popular culture can be developed so as to become a valuable component of life-long learning strategies, enabling students to make important transitions throughout their educational, civic, and economic careers.

As many educationalists are pointing out, Giroux (1992) perhaps foremost among them, the classroom can be a site of critical engagement with cultural forms, rather than simply a site of transmission of them. Henry, citing Glissant, suggests this very possibility:

...a project of creolization, (is) one in which intellectual workers would re-enter the long-concealed areas of our imagination and undo the binary oppositions and negative evaluations that block African and European elements from creatively coming together. These subterranean voyagers should strive to open blocked arteries and channels. (Henry, 2000: 88)

When Mr. Lewis asks his class when do they think Christmas falls in the year, I believe he is opening up a space for them to do precisely what Glissant envisions as necessary, and no less. Initially it seems a very simple or even absurd question, yet, there are deeper carnival dimensions to it. He is asking an open question, not a rhetorical one, a question that has more than one answer, that invites many perspectives each carrying their own particular political, historical and existential meanings to enrich the discussion.

Noticeably it was the younger teachers with more diverse educational and community experience who were willing to open their classrooms up to become a forum for the articulation of popular culture. They had a more intuitive practice. My concern is that they will gradually, over time, adapt to the prevailing institutional practices. This concern brings to mind Moll's (1994) point that in order for teachers to remain sensitive within the classroom they have to get out of the classroom. Broadfoot notes that the boundaries between education itself and other activities in life themselves are breaking down, and that the worlds of work and home, leisure and study are becoming inextricably related, causing an "erosion of modernist conceptions of education as a defined and organised form of activity" (2000: 369). This erosion is also opportunity for new forms of education and new relationships between educators and learners to emerge.

#### INCORPORATING COMPLEXITY INTO CHOICES

As scientific understanding of mind rewrites the basic tenets of child development into a much more complex version, and as media resources offer to children a much more complex range of aural, print and visual means of communication, complex understanding of dialogic dynamics is only going to become more relevant. The challenge becomes not to introduce change but to see what form change is already taking, its terms, conditions, the strengths that propel it, and to envision one's plan of action as an ongoing interactive dialogue with the complex dynamics already at play. The lessons of complexity reinforce the note of caution sounded in recent Comparative Education special issues (Crossley and Jarvis 2000, 2001) on globalisation that re-emphasise the importance of context and argue against the wholesale importation of educational policies deemed to be competitively advantageous.

Many policy articles reach for a strong conclusion: what is needed is a change of policy, implementation of a different teacher training curriculum, or pedagogical framework. As worthwhile as any of these may be, this cannot be the conclusion of this article. The conclusion is both larger and smaller than these, includes a consideration of all of them, and, yet, can be encapsulated in none of them. Whatever

the structural strategy taken it should include a sensitivity to dialogic dimensions of discourse and an appreciation of the expertise embedded within children's play practices. As the discourse analysis of Chouliaraki (1999), Alexander (2000), and Edwards and Mercer (1987) before have pointed out, all of these larger systemic approaches to change, *depending upon the way they are delivered*, can actually reinforce the dynamics they are intended to change.

Business and management have embraced the language of complexity, not without generalising and misconstruing some of the important dynamics of its intricacies. The problem is that emergence is selectively glossed in this discourse, and complexity's other lessons conveniently ignored. Emergence is the capacity for some systems to build order out of disorder in a seemingly disordered process, thus creating change. However, there are also systems that resist change. When threatened with dissipative factors they re-organise themselves, evidencing a remarked resiliency towards change. It is important to keep both eventualities in mind, as well as others, when drawing analogies to society

To reconsider educational metaphors in light of complexity is to substantially amend mechanistic understandings of organisations to incorporate the lessons of fractal scaling, non-linear fluid dynamics, and autopoietic dissipative structures. Our capacity for and the validity of interpretation and interaction is enhanced by a complexity research stance. What is crucial to understand is the relations between terms within the same level of interaction AND across levels of interaction. The more interactive the variables are, the greater likelihood that their feedback between each other can amplify or strengthen their effect, be that to throw the system into chaos, or conversely to stabilise and make it resilient to change. Non-linear fluid systems are capable of doing either (Eve, 1997: 278). Teachers' resistance to change, the resilience of school culture, the transformative moment when a child appears to take a quantum leap forward in learning, all of these defy mechanistic analysis, yet, they are the very sort of experiences or situations that educators must grapple with most vigorously.

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