GIVING THE GAME AWAY: EXPLICITNESS, DIVERSITY AND GENRE-BASED LITERACY IN AUSTRALIA

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0. ORIENTATION

In this paper I'll provide a brief overview of issues arising from the development of genre-based literacy programs in Australia, concentrating on the so-called "Sydney school" (Hyon 1996)[1] which has been the focus of my involvement in language education (Christie 1992, Martin 1993a).

1. LOCKING IN

We began work in 1979, in and around the MA Applied Linguistics program at the University of Sydney, inspired by Halliday's functional linguistics and Bernstein's sociology of education. During his visit to Australia in 1978, Bernstein drew our attention to the threat posed by progressive education for disadvantaged children (soon to be manifested in process writing and whole language programs):

"... we must make very certain that the new pedagogy [= progressive pedagogy; JRM] does not lock the child into the present – in his or her present tense. There is a danger that the new educational pull with its emphasis on the aural might well in fact do that unless we seek to understand systematically how to create a concept which can authenticate the child's experience and give him or her those powerful representations of thought that he or she is going to need in order to change the world outside." Bernstein (in Australia 1978) 1979: 300–301

Early on, in fact, we were struck by the very narrow range of writing undertaken by students at all levels of schooling, when considered from the perspective of genre. Text 1 illustrates the recount genre, which we found commonly in primary school – a record of personal experience, in this case a class trip to the zoo.

[1] Taronga Park Zoo (age 7)

Last Wednesday all Year I went to Taronga Zoo.

First we went to have a lesson. We all saw a ringtail possum and the teacher showed us a koala's hand. We saw a great white shark's mouth and I saw a lion.

We saw a peacock while we were having lunch and my Dad came to the Zoo with me and monkeys and a big gorilla and we saw zebra and a giraffe and I had a good time at the Zoo. I went back to school. I felt good.

I liked the lion and the elephant and giraffe but the best thing was going on the train and the ferry and the bus and I felt good going back home and when I got back home I felt exhausted and we had a snack.

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[1] So christened, I believe, for an international audience by Green & Lee (1994: 208).

It concerned us that personal expressive writing of this kind (Rothery 1996) wasn't preparing students for writing across the curriculum in primary or secondary school nor for writing in the community outside of school. And we observed and documented that as far as progressive literacy teaching was concerned (e. g. Graves' *process writing*, the Goodmans' *whole language*), children were indeed being locked in; and the less mainstream their background, the more locked in they had become – ever more so, we felt, but could not document, than if they had received a traditional education (Rothery 1996).[2] Ensuing research in America has ended to confirm our findings (e. g. Kamberelis 1999, Kamberelis & Bovino 1999 and the reference to Pappas and others therein)

2. LANGUAGE AND SOCIAL POWER PROJECT (FROM 1985)

The main issues arising from our work in this period had to do with creativity, discovery learning, in-servicing and materials development (Reid 1987, Cope & Kalantzis 1993).

The creativity issue had to do with whether knowledge about language gets in the way of or enables creativity. Our research into process writing schools showed us that without explicit instruction, children took up a very narrow range of genres, without development, year after year – drawing on story genres they had encountered in reading or in their oral culture (Rothery 1996). Following Bakhtin, we argued on the other hand that creativity depends on mastery of the genre, and provided students with knowledge about language which they could use as a resource for taking control of genres and for creatively exploiting the possibilities that informed control affords (e. g. Rothery & Stenglin 1994).

The discovery learning issue had to do with the roles played by teachers and students in language learning. Progressive educators, drawing on Piaget and Chomsky, tended to argue that students only learn what they discover for themselves. Following Halliday and Painter on the other hand we argued that teachers have an important role to play in scaffolding students' learning and that knowledge about language was an important part of this scaffolding (e. g Halliday 1975, Painter 1984). Accordingly, we designed pedagogy in which teachers played an active role in scaffolding student writing before expecting students to write on their own (Christie 1998, Chouliaraki 1998, Wells 1999).

During this period, we also came to appreciate the importance of on-going classroom support for teachers taking up the new genre-based curriculum and pedagogy; a one-off day of in-service was generally not enough. And we learned the significance of affordable and practical materials which teachers could draw on day by day in their teaching (e. g. Murray and Zammit 1992, Anderson & Nyholm 1996, Callow 1996). Sadly, as governments in the Western World withdraw funding from public education, resources for in-service and materials of this order are becoming so scarce that major changes to curriculum and pedagogy have become next to impossible to implement. So even where syllabi are renovated in the direction of significant change, teachers tend to teach the way they themselves were taught, however inappropriate.

Our first attempt to unlock the meaning potential of Australian students took place in the Disadvantaged Schools Program in an inner city region of Sydney. This program drew on federal funding ear-marked for schools with high working class and migrant enrolment.

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[2] For the deconstruction of progressive education underpinning our work, see Bernstein 1975: 116 & 122–123.

Our Language and Social Power Project attempted to introduce the notion of genre to primary school teachers and students, and thereby broaden the range of writing undertaken – including recount, narrative, report, explanation, procedure, exposition and discussion (Feez & Joyce 1998, Littlefair 1991). Two of the "factual" genres we tried to promote are illustrated below.

[2] report genre – Snails (Year 5; age 10/11)

Snails belong to a group of animals called molluscs. Octopus, squid and shellfish belong to the same group.

Snails have shells which can have clockwise or anti-clockwise spirals. They move on a fleshy foot. Mucus helps the snail move and stick onto leaves. The mucus leaves a silver trail. Tentacles help them feel and find where they are going. The eyes are on the end of long stalks. If you touch them they go into the shell. The tongue is called the radula. They have two holes in their body. One is for breathing and the other is for excretion.

Snails eat green leaves and brown leaves. They hate the sun. They like wet places. They live in trees or hide under rocks.

There are no male and female snails. Each snail is both and can lay eggs. They lay 30 to 40 eggs at a time. The baby snails become adults in 2 to 3 years.

If you tread on a snail, it will squash very easily.

[3] exposition genre – Should an amphitheatre be built in Wiley Park? (Year 6; age 11/12)

I strongly believe that the amphitheatre in Wiley Park should be built for these following reasons, such as: it attracts more people to the area, shops and public transport will earn a larger profit, people will become more interested in Wiley Park, and it is suitable for all ages.

My first reason is that it will bring more people to our area because there are not many main attractions in our community and it can be something to remember our bi-centenary by in years to come.

Another point to mention is shops will earn more money, for example, the new restaurant which will be built with in the amphitheatre. And not to forget Public transport which will create more money for the government and will be more easier for the disabled to travel by if they wish to do so.

And last but not least it is not only for the grown ups but it is also suitable for children for example, there will be entertainment such as concerts, plays and shows. In my opinion from a child's point of view I think it's going to be fun and it's about time the council did something like this.

I hope I have convinced you that we should have a amphitheatre at Wiley Park.

In order for this broadening of the literacy curriculum to take effect, we had to change the way in which writing was taught – drawing on our understandings of language development as described for us by Halliday (1975, 1993) and Painter (1984, 1986). Like Applebee & Langer (1983) we were struck by the scaffolding provided by caregivers in spoken language development, as illustrated by Halliday (1975) for his son (aged 22 months, 14 days). Note the initial co-construction of experience below:

Child:	Auntie Joan cook quack quack for you.
Father:	Auntie Joan cooked quack quack for you, did she?
Child:	Auntie Joan cook greenpea.
Father:	And green peas.
Child:	Began shout.
Mother:	Who began to shout.
Child:	Nila began to shout.
Mother:	Did you? What did you shout?
Child:	Greenpea.

Later that same day the child was able to tell the story on his own:

Child: Auntie Jean cook quack quack for you...and green pea...you began to shout GREENPEA!

Painter (1984, 1986, 1989, 1991, 1996, 1999) provided us with copious examples of related interventions, including prompting and advice:

Father: This car can't go as fast as ours.
Child (4.8):   I thought – I thought all cars could – all cars could go the same – all cars could go the same (pause) fast...
Mother: The same speed.
Child: Yes, same speed. [from Painter 1993/1999]

Child (6):   I don't know what to say.
Mother: Well, first you say "This is David." and then you say that you will be able to go to John's party.
[David dials the number and starts talking into the dialling tone]
               No, wait for some one to pick up their phone and say hello to you.
Voice: Hello.
Child: This is David. I'm going to come to John's party.
[after child hangs up]
Mother: There, good. Next time, after you've said your name, give them a chance to speak before you go on. [from Painter 1986:80]

From this work (especially Painter 1986; cf. Vygotsky 1978: 86 on zone of proximal development, and also Gray 1987, Hasan & Martin 1989, Kamberelis & Bovino 1999, Mercer 1994) we took our basic pedagogic principle, namely, "Guidance through interaction in the context of shared experience". And we tried to shape writing lessons in such a way that students were introduced to models of writing and in addition jointly constructed texts with their teachers before being expected to write on their own (Derewinaka 1991, Martin & Rothery 1990, Martin 1998a). The teaching/learning cycle framing our pedagogy is outlined in Fig. 1 (Murray and Zammit 1992:7), including deconstruction, joint construction and individual construction phases – all dependent on prior negotiation of the field (what the students will be reading and writing about).

The negotiating field wedge in the cycle refers to the need for teacher and students to build up shared knowledge about some discipline or institution (animals, technology, environment etc.) which they can use as a platform for language development. On the base of shared understandings, zones of proximal development can be established in which teachers guide students forward from what they can already do.

The deconstruction phase of the cycle has to do with establishing goals for writing development – by providing models of the genre under consideration, and situating that genre critically in its social context. This involves consideration of both the linguistic structure of a genre, and the role it plays in the institutions in which it functions.

The joint construction phase involves teacher and students jointly composing a text in the same genre but drawing on a related or different field (Hunt 1994). In order to facilitate interactive scaffolding here, we encouraged teachers to scribe the text in front of the class on the board, butcher paper or OHP – with the students making suggestions about what she should write. This established a powerful zone of proximal development in which students could move towards taking over the writing task for themselves.

The individual construction phase has students writing a text on their own in a related or different field, including consultation with the teacher and peers, and the organisation of opportunities to deploy or renovate the genre to challenge power relations in the culture (Murray and Zammit 1992: 39–40, Anderson & Nyholm 1996: 37–38, Callow 1996:13–14).

Following Halliday and Painter's work on the role played by talk about language in spoken language development, we infused each phase of the cycle with as much knowledge about language as possible – beginning with knowledge about genre and genre structure, and moving into functional grammar where possible. The following text from research by Williams and Rothery (Williams 1998) indicates something of the progress we were able to achieve in this area under optimal conditions (from a Year 6 class; age 11/12)
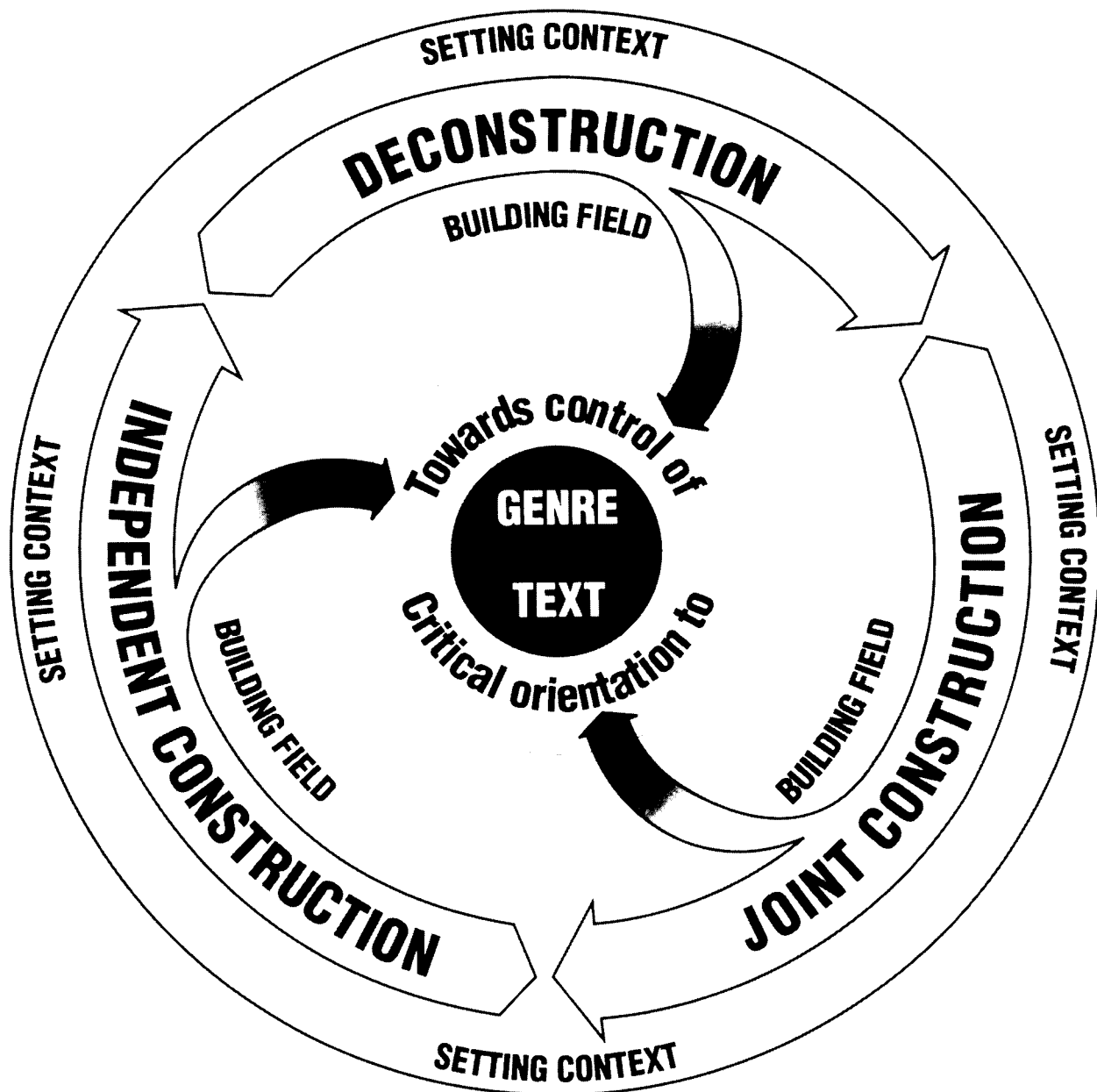
Fig. 1: A teaching/learning cycle for primary school, from Murray & Zammit 1992: 7

4. "What we learnt about the grammatical patterns of Piggybook"

Beginning.

All the Goals Mrs Piggott did were to do with housework.

Only Mrs Piggott had Goals. This shows she is the only one doing something TO something else.

Mr Piggott and the boys only did things for themselves; they did not do work in the home. This is shown by the fact that they didn't have any Goals. They were the only characters that talked. They told Mrs P to hurry up.

Resolution

At the end, everyone did an action to something – to benefit the whole family, not just themselves. Everyone had Goals at the end.

Now the Goals for Mrs Piggott included more than housework.

[She mended the car. – diagrammed as Actor Process Goal]

The Goals had a big role in structuring the narrative. The pattern of Actors and Goals changes at the end. This makes the Resolution.

Martin (1998a) includes a more detailed discussion of our pedagogy in relation to Bernstein's notions of classification and framing.

3. WRITE IT RIGHT PROJECT (FROM 1991)

The main issues arising from this phase of research and intervention included (i) genre and subjectivity – in what respects does introducing non-mainstream students to mainstream genres damage or enhance their subjectivity (Cranny-Francis 1993); (ii) critical literacy – at what stage in the pedagogy and to what extent in the curriculum are genres deconstructed in relation to power and solidarity (Macken & Rothery 1991); (iii) timetabling – is it possible to actually teach writing in 40 minute periods compromised in various ways by the time taken to settle and pack up again to move on; (iv) joint construction – how does one go about jointly constructing longer multi-page texts with students and overcoming teachers' insecurity about actually modelling writing for students; (v) autonomy – how can alternative pedagogy and curriculum be developed in an increasingly centralised and bureaucratised system of public education in which the interests of politicians and administrators are placed above those of the professional educators and students they are meant to serve.[3]

The issue of critical literacy remained a hotly contested one throughout, with functional linguists and critical theorists adopting a range of positions on how and when to intervene. Exemplary critiques of the "Sydney School" are found in Lee (1996) and Luke (1996), based on fears about imagined implementations of genre-based pedagogy; these can be usefully read in relation to materials which attempted to deal with critical language awareness (Fairclough 1992) in primary and secondary classrooms, none of which are addressed in these critiques (e. g. Murray and Zammit 1992: 39–40, Anderson & Nyholm 1996: 37–38, Callow 1996:13–14; Coffin 1996, Rothery 1994). Martin & McCormack (to appear) comment as follows:

"...for us critical literacy cannot mean adopting some transcendental vantage point from which to critique other texts or processes. But nor can it mean simply asserting your own point of view. Rather critical literacy means being able to participate in unfolding conversations and voices engaged in assessing and assigning value to matters in the present."

In 1991, the region of the Disadvantaged Schools Program in which we were working secured funding to move our work into secondary school and workplace literacy. We started looking in detail at secondary school creative arts, English, geography, history and science; and at science industry, public administration and print media (for materials arising see Coffin 1996, Humphrey 1996, Rothery 1994; Rose et al. 1992, Iedema et al. 1994, Iedema 1995). In this phase of our work we attempted to map secondary school disciplines and workplace institutions as systems of genres, and in addition to develop register theory to explore activity, social relations and texture (Christie & Martin 1997, Martin & Veel 1998).

An example of our workplace mapping is outlined in Fig. 2, based on Rose's work on procedural genres (Rose et al. 1992; Rose 1997, 1998a). It begins on the left with simple procedural texts for less demanding tasks, moving on to conditional procedures where alter-

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[3] By 1995 the Disadvantaged School Program in which we worked had been absorbed in the New South Wales Department of Education and thereby destroyed as an alternative voice in curriculum development; soon after, the New South Wales Adult Migrant Education Service, a national leader in the development of ESL curricula and pedagogy based on a functional model of language, lost 80 % of its operation when the government outsourced its work to the private sector – who were able to offer cheaper services precisely because they would not be involved in developing curriculum change.

specialised
English

technical
English

		oriented to technology		
Simple procedure	oriented to task → conditional procedure	topographic procedure ↗ ↘ co-operative procedure	technical procedure	duty statement
		oriented to operators		

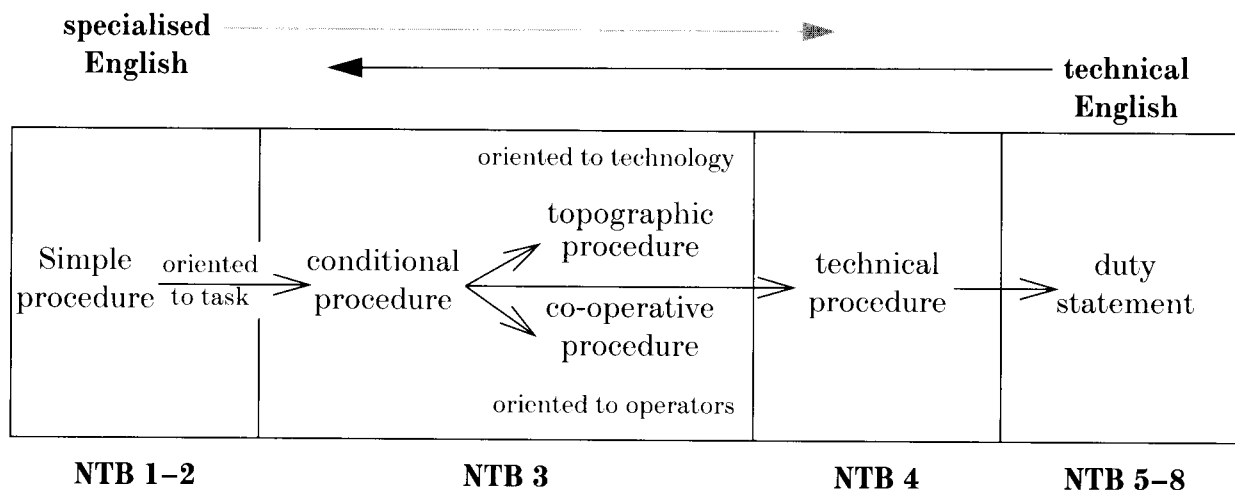**NTB 1–2**   **NTB 3**   **NTB 4**   **NTB 5–8**

Fig. 2: Procedural genres in science industry, in relation to National Training Board levels (Rose et al 1992)

native courses of action are present, to co-operative procedures requiring more than one operator and topographic procedures oriented to specialised technology, and on through technical procedures involving scientific measurement to duty statements which generalise about responsibilities of senior staff without specifying their activities in step by step detail.

This arrangement of genres involves both a move from specialised discourse which can be ostensively explained to technical discourse which requires linguistic elaboration and definition (White 1998), alongside a move through Australian National Training Board levels from junior to senior staff. Rose (1997: 45) shows how this hierarchy is related to secondary school science (Veel 1997).

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In order to illustrate this outline of workplace procedures, some key genres will be exemplified here (setting aside topographic procedures and duty statements to save space). A simple procedure is exemplified in text 5 below, involving a simple series of steps to be undertaken by a single operator (Christie et al. 1992).

5. ISOLATE PRECIPITATOR ELECTRICALLY

1 a   Move the main isolator switch (CFS) in the precipitator switch room to the OFF position
   b   and tag, "OUT OF SERVICE".
2   Lock the main isolator switch switching arm using "Castell Key 2"
3 a   Remove the "Castell Key 2"
   b   and attach an "OUT OF SERVICE" tag to the key identifying No 12 Tar Precipitator.
4   Place the "Castell Key 2" in the shift supervisor's office.

Conditional procedures concern more complex processes in which decisions have to be made about courses of action. Here the language has to construct alternatives and the conditions under which they are undertaken.

6. STOP GAS FLOW THROUGH PRECIPITATOR

5.3.1   Check the number of the tar precipitators on line to assure an uninterrupted gas flow.
Currently four (4) tar precipitators are the minimum number that have to be on line to maintain an acceptable back pressure range of 8–14 kps.

If after this precipitator is isolated:

i.   There will be fewer than four (4) tar precipitators in operation, go to step 5.3.2.
ii.   There are four (4) or more tar precipitators in operation, go to step 5.3.3.

5.3.2   Open tar precipitators by pass gas valve (5 or 6 turns).

5.3.3   Close the inlet gas valve slowly,
            and tag, "OUT OF SERVICE" in two positions:
            – Rotork isolator with the lugs tied together,
            – Manual valve handle.

5.3.4   Exhauster driver to monitor back pressure
            which must be in the acceptable range
            if enough precipitators are on line (Range 8–14 kps).

If when the precipitator by pass gas valve is open:

i.   Pressure range is OK,
            go to step 5.3.7
ii.   Pressure range is too high,
            go to step 5.3.5
iii.   Pressure range is too low,
            go step 5.3.6.

5.3.5   Open the precipitator by pass gas valve
            until exhauster back pressure is in range.

5.3.6   Close tar precipitator by pass gas valve
            until exhauster back pressure is in range.

5.3.7   Close the outlet gas valve slowly,
            and tag, "OUT OF SERVICE" in two positions:
            – Rotork isolator with the lugs tied together,
            – Manual valve handle.

Cooperative procedures involve processes that need to be undertaken by more than one operator. Among other things this means that the Subject of commands must be specified, in modalised declarative clauses (indirect speech acts); simple imperative clauses will not suffice.

7. DUMPING BRASSERT WASHER

1.0 Purpose
The purpose of this procedure is to establish or outline the steps required in dumping the brassert washer under normal conditions.

2.0 Scope
This procedure will apply to No 4 Blast Furnace

4.0 Definitions (3.0 has been omitted)
Dump – remove some of the water seal from the brassert.

5.0 Procedure

5.1   *Philosophy*
    a   The brassert washer is the second mechanism in the gas cleaning plant at No 4 BF.
    b   The water sprays used in the gas cleaning process cause dust particles to precipitate out of the gas and form a sludge at the base of the brassert.
    c   Some of this sludge is not removed by the normal flushing process.
    d   Dumping of the brassert flushes this sludge out of the base,
    e   therefore preventing build up.
5.2   a   Two trained people are required to safely dump the brassert (one operator and one gas watcher).
5.3   a   Operators should liaise with the general supervisor
       b   to ensure the furnace is casting,

c   in case difficulties arise in shutting the slide valves at the base of the brassert, resulting in an un-
scheduled furnace stop.

5.4   Control room attendant should be notified about intentions (for possible alarm).

5.5   One of the operators should equip himself with a CO monitor.

5.6   Ensure no personnel are in the immediate area, such as staves platform and ground level around
brassert sump (possibility of gas below).

5.7 a   Bottom slide valve on brassert cone to be opened fully
     b   and then closed (reason, to depressurise area between valves).

5.8 a   Top slide valve on brassert cone should be opened fully
     b   and then closed immediately.

5.9 a   Bottom slide valve on brassert cone should be opened fully
     b   until a turbulence is noted in the brassert sump
     c   and then closed immediately.

5.10   Ensure both valves are completely closed.

5.11 a   Notify general Supervisor and control room attendant
     b   that dumping has been completed.

Technical procedures are preformed by more highly trained workers, to test production
materials. For this procedure samples have to be prepared and tested to derive numerical
results, which are then operated on mathematically to produce useful figures. Note that the
language here is much more nominalised than in the previous procedures, reflecting the
more abstract and technical nature of the operations involved (e. g *the extent of HAZ
cracking, metallographic examination, vertical crack length, the amount of cracking in the
weld*).

8. CRACK EXAMINATION

Objective

1   The objective of the test is to determine the extent of HAZ cracking.

Sample preparation

2a   The test section shall be sectioned transverse to the weld joint,

2b   ground to a 1200 grit

2c   and etched with 2 % nital.

3a   To assist metallographic examination,

3b   the test piece should be cut down to the approximate dimension shown in Fig. 2.

Testing

4a   Crack examination is done by one of two methods,

4b   either using an optical microscope or a shadowgraph with a stage that has a digital readout.

5a   Firstly using the optical microscope,

5b   the microscope is set at 100x.

6a   First the vertical leg length of the weld is measured

6b   and expressed as a number of fields (fig 3).

7   This leg length is measured from the top of the groove.

8a   Similarly the vertical crack length is measured

8b   and expressed as a number of fields (fig 3).

9a   Secondly using the shadowgraph

9b   a similar measure is used.

10   Magnification is set at 100x.

11a   The vertical leg length and vertical crack length are measured

11b   using the digital readout.

12   This gives the actual measurements in mm instead of in the field.

Results

13   The vertical crack length is expressed as a percentage of the vertical leg length $(I/L) \times 100$.

14   The four results obtained are averaged to give a result to the nearest 10 %.

15   This number is then taken to be the amount of cracking in the weld.

One of our main concerns in this research had to do with post-Fordist workplace practices where multi-skilling and quality control teams tend to "flatten" hierarchies, with workers expected to manage a wider range of procedural and other genres than in the past. It seemed to us that students leaving school in years 10 or 12 would find it increasingly difficult to fit into workplaces of this kind unless schools themselves made changes to ensure that students were equipped to deal with a broadening range of genres involving both specialised and technical lexis.

An example of our work on mapping disciplines as systems of genre is outlined in Table 1 (Coffin 1996, 1997, Veel & Coffin 1996), which is arranged in a kind of learner pathway[4] moving students through the uncommon sense discourses of history (Brook et al. 1996). The pathway begins with various recount genres designed to reconstruct personal and vicarious experience, moves on through genres concerned with explaining cause and effect, continues with argumentative genres and culminates with Foucauldian genealogy. As with Fig. 2 above, one critical factor in this development is the mobilisation of grammatical metaphor (Halliday 1994, 1998; Halliday & Martin 1993, Martin & Veel 1998) – resources for nominalising processes, qualities and modal assessments and for realising logico-semantic connections inside the clause. Our work in this project convinced us that learning to read and write grammatically metaphorical discourse was the main linguistic task for teachers and students in secondary school, since it is through grammatical metaphor that every discipline and institution we considered evolves the discourses which construe specialised knowledge and regulate populations (Martin 1993b).

The personal recount genre was illustrated in text 1 above. There events unfold in temporal sequence, and involve the narrator reacting to sensuous phenomena. Significantly, people, places and things are realised as nominal groups (*Taronga Park Zoo, all Year 1, a ringtail possum, the teacher, a koala's hand, a great white shark's mouth, a lion* etc.), processes are realised as verbal groups (*went, showed, saw* etc.) and qualities come out as adjectives (e. g. *big, good, best, exhausted*).

A few rungs down the ladder, with historical recounts, all these parameters have changed. Setting in time takes over from sequence in time as an organising principle (*by the mid twenties, during the depression years, during the WWII years that followed* etc.), events are undertaken by institutions rather than people – and there are many abstractions (*big changes, the needs of fishing industry, the importance of understanding fish habitat* etc.). Now many processes are realised by nouns (e. g. *changes, needs*) and qualities as well (*importance*).

9. ...**By the mid twenties**, big changes took place to meet the needs of the fishing industry and government fisheries managers. The Board began to employ full-time scientific staff, and Technological Stations were established in Halifax, Nova Scotia, and Prince Rupert, British Columbia. The staff quickly became multi-disciplinary. At the Biological Stations physics and chemistry were added to zoology in recognition of the importance of understanding fish habitat. At the Technological Stations zoologists did some initial work on refrigeration of fish, but chemists, bacteriologists, and engineers soon took over responsibility for industrial research and development.

During the depression years the fisheries research and development program was maintained despite constrained budgets. Facilities for volunteer investigators could only be provided to those with independent financing, and the small permanent staff endured a ten-percent reduction of salaries. **During the World-War-II years that followed**, there was the additional setback of loss of some staff to war service.

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[4] We would not argue that every student follow this pathway precisely; but we would point out that genres further along tend to presuppose resources in preceding genres, and that this meaning potential has to be developed in other ways if the genres in question are in some sense "skipped".

Table 1: Learner pathway for secondary school history genres (by genre, including staging and language features)

genre [staging]	informal description	key linguistic features (Halliday 1994, Martin 1992)
personal recount [Orientation^Record]	agnate to story genres; what happened to me	sequence in time; 1st person; specific participants
autobiographical recount [Orientation^Record]	borderline – agnate to story & factual genres; story of my life [oral history]	setting in time; 1st person; specific participants
biographical recount [Orientation^Record]	story of someone else's life	setting in time; 3rd person (specific); other specific & generic participants
historical recount; [Background^Record]	establishing the time line of the grand narrative	setting in time; 3rd person; mainly generic participants (but specific great "men")
historical account; [Background^Account]	naturalising linearisation rendering the grand narrative inevitable	incongruent external causal unfolding; 3rd person; mainly generic participants; prosodic judgement
factorial explanation [Outcome ^ Factors]	complexifying notion of what leads on to/from what	internal organisation of factors; factors externally linked to outcome; 3rd person; mainly generic participants
consequential explanation [Input ^ Consequences]	complexifying notion of what leads on to/from what; hypothetical variant – if x, then these outcomes	internal organisation of factors; consequences externally linked to input; 3rd person; mainly generic participants
exposition – one sided; promote [Thesis^Arguments]	problematic interpretation that needs justifying	internal conjunction keying on thesis
challenge – one sided; rebut [Position^Rebuttal]	someone else's problematic interpretation that needs demolishing	internal conjunction keying on thesis
discussion – multi-sided; adjudicate [Issue^Sides^Resolution]	more than one interpretation considered	internal conjunction keying on thesis; + internal organisation of points of view
deconstruction [Foucault; cf. Ian Hunter]	avoiding reductive temporal & causal linearisation into grand narrative, effacing voices of the "other"...	replace naturalising time/cause explanation with "spatial" discursive formation realising episteme

For a quarter century following World War II, Canadian fisheries followed the world fisheries evolution through development, to overfishing and constrained harvesting, to increasing use of aquaculture to meet the ever-growing demand for aquatic food, and to environmental concerns for aquatic ecosystems and the global biosphere. FRB provided scientific information and advice for this rapidly changing fisheries scene. Despite expansion of budgets, staff and facilities, FRB could barely meet the demands placed upon it. With growing international exploitation of fisheries resources, and multiple uses of water, fisheries scientists became increasingly involved in international and national collaboration.

During those expansion years, changes were made in FRB operations. Demands on honorary Board members, particularly the Chairman, were excessive, and increased responsibility was left to the Station Directors. In order to maintain a national identity, a full-time Chairman was appointed **in 1953**, and this practice continued **through the next two decades**. The Board retained responsibility for policy direction, program reviews, and executive decisions. Management and administration were delegated to a small Headquarters staff and Stations Directors... [W. R. Martin 1991 The Fisheries Research Board of Canada. *Bulletin Canadian Society of Zoologists* Vol 22 (3). 36–40.]

As we move further down the pathway, to consequential explanations, causality takes over from temporality as an organising principle – text 10 gives three reasons for the success of Mao's Long March. And moreso than before we have abstractions acting on abstractions – *the prestige Mao acquired assured his dominance, Mao's leadership also brought an end to the dominance of the Soviet Union, the policy of going north to fight the Japanese also stimulated high morale in the Red Army*. In order for abstractions to affect abstractions, even more nominalisation is required than before. The effect of this is to code causality inside clauses as well as between them. Thus where in a more spoken text we might argue that *Mao acquired considerable prestige during the Long March and so became dominant*, in historical explanation this is tightened up inside the clause as *prestige assuring dominance*. By this stage on the learner pathway we are a long way from the spoken discourse students grow up with in their home, and firmly embedded in the consolidating textures of abstract writing.

[consequential explanation; internal organisation, listing effects; ideational metaphor] ,

10. HOW DID THE LONG MARCH CONTRIBUTE TO THE EVENTUAL COMMUNIST VICTORY?

First of all, it established the leadership of Mao Zedong. Although Mao was challenged by the leader of the Fourth Route army, Zhang Guotao, the prestige Mao acquired during the Long March assured his dominance. Mao's leadership also brought an end to the dominance of the Soviet Union in the party and made Chinese Communism more independent.

The Long March forged a tightly knit army that drew strength from its sufferings. The survivors formed the tough nucleus of the New Red Army which developed at Yunan. The policy of going north to fight the Japanese also stimulated high morale in the Red Army and appealed to patriots throughout China.

As it passed through twelve provinces the Red Army brought the message of Communism to hundreds of millions of peasants, who would otherwise have never heard of Communism. [Buggy 1988: 240]

In order to provide the scaffolding needed to move learners along pathways of this kind, the teaching/learning cycle introduced in Fig. 1 above was refined, along the lines of Fig. 3 (from Rothery & Stenglin 1994: 8). In this model, setting up the social context of the genre and building field knowledge are generalised across all stages of the model (Deconstruction, Joint Construction and Independent Construction). The point of this is to emphasise the instrumentality of shared understandings about disciplines/institutions in their cultural contexts for scaffolding to proceed effectively. In order to establish effective zones of proximal development in other words, the knowledge that teachers and students can all assume is vital.

In addition, the goal of the model is explicitly oriented to both control of and a critical orientation to the discourse under consideration. This reflects the fact that in the 90s debate had shifted from a concern with creativity in relation to genres to a concern that genres be taught as part of a critical language awareness program (Fairclough 1992, Hasan & Williams 1996) which gave students opportunities to critique and renovate genres alongside mobilising them to interrogate power relations in the culture (Christie & Misson 1998).

Bernstein's work on pedagogic discourse (Bernstein 1990, Christie 1998) provides a model for considering this pedagogy in relation to alternative positions in their idealised form. I've adapted a figure from his work below (1990: 213) to position our work in his lower right hand quadrant[5] where he imagines "a radical realisation of an apparently conser-

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[5] I suspect that pedagogy deriving from the MCA (Mind, Culture, Activity) coalition of neo-Vygotsky-ans around the work of Wertsch and Cole occupies an affine position (Wells 1996, Russell 1997), although the extent to which they have transcended progressivism is perhaps unclear.
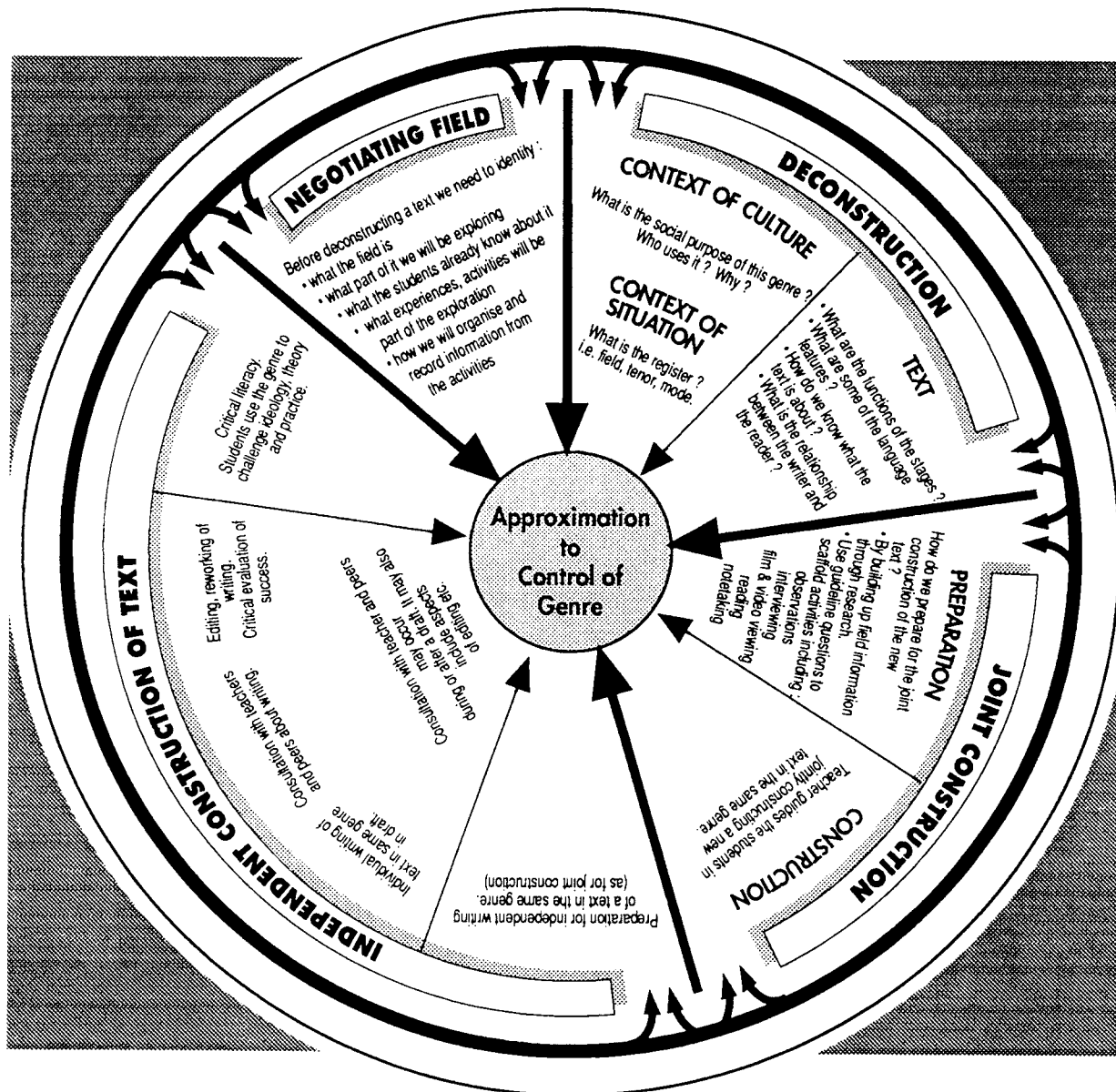
Fig. 3: A teaching/learning cycle for secondary school, from Rothery & Stenglin 1994: 8

vative pedagogic practice" (1990: 73). Bernstein's characterisation of pedagogic modalities in these terms follows:[6]

"The vertical dimension would indicate whether the theory of instruction privileged relations internal to the individual, where the focus would be *intra-individual*, or whether the theory of instruction privileged not relations within the individual but relations *between* social groups (inter-group). In the first case, intra-individual, the theory would be concerned to explain the conditions for changes within the individual, whereas in the second the theory would be concerned to explain the conditions for changes in the relation between social groups. The horizontal dimension would indicate whether the theory articulated a pedagogic practice emphasising a logic of acquisition or one emphasising a logic of transmission. In the case of a logic of acquisition the focus is upon the development of shared competences in which the acquirer is active in

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[6] "It is a matter of interest that this top right-hand quadrant is regarded as conservative but has **often produced very innovative and radical acquirers**. The bottom right-hand quadrant shows a radical realisation of an apparently conservative pedagogic practice...each theory will carry its own conditions of contestation, resistance, subversion." (Bernstein 1990:73)
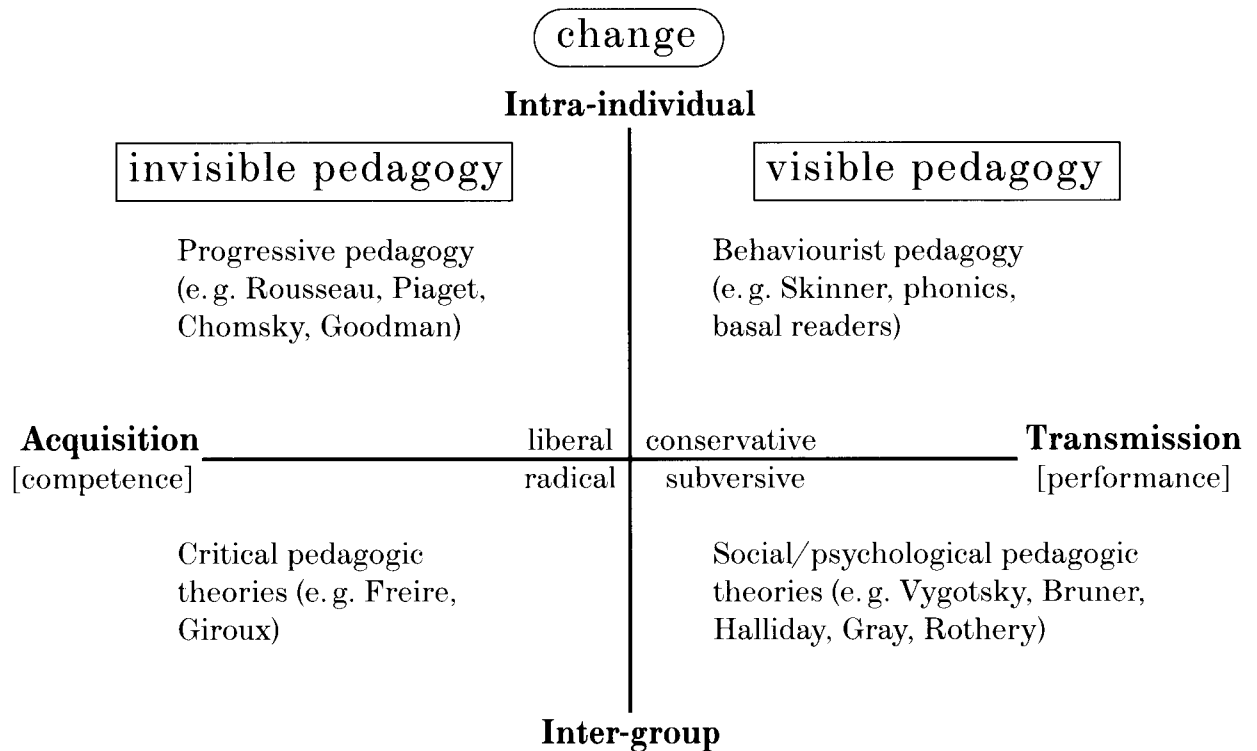
(change)

Intra-individual

| invisible pedagogy | visible pedagogy |

Progressive pedagogy
(e. g. Rousseau, Piaget,
Chomsky, Goodman)

Behaviourist pedagogy
(e. g. Skinner, phonics,
basal readers)

| **Acquisition** | liberal | conservative | **Transmission** |
| [competence] | radical | subversive | [performance] |

Critical pedagogic
theories (e. g. Freire,
Giroux)

Social/psychological pedagogic
theories (e. g. Vygotsky, Bruner,
Halliday, Gray, Rothery)

Inter-group

Fig 4: Pedagogic modalities (after Bernstein 1990)

regulating an *implicit* facilitating practice. In the case of a logic of transmission the emphasis is upon *explicit* effective ordering of the discourse to be acquired by the transmitter." (Bernstein 1990: 213–214)

In the diagram I've extended Bernstein's characterisation by adding the terms invisible and visible pedagogy (Bernstein 1975, Cazden 1995, Chouliaraki 1998) to gloss the implicit facilitating practice of acquisition discourses and the explicit practices of transmission discourses. In addition I have appended the terms liberal, conservation, radical and subversive to characterise the idealised positions outlined; in choosing the term subversive for our genre-based literacy pedagogy I was influenced by Bernstein's comment that "the bottom right-hand quadrant shows a radical realisation of an apparently conservative pedagogic practice" (Bernstein 1990: 73), writing at a time when he was unaware of our initiatives (for further discussion of our work in relation to Bernstein's theories see Christie 1998).

4. INTO THE MAINSTREAM (FROM 1995)

By the mid-1990s our work was becoming increasingly influential in the development of English syllabi around Australia. In New South Wales the Board of Studies proposed a primary syllabus which in effect took the work we had developed for disadvantaged schools and mainstreamed genre-based literacy pedagogy. One of the outstanding issues arising here has to do with the kind of grammar, if any, used to support literacy programs.

Drawing on our work, the Board proposed teaching functional grammar in a state where no grammar of any kind had been taught for more than a generation.[7] Public reaction to the genre-based syllabus was mute; but reaction to the "new" grammar was stun-

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[7] Not taught because progressive educators had argued that knowledge about language not only did not facilitate language learning but was a positive impediment to using language effectively (cf. Freedman & Medway 1994).

ning. Politicians, talk-back radio hosts and newspaper commentators all took offence, and editorialised strongly for a return to traditional grammar (back to the 1950s!), based on the widely promoted misunderstanding that functional grammar didn't include terms like noun, verb and adjective. My colleagues and I were caught completely unawares, not having expected the Board to include functional grammar in the syllabus, and not having predicted such a volatile response. Politicians set an inquiry which directed the Board to revise the syllabus, using "conventional" terminology, and the battle seemed lost – or was it?

Somewhat ironically, the syllabus was revised by educational linguists who saved what functional grammar they could, broadened the range of genres considered, and developed a wide range of materials based on our experiences with teachers in disadvantaged schools. In effect, what we ended up with was a curriculum emphasising work on genre but diminished with respect to the functional grammar required to ground this work in the clause by clause unfolding of student texts. Perhaps not a bad outcome, since the New South Wales government is not prepared to fund the in-servicing required to bring about the changes proposed by the Board, let alone the funding which would have been necessary to equip teachers and students with the knowledge about grammar they require to effectively implement a genre-based literacy program.

The terms of the New South Wales debate over grammar are of international significance, since they pitted traditional school grammar of the kind taught in Europe and Britain, and exported from there around the world, against functional grammar (see Martin & Rothery 1993 for discussion of traditional, formal and functional grammar in relation to language in education programs). It is critical to understand what exactly is at issue here.

Halliday's 1994 functional description of the English nominal group for example employs both class (determiner, numeral etc.) and function (Deictic, Numerative etc.) labels as outlined below:

those	*two*	*young*	*African*	*elephants*	*in the zoo*
determiner	numeral	adjective	adjective	noun	prep phrase
Deictic	**Numerative**	**Epithet**	**Classifier**	**Thing**	**Qualifier**

The reason for the double labelling is of course that function and class aren't the same thing. For example, a given class can have more than one function – the adjective *red* is an Epithet describing the Thing in *red dress*, but a Classifier classifying the Thing in *red wine*;[8] and a given function can be realised by more than one class – an Epithet can be realised by either an adjective like *clear*, or a verb like *falling* as in *clear water* and *falling water* respectively. A slightly fuller outline of Halliday's description is presented as Table 2 below.

Table 2: An outline of the English nominal group (based on Halliday 1994)

grammatical function:	question answered:	typical word class:
Deictic	which one?	**determiner** (a, some, the, this, that...)
Numerative	how many/much?	**numeral** (one, two, three...; first, second, third...), **adjective** (many, few, several...)
Epithet	what like?	**adjective** (big, round, red...)
Classifier	what kind?	**noun** (stone, brick, steel...)
Thing	what?	**noun** (wall, house, pan...)
Qualifier	long what like? [often specifying which one]	**prepositional phrase** [in the garden], **embedded clause** [[that can be opened and closed]]

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[8] So we can have *a very red dress*, but not **a very red wine* (unless we mean the colour, not the type) – since Epithets are gradable, but Classifiers are not.

In our work with infants and primary school children, we emphasised the functional la-
belling, since it was more revealing about meaning. Rothery (e. g. 1989) tended to simplify
the functional terms for work with very young children (ages 5–12), along the lines of
Table 3. Our experience over the years was that students had no trouble whatsoever taking
up the functional labelling from the beginning of school; indeed we found that the function
labelling was easier for them than class labelling since it is more transparently concerned
with meaning. And for the generation of teachers that had gone through school learning no
grammar whatsoever, there was really no traditional grammar to get in the way.

Table 3: Simplified functional labelling (after Rothery, e. g. 1989)

Halliday label	kind of term	Rothery label (Latin):
Deictic	Greek based	Pointer
Numerative	Latin based	Number
Epithet	Greek based	Short Describer
Classifier	Latin based	Classifier
Thing	English based	Thing
Qualifier	Latin based	Long Describer

Older teachers, however, along with politicians, administrators and print and elec-
tronic media personalities did remember some traditional grammar – especially terms like
noun, verb and adjective (whether they actually remembered what these terms referred to
is another question altogether). And they found the new terminology disturbing. What they
wanted was "back to basics"; and that meant traditional terminology – i. e. class labels. The
fact that Halliday's grammar included class labels alongside function ones was not enough.
The media argued (erroneously) that the function labels replaced class labels in Halliday's
theory and that class had to be restored, not alongside, but at the expense of function.

At one stage in its development, this "conventional" grammar referred to all items
functioning as pre-modifiers in nominal groups as adjectives (including determiners, nu-
merals, adjectives and nouns regardless of function) and items functioning as post-modi-
fiers as adjective phrases or clauses. And this farce has been hard to work around once it
was decided by politicians and bureaucrats that only terms like adjective, verb and noun
would be allowed. We had the blind leading the blind, in utter contempt of the ground
breaking research that had been done. Sydney's leading broadsheet wrote an editorial dis-
missing the educational linguists favouring functional grammar as "ideological linguistic
warriors"; and politicians bemoaned the University of Sydney conspiracy responsible for
foisting functional grammar on the unsuspecting students of New South Wales schools. By
this stage the media narratives were so far from the genesis of genre-based literacy pro-
grams in Sydney's inner city disadvantaged schools that one was not sure whether to laugh
or cry. It certainly taught us a thing or two about the media, and the utter irresponsibility
with which they construct educational debates.

It seems to me that the main issue arising from this phase of our work has to do with
how to handle language in education issues in the public sphere. Up until 1995, all of our
energies had been devoted to developing literacy programs which made a difference for dis-
advantaged students; and we debated the pros and cons of our approach with educators. It
seems naive in retrospect, but we had not really considered the problem of getting parents,
the media and politicians on side with respect to what they would view as radical changes
to curricula. And we were totally unprepared for the fact that in Australia anyone who
speaks English considers themselves an expert on English and English teaching and are
deeply mistrustful of those presenting themselves as expert on these matters (part of the
culture of irreverence for which Australians are renowned). Certainly changes to math and

science curricula attract some media attention; but nothing like this. Language matters, publicly, in a way we had not predicted. Here's hoping others can learn from our mistakes.

The lack of adequate in-service support to enable the new curricula became an even bigger problem throughout the 90s. Politicians and administrators speak the rhetoric of change, but don't deploy the material resources needed to back up. Another issue I would flag has to do with the successive waves of simplification that set in once a program is re-designed to map across a school system (the elision of function labels in the grammar can be seen as one aspect of this). How to make a program system proof becomes a key anxiety. How does one interrupt a system that recontextualises programs until they can be seam-lessly absorbed into what has gone before – because that is what costs least and has the smallest amount of political fallout?

Two final issues I would raise have to do with multi-modality and critical literacy. During the 90s, thanks to the seminal work of Kress & van Leeuwen (1996), the role of images received increasing attention (e. g. van Leeuwen & Humphrey 1996). And consideration of verbiage/image relations in multi-modal texts opens up a number of exciting possibilities for work in school. But at the same time it ups the ante as far as knowledge about semiosis is concerned, since it's now in students' interests to learn about the grammar of images as well as the grammar of verbal texts. Since Kress & van Leeuwen base their work on Halliday's functional perspective, some measure of economy might have been achieved by generalising categories across modalities; but as noted above, the categories which might have been mapped across modalities were precisely those proscribed by politicians and the media. On the one hand, our culture makes more demands on students, as it elaborates it meaning potential through multi-modal texts; on the other, it cripples students (especially those most at risk), by dumbing down the curriculum. Who's behind this conspiracy, one might well ask?

Our interest in critical literacy has also not fared well. As long as the Disadvantaged Schools Program remained relatively independent of the state education departments, thanks to its federal funding and politicised commitment to disadvantaged students and social change, then critical language awareness was a possibility. We were able to introduce materials which deconstructed texts in relation to power. Once the Disadvantaged Schools program lost its identity, however, and our work was mainstreamed, critically oriented texts and analyses were systematically culled lest they offend one or another section of the community, especially interested bureaucrats and politicians. Translating critical literacy from the high moral ground of Academe into the classroom remains for us a vexed question, whatever our intentions. Morgan (1997) offers perhaps some rays of hope in this arena (see also Walton 1996).

5. CODA

Currently, the notion of a "Sydney school" is becoming more reductive than ever, since the main concentration of funding and action research initiative is in South Australia – in the school ESL sector under the leadership of John Polias and Brain Dare, and in Aboriginal Education as inspired by the work of Brian Gray and David Rose (1998b). Certainly the next survey of the work outlined here will have to be undertaken by someone from Adelaide, rather than Sydney. I, for one, look forward to the ways in which curriculum and pedagogy will be recontextualised in these new sites, where our theory has not so intensively been put into practice before. In particular, I look forward to the implications of these sites, not just for language in education, but for the nature of the functional linguistics

grounding the work. At best, a dialogue between linguistics and education changes more than schools; it changes linguistics as well (Martin 1999). The development of genre theory is just one example of the impact of our work in schools on Hallidayan theory (Martin 1998b).

Thinking globally, I think there are a number of pressing issues which bear critically on the design of literacy programs. Are we trying to liberate individuals, or change the power relations among social groups? And to achieve this, do we favour implicit or explicit scaffolding to enhance student's learning? Perhaps as long as we are trying to liberate individuals with an implicit pedagogy, the model of language we choose to inform our work is not crucial; we might even argue that knowledge about language has no role to play at all. But the more we concern ourselves with power relations among social groups and lean towards an explicit pedagogy to renovate these relations, then the more we will need to draw on functional models of language which relate writing to the social. For my money, systemic functional linguistics in dialogue with critical discourse analysis (Unsworth 1999) might well provide us with the resources we need, towards a critical language awareness that can make a difference to our world.

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