

Teaching not Learning: Listening to Parents and Empowering Children

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Conversation between brothers Wilf (8) and Matthew (4):

- Matthew: You ought to call me "The Thinker" you know
Wilf: What?
Matthew: You should call me "The Thinker".
Wilf: Why?
Matthew: 'Cos I'm always thinking I think all the time.
(Pause)
Wilf: That's how you know you're alive, 'cos you think.

This paper explores the gap which exists between the ideological orthodoxies of mathematics education and the expectations and beliefs of parents. Over the last twenty years a "progressive" post-Piagetian approach to the teaching of maths, what is sometimes termed "modern maths", has increasingly dominated primary or elementary school pedagogies. However, it is doubtful if Piaget would recognise, let alone approve, some of the practices promulgated in his name. It is also clear that there is widespread disquiet on the part of parents who, not understanding either the rationale nor the methods themselves, feel both alienated and disturbed by what they perceive as a failure to get to grips with the maths that counts. For a somewhat longer period, perhaps thirty years, we have witnessed an increasing tendency within the world of education to focus on *learning* rather than *teaching*. This, too, has seemed strange to many parents, whose idea of school is that it is quintessentially a place wherein teaching occurs—learning, they feel, can happen anywhere.

The arguments in this paper arise out of my work with teachers, parents and children in the context of a large project, IMPACT, whose overt aim is to involve parents in their children's learning of maths. This work has incorporated two aspects:

1. A major intervention initiative in which teachers have been encouraged to base a varying proportion of the childrens' maths classwork upon the outcome of structured maths activities shared at home with their parents.
2. A programme of research in which the work with the parents and children has been monitored and some of the implications for pedagogical strategies, both inside and outside schools, explored.

The basic mechanism by which IMPACT operates is very simple: Teachers select a task from a bank of specifically designed maths activities and the children in the class take it home and share it with a parent, grandparent, sibling, or anyone else they choose. The maths task—usually a game or a practical activity—is performed in the context of the home and the results are then used by the teacher in the following week's classwork. IMPACT operates with children aged 3-12, and is now the largest initiative of its kind in Europe with an estimated 8,000 schools participating. Its remarkable success may be due to the fact that it combines some of the advantages of traditional homework with a system which effectively generates a genuine collaboration with parents. This partnership is established through the use of small IMPACT diaries which accompany the task and which are completed by parents and children. These diaries provide an important mechanism by which task-specific parental comments may be read and responded to on a week-by-week basis.

IMPACT is a project which exists at the boundaries, at the margins of orthodox education. The liminal nature of the work has focussed my attention on the ways in which many of the apparent dogmas of liberal education are questioned by most parents for reasons which seem—to a progressive educationalist—to be entirely fair. Education at present appears to be structured along the folds of the difference "progressive/ traditional". As soon as the flag of progressivism is raised, many of us feel an overwhelming urge to salute; just as, presumably, those on the other side of the divide feel a similar unreasoning loyalty to their own standard. In describing myself as a "progressive" educationalist, I mean to assert a commitment to equality and democracy, and a liberal view of both education and schooling. However, the word "progressive", particularly in the context of mathematics education, has, I believe, come to have less to do with equality of opportunity and become more entrenched within notions such as "child-centred education", the importance of "understanding" as opposed to "rote learning", and the role of something called "everyday maths".

The work with parents, listening to their views and observing their ways of supporting their children's learning, has caused me to think again about what it is to be committed to "progressive" education. I shall argue that we need a major realignment of the structuring dyads—such as the classic "progressive/traditional" divide—by which the field of maths education has come to be consti-

tuted. The dichotomy between parents' views and the rhetoric of progressive education has made me aware, not, as is often said, of the necessity to *convert* parents to our point of view, but rather of the crucial importance of *re-drawing these lines of difference*.

In this paper I shall do three things. First, I emphasise the necessity of listening to parents—from a *progressive* point of view. Second, I describe several of the main difficulties with what is currently termed “a progressive approach”, showing that these are, in essence, both inegalitarian and disempowering. My examples are drawn from my work in primary maths, although the argument has implications for education more generally. Third, I suggest some pedagogical strategies which, I believe, would lead us to provide an education in our schools in which parents could participate and children could flourish.

Listening to parents

Educational treatises, as well as those within the field of developmental psychology, frequently take pains to stress the importance of the parents' role in the education of the child. The home may be considered, it is said, as the single most important factor in children's educational attainment [Atkin & Bastiani 1988; ALBSU, 1993]. We are also informed that “parents are children's first and best teachers” [Hamilton & Griffiths, 1984]. Research on IMPACT, and also from other sources [Tizard & Hughes, 1984, Hannon, 1995] suggests that parents may actually be involved a great deal more in didactic instruction in the home, where children are “taught” so-called “school” subjects, such as counting, spellings, simple algorithms, and so on, than has previously been assumed. Nor are all these “instructing” parents from middle-class, high income families. What Jean Lave terms JPFs, just plain folk, are quite likely to be slipping a bit of good old-fashioned rote-learning or didactic instruction into the home curriculum [Lave, 1988].

Through IMPACT we have monitored literally hundreds of parents' comments on their children's learning of maths. The degree of assistance given by many parents and their willingness to participate in, and evaluate, their children's learning, have certainly been impressive [Merttens & Woods, 1994; DFE Report, 1994]. Yet we have found that the well-publicised and “progressive” reforms of the seventies have left many feeling educationally disenfranchised. It seems that their own experiences of learning maths no longer provide a sound basis upon which to collaborate in the education of their own children. Parents also demonstrate that they are aware of the problematic nature of current educational orthodoxies—for example, that a child is not yet “ready” to do a particular piece of maths. They complain of being literally disempowered by the phrase, “It is all taught differently now” [Merttens & Border, 1993]. However, they say, children are still children, and much of the primary curriculum is not dissimilar to what it was when they were at school. This makes it difficult to see why some teachers stress that it is all different now, and almost impossible to appreciate why doing certain things—e.g., giving the child a page of problems to do—is not regarded as supportive behaviour.

Listening to parents, reading the comments they make in literally hundreds of instances [Merttens & Woods, 1994], encourages me to re-define how progressive maths education looks and feels *in practice*. We cannot assume that parents are simply harking back to “how things were” any more than that teachers are simply pointing to “how things should be”. Traditional versus progressive; Arcadia behind and Utopia in front. In the main, parents are all too aware of the dangers entailed in many of the demands for traditional educational methods. They know, for instance, that most children *fail* competitive exams. They are aware, miserably, that the traditional maths teaching to which they were themselves subjected did not produce large numbers of confident mathematicians. Similarly, teachers realise that the current emphasis on manipulatives and problem-solving, on the importance of “real” understanding as opposed to “rote-learning”, is to some extent, a question of the rhetorics used and the vocabularies within which sequences of action or forms of behaviour must now be described. If I want a good career, I must learn the lingo.

“Unpicking” progressive education.

It is crucial that we unpick some of the ideas to which progressive maths education appears to be tied. This then enables us to defend the philosophical and political basis for progressive education—which I take to be egalitarian and libertarian. We can do this without being simultaneously forced to adopt pedagogical or psychological notions which are increasingly difficult to sustain, in the face of what seems to us both reasoned and reasonable parental criticism. In other words, by disentangling the important ground of progressive education from these inessential, unpopular and, I argue, mistaken, notions, we are able to mount a more cogent and spirited defence against the forces of reaction—which I take to be elitist and authoritarian.

Behind the move towards a more progressive and less authoritarian classroom lies an important critique. This is the rejection of the belief that teaching consists in the transmission of knowledge. The idea that the pedagogical relation may be described as inherently unequal, or asymmetric, in terms of the possession of knowledge is usually grounded upon one of two theories. The first is the almost platonic idea of knowledge and ideas as a somehow pre-existing discourse, and the second is the construction of knowledge as a series of competences—social, intellectual, cultural, rhetorical. This is also platonic in its assumption of a pre-existing order. However, the view that teaching is the transmission of knowledge is certainly not confined to those arguing from what is traditionally conceived as a conservative position. Althusser, in the lead up to the heady revolutionary talk of '68, wrote that, “The function of teaching is to transmit a determinate knowledge to subjects who do not possess this knowledge. The teaching situation thus rests on the absolute condition of an inequality between a knowledge and a non-knowledge” [Althusser, 1964].

By contrast, the utilisation of Piaget, the imagery of children's learning as “the natural growth of a living organism” and the desire for a less inegalitarian reading of teacher/pupil than knowledgeable/ignorant [1], were

instrumental in the conception of a view of teaching as “enabling”, or facilitating, development. The role of instruction was minimised in preference to a reading of education as a “drawing out” (Latin: *e-ducare*). As some writers have observed, the move to approach teaching as “enabling children to learn” rather than “transmitting knowledge” may not be any more egalitarian or progressive, either in the methodologies it produces or in its political effects [Walkerdine, Urwin, et al, 1984; Walkerdine & Lucey, 1989].

More recently, we have witnessed a reversion to the “transmission of knowledge” model of pedagogy, with the place of instruction more centrally positioned. This has arisen from two factors. Firstly, there has been a growing pressure for a change of direction from the political right, motivated by what is widely perceived as the failure of progressive teaching methods. Secondly, the influence of the writings of Vygotsky and Luria have increasingly permeated critical thinking on education in the West. Vygotsky argues for the importance of *mediation*, and sees learning and development as distinct although related. Teaching, he believes, can enhance development. However, in their infusion into teaching parlance, Vygotsky’s ideas have, to some extent, been translated into a more comfortable mode, enabling their inscription within a more-or-less Piagetian pedagogical approach. Thus the Vygotskian thesis of the importance of dialogue as mediation is read as a demand for group work to encourage learning and the reinforcement of the centrality of talk as an aid to understanding. The implications of a dialogic or dialectical theory of learning and mediation have been largely ignored.

The idea that theories of how children learn provide us, as teachers, with crucial metaphors which then guide our practice is paramount. If we believe that children develop “naturally”, and that the teacher’s task is to guide that development, we shall draw upon a whole different set of metaphors to account for and describe our practices than those we utilize if we adhere to a “transmission of knowledge” philosophy. And a truly Vygotskian perspective will lead to an emphasis upon instruction, mediation, and the regulative practices of teachers and parents in supplying “tools” by means of which learners acquire further skills.

Transference of skills

One metaphor which has been extremely influential in the formation and articulation of maths education practices is that of the transference of skills. This is the notion that children “carry around” a set of skills or competences which they may then utilise in a variety of differing contexts. Two factors make it increasingly hard to sustain the metaphor of skills transfer in either classroom-focussed or intellectual debates. The first is the wealth of evidence [cited in Lave, 1988] acting to supply an empirically-based critique. The second consists of the theoretical difficulties inherent in the warehouse or “toolkit” metaphor of the mind, which then remains as “the only imaginable source of continuity across situations” [ibid]. However, the idea retains a remarkable tenacity, with learning or at least

knowledge conceived of as “a set of stored competences” [Giddens, 1974]. Therefore, in most pedagogical texts, it still appears as the dominant and structuring formulation of what is perceived as the major difficulty in teaching maths. Whether it is the distance from “sums on the page” to word problems, the gap between arithmetic in the classroom and that demanded in the shop, or just the difference between counting imaginary dinosaurs and counting on a number-line, children are said to “fail to transfer skills”; what they can do, mathematically speaking, in one context, they simply seem unable to replicate in another.

Alternatives have been offered which counter the dominant belief in teaching as transmission, and also its concomitant subscription, in theoretical terms, to an enduring cognitive subject, unified and relatively self-contained across contexts, with a metaphor of skills (or competence) transfer. I have already referred to the critiques of these metaphors and the theoretical frameworks they embody [Lave & Rogoff, 1984; Lave, 1988; Lave & Wenger, 1991; and Rogoff, 1993], and Lave, in particular, has moved on to suggest an alternative framing of the pedagogical relation. Starting with the notion of all learning as situated activity, she suggests that, rather than teacher/pupil or knowledgeable/ignorant, the formulation *master/apprentice* was the one which exerted, so to speak, the most gravitational pull upon her and her colleagues in their discussions. In the subsequent report of her fascinating research, and that of others, into the area of apprenticeships, Lave proposes a notion of *legitimate peripheral participation*. The idea here is to focus upon the social dimension inevitably present in all learning. Learning is, for Lave, a form of apprenticeship, whereby the learner can be said to be a participant, marginal rather than central, in an activity or sequence of activities in which others demonstrate more expertise. The examples drawn upon by Lave and Wenger include those of learning how to be a tailor or a midwife. We can see how the apprentice/master dyad provides a crucial and structuring metaphor in their theoretical analysis.

Lave asserts that “learning is never simply a process of transfer or assimilation: learning, transformation and change are always implicated in each other” [Lave, 1991, p. 57], and certainly we witness a welcome change of focus to a perception of learning as *a dimension of a social process*. This is accompanied by the decentering of the unified cognitive subject and will hopefully presage a decisive shift in our formulations and articulations of what constitute the “problems” of teaching maths. For a start, it reinforces the emphasis on the situated nature of *all* learning.

However, such advantages should not blind us to the fact that legitimate peripheral participation is “not itself an educational form, much less a pedagogical strategy or a teaching technique. It is an analytical viewpoint on learning ...” [ibid]. The authors are themselves at pains to stress the distinction between a theory of situated learning and a recipe for pedagogical reform, “We hope that legitimate peripheral participation will shed new light on learning processes ... but this is very different from attributing a prescriptive value to the concept of legitimate peripheral

participation and from proposing ways of implementing or 'operationalizing' it for educational purposes" [ibid]. Concerned as we are here, precisely with the domain of schooling, and therefore of *teaching*, if the notion of legitimate peripheral participation is as broad as those who generated it claim [2], it is difficult to see precisely how it could be instrumental in furnishing prescriptions, or even in enabling a radical rethinking of the pedagogical relation itself. In progressive terms, "master/apprentice" may turn out to be no less inherently inegalitarian than "knowing/ignorant".

"Real" understanding, not "rote" learning

Progressive mathematics teaching has come to depend upon a notion of a "true" understanding of maths, as contrasted with a limited, "memory-based" understanding. Children, it is said, must understand what they are doing. No longer can they recite their tables, practice their sums, or rehearse the required formulae; they must understand the maths first—only later are they allowed to "learn" it. This is a gentle but deadly weapon, and one which asserts the power of the professional over the laity. Both the teacher and the parent may teach children to count to ten, but even in this respect they are not equal, for only the teacher can say if the children understand what they are doing. Why, parents ask, does it matter whether my child understands? If she can add hundreds, tens, and units perfectly, why does the teacher not let her do these sums? The teacher's answer is that she is not "ready". The appropriate stage of understanding has not yet been reached. Of course, it is the teacher, and not the parent, who is able to tell when understanding has occurred. This is a matter for *professional* judgment, and many thousands of words have been written about how difficult it is to tell if a child has *really* understood a certain concept, such as place value, since mere arithmetic competence is not sufficient to guarantee *real* understanding.

This is what Jacotot, a pedagogue of enlightenment, called "the myth of understanding". Jacotot, whose fundamental concern was that of equality in education, was concerned to explode the pedagogical reliance on understanding. "[The myth of understanding] says that memory is something other than intelligence or imagination and, in so doing, it uses an ordinary weapon against those who want to prevail over powerlessness ... (T)his is its gentle weapon: difference: *this* is not *that*, it is far from *that*, . . . Memory is not intelligence, to repeat is not to know, comparison is not reason . . . Any flour can be ground up in the mill of distinction" [Jacotot, 1829]. His point here is that the notion of understanding presupposes a separate faculty, one which, unlike a skill, may not be assessed through "performance". He argues, "There is not one faculty that records, another that understands, another that judges. The locksmith who calls the letter O "the round", and the letter L "the square" is already thinking about relations" [ibid]. Inventing, he feels, is *not* of another order to remembering.

It is the political effectiveness of the myth of understanding which disturbs me. Parents feel as if they are being told, "They do not learn as you learned, by repetition or memory, they learn by *doing*, by *experiencing*". But, the parent wonders, was not repeating, doing? Is not mem-

orising, an experience? How can the child *experience* that $2 + 5 = 7$? However, they are assured, only if pupils have had certain types of "concrete" experience, will they then understand. It is not hard to agree with those, like Jacotot, who find an enormous arrogance in the implicit claim that teachers know how children learn—like this and not like that—and that we, the teachers, can tell you, their parents, if the children have understood and are ready to learn the next thing. The claim that the maths must not only be learned, it must be understood, legitimates and validates the professionalism and the authority of the teacher. "This word alone—understanding—throws a veil over everything: understanding is what the child cannot do without the explications of the master" [3]

Everyday maths

Another theme song of progressive maths education concerns the notion of "everyday maths". This provides the justification for two aspects of progressive teaching in maths:

- the inclusion of specific algorithms and content areas in the curriculum, and
- the pedagogical strategies by which these are supposedly delivered.

Exemplifying the inclusion of specific items in the curriculum, we find that traditional written algorithms are sometimes replaced by formalised versions of procedures used in "everyday life". One example from a commonly used maths textbook may be used to illustrate this point. The book introduces children to a non-traditional method of subtraction—a "Gazupta". This involves counting on from the number being subtracted to the number it is being subtracted from. The written algorithm here involves the use of zig-zag lines to indicate this counting on procedure. The justification for this algorithm is provided by a reference to "everyday mathematics". A milkman, it is argued, gives change by counting on out loud: "Two pound fifty, and fifty pence more gives you three pounds, and another pound makes it four, and one more makes it your fiver". However, when this procedure is formalised as a written algorithm in the classroom as the "Gazupta", it becomes simply unrecognisable by the "man in the street" with whom it originated. It attains the status of an object of knowledge possessed by the maths educator and not by the parents, who remember a different "old fashioned" method of subtraction involving "hundreds, tens, and units".

The argument here depends crucially upon the recognition that for parents—and for children—the formal mathematical algorithms of the classroom have little connection with the informal and contingent mathematics of daily life. Nor are they expected to do so. The milkman's counting out of change is simply one utterance amongst many in the "continuous process of verbal (and non-verbal) communication" of a "here-and-now situation" [Voloshinov, 1929/1986] and is never treated by the participant as an abstract formal procedure. Thus the fact that the milkman counts out the change verbally in this fashion does not prevent him from using the traditional "hundreds, tens, and units" formulation which he was taught at school in any situation that requires written maths. Therefore, as a par-

ent, the milkman himself is simply unable to help when the children have difficulty with these written and often cumbersome “street maths” algorithms. This provides a clear instance of the ways in which “progressive” (e.g., using street-maths) teaching can act to disempower those practitioners with whom the practices themselves originated.

The second point here concerns the fact that the rhetoric of real-life maths incorporates the idea that “maths is all around us”. Thus, goes the argument, parents are actually doing maths with their children all the time even though they do not realise it! This means that when parents of young children, feeling uncertain about their own mathematical abilities, ask what they can do to help their child in maths, they are likely to be told, “Oh, you’re doing it all already!” The suggestion is that no extra help is necessary since, every time a child helps Mum or Dad lay the table or decorate a room, they are actually doing maths, though it may not be recognised as such. So strong is this belief that it is almost impossible in my experience to find a school-produced text for the parents of young children which does not emphasise this fact, stressing that no “formal” instruction or special help need be given.

The reality, of course, belies the advice. Certain parents are unpersuaded by the rhetoric and ignore the advice [4], overtly teaching their children maths at home, repeating the numbers in order, helping them to do simple addition sums, rehearsing tables facts, playing number track games, etc. Such assistance pays appreciable dividends on entry into either secondary or primary school. The criteria by which children’s ability (not just the stage they have reached) is assessed crucially include skills such as being able to count, recognising numbers, knowing tables facts, and so on. They do *not* include laying the table or helping decorate a room! And we have overwhelming evidence to the effect that a great deal follows from these preliminary “impressions” of children’s ability. The advice from professionals that parents are doing maths through activities such as laying the table thus serves to further advantage particular sets of parents and to marginalise others. However, it is difficult if not impossible to alter the progressive ideology that “maths is all around us” and that “parents are doing it all anyway”. We have been surprised, in IMPACT, at the extent to which these beliefs persist among teachers even in the face of contrary evidence.

Three new strategies

In the attempt to produce a new progressive pedagogy, I start with two assumptions derived from Joseph Jacotot. Firstly, knowledge is always knowledge *of* something. Just as there may be said to be no consciousness without an intentional object so, in the same sense, knowledge always has an object. When we teach, then, we are teaching *something*. This makes a great difference to our view of precisely what it means to teach.

Secondly, it is possible to make equality not something to aim at but something to start from: “What would it mean to make equality a presupposition rather than a goal, a practice rather than a reward situated in some distant future. ?” [Jacotot, 1835]. What I think we may take from Jacotot here is that children are, as the introductory quote indicates,

thinkers. They will use what we teach them, recasting what we do within their own experience. As progressive educationalists, we can afford to place more faith in the fact that children *are* thinkers, and worry less about protecting them from things for which they are not “ready”. We can assume that, as thinking beings, they will acquire street algorithms in the street and school algorithms in the school. Our job, as teachers, concerns the latter.

With these assumptions in mind I want to highlight three specific pedagogical strategies. These take us nearer to what I think parents have in mind when they send their children to school in the belief that they will be *taught* things. The strategies suggest ways of working which, although traditionally associated with a more didactic teaching style, when recontextualised within a progressive system may provide an answer to some of the criticisms mentioned earlier.

1. Repetition and attention:

One of a teacher’s functions is to help children to learn “off by heart” certain facts and knowledge. This not only applies to things like the months of the year and the sequence of natural numbers. The power conferred by having memorised a text, an algorithm, a strategy, is frequently under-estimated nowadays. In fact, from the evidence of many parents, the single biggest difference marking their own memories of school from the experience of their children is the position accorded to rote-learning. In contra-distinction to those who assert the authoritarian aspect of traditional rote-learning, I suggest that we listen to what parents are trying to express through the feedback mechanisms supplied by projects such as IMPACT. Recontextualised within a more progressive classroom in which the purpose of what is being done is made visible to children, and who are encouraged to express both opinions and feelings, these rote learning techniques can have a liberating function. Repeating and memorising not only number facts, but procedures, arrays, and formulae as well as prayers, poems, stories, and historical events, in a remarkable fashion *empowers* the learner. It succeeds in this in two ways.

Firstly, through focussing attention on the object of knowledge. Those of us who, like many parents, remember learning many texts and algorithms “by heart” will bear witness to the ways in which not only was attention focussed, but also the words and stories (an algorithm can be a sort of narrative) have stayed with us all our lives. Examples of this are easy to come by when interviewing parents:

“After all these years, if I say the first three words of a poem or prayer, the rest still comes flooding back.”

“I still find my way around maps and places using Never Eat Shredded Wheat to remember the points of the compass!”

“I still do the nine times table on my fingers—I’ve no idea why it works but I never forget it!”

“Thirty days hath September, April, June, and November ... I still think of it when I have to work out how many days in a particular month.”

and there was the parent who told us that she still remembered how to do long multiplication by a procedure which began, "Lay an egg!", i.e., place a nought in the units column!

Many parents have affirmed their belief that such memorising pays rich dividends. Not only is the memory trained—several parents commented how hard their teenage children find it to memorise since they have never been required to focus their attention in this way before—but it can inform and empower our subsequent learning

Secondly, anyone with the will to do so can learn a text. "What is needed? An absolute attention for seeing and seeing again, for saying and repeating" [Jacatot, 1835]. The child who cannot yet read will repeat the prayer, the song, the football teams in the first division. The words of current pop songs are often engraved in the minds of seemingly intransigent teenage learners. It is this unconditional attention given to what is being studied, to the object of knowledge, which is crucial, which constructs between teacher and learner a "bridge of communication" in the materiality of that object. All that is necessary is an unconditional attention given to the text. The teacher's role is minimal—she verifies that the work has been done with attention: "Don't try to fool me or fool yourself. Is that really what you saw?" [ibid].

2. Narratives and stories:

Stories are a powerful mechanism—probably the most powerful—by which we *make sense of experience*. The act of constructing a narrative at once creates the essential distance, spatial and temporal, from the immediate. It orders the unvoiced chaos of perception and enables the teller to "fix" what is told, to remove it from the eternal present of experience and to create an object which, in becoming "past", endures for the "future". Stories—our own or other people's—present the learner with an "external" view of the object of knowledge. For this reason Lave and her colleagues have pointed out the crucial role of stories in apprenticeships: "In the ways in which the (learner's) stories are treated, elaborated, ignored, taken up, characterized as typical, and so on, the collaborative work of deciding on what to do in the present case is done. These stories, then, are packages of situated knowledge ..." [Jordan, quoted in Lave, 1989]. Stories, in the words of Walter Benjamin, enable us to "re-cast our own experience as that of others" [Benjamin, 1932]

Stories enable the learner to make decisions and to generate categories. When I move from "six take away two" to "a great big crocodile comes and gobbles up two of my sweets" I provide the children with a part in the action. Jacatot recognised both the definitively human aspect of story-telling: the human being knows himself as an animal "who make words, figures, and comparisons, to tell the story of what he thinks to those like him ..." and their pedagogical value: "In the act of speaking, man doesn't transmit his knowledge, he translates, and invites others to do the same." Stories can assist this process of translation, which is fundamentally what "understanding" consists in. The stories children tell are their way of making sense

3. Giving instruction:

This is the strategy most aligned with traditional teaching,

and perhaps the one which has come in for most adverse criticism over the last twenty years. It is also that set of practices which parents think of as quintessentially teaching. It is important to be specific about precisely what type of strategy is being referred to here, and this is easiest to accomplish by means of some examples. Instruction, or the provision of procedures, is the practice which occurs when someone:

- gives a recipe
- gives a set of directions
- shows the way to move along a numbered track
- explains how to do a long multiplication sum
- explains the rules of *Monopoly*
- demonstrates how to write a series of joined-up letters
- shows how to put on a life jacket
- gives the procedure for crossing the road safely

To instruct children is to give them a series of "now do this, then do that" procedures. *It is also to credit them with their own intelligence*. It is to assume that, with our help, they will utilize these procedures as and when appropriate, that they will have the intelligence not only to adopt but to adapt them, phrasing them in their own terms and for their own reasons, articulating them (in all senses of the word) in their own contexts; in short, writing these instructions into their own stories. It is also to refuse to participate in the fiction that children must invent all their own strategies. A set of instructions is no more a strait-jacket than a story or a game. Having followed and then grasped a procedure, children can modify it. Given the space and the encouragement, they can play with it and situate it, making sense of it in relation to other pieces of knowledge or algorithms. The much-talked-of *understanding* will either come as they use the procedure, or later on, or even not at all because they never have the need to relate that particular algorithm to any other aspects of the subject. To understand, in this sense, is to translate, to incorporate what one has been given into one's own story

These three strategies represent the beginnings of a path which will allow us to reappropriate progressive education. Education should, I believe, empower the learner—providing vocabularies, information, memories, behavioural and rhetorical strategies, and thus giving access to domains previously closed or found intimidating. At the same time the learner must be valued. We should, in Jacatot's terms, presume his or her intelligence instead of making it (in the guise of "understanding") the goal to be sought. Many of the so-called progressive educational methods in the last three decades have been more authoritarian, and even patronising in their practice, than empowering. Teachers have felt that they should not give the children three-digit numbers or teach a particular algorithm because the children were not "ready". An emphasis on rote learning has often been assumed to be didactic and authoritarian. I am arguing that it can have a great purpose and be emancipatory in both its practice (almost any child can do it) and in its effects (once attention has been focussed, the resulting memory is another resource to be utilised)

Children (and adult) learners often need algorithms. Sometimes these procedures are relatively simple and can

be conveyed through a set of instructions. There seems no particular virtue in placing such a stress on understanding the provenance or the rationale for these at the moment of teaching them. Later on, the “penny may drop” (“So that’s why we put a nought there!”), or we, as teachers, may have to explicitly address the reasoning behind getting from step A to step B in order to teach a further set of instructions. But often, especially in maths, this is not the case. The parents who can do subtraction and division, but who do not, in the teacher’s terms, “understand” what they are doing [5], can still *do* their subtraction and their division. They can utilise these procedures as and when they wish.

I am not suggesting here that all learning is of this order. Clearly, some procedures are extremely complex and may be said to be “chronically embedded” [6] in particular contextual configurations. This is where the metaphor of an apprentice/master relation becomes much more pertinent. Such embedded sets of strategy and skill are “mastered” in complex ways through a process of “legitimate participation”. The pedagogical strategies outlined above are not intended to suggest a theory of learning. They constitute quite precisely an attempt to turn our attention towards the processes of “teaching” instead of those of “learning”.

An important part of redefining progressive education is the recognition and restatement of some of the other aspects of teaching which motivated progressive educationalists in the 1960s. The question of valuing the children as learners is crucial. I have quoted the suggestion that we should make equality a presumption not a goal and, in many respects, this is precisely what several writers [Neill, 1964; Holt, 1964, 1967, 1971] were getting at in their injunctions that classroom teachers should focus on success rather than failure, should attempt to make children feel good about what they are learning, that they should provide them with resources, rhetorical and actual, for admitting to being “stuck” and asking for help. Furthermore the emphasis on allowing children much more say in what they are doing was also motivated by a desire to alter patterns of control within the classroom. The move to cheer the classroom environment, to display children’s work, to provide toys and games, and to incorporate a ludic quality into the schooling process, was one which has produced a large number of lively and bright classrooms. All of these, and other, aspects of what came to be called progressive education, are cardinal to our purpose here. We envisage cheerful and inspiring classrooms, where children are valued, where success is praised and “being stuck” is allowed, where self-esteem is fostered. The shifts in education which have brought about such classrooms, are both appreciated and valued by parents. The three strategies highlighted above complement rather than contradict these approaches.

How do these three strategies imply that parents will participate more in their children’s education? First, they accord with what parents already do. As one teacher said, “It would be nice to know that we and the parents were pulling in the same direction instead of feeling that we had constantly to convert them to our way of thinking.” Secondly, many teachers are not so much wedded to

opposing the strategies as fearful of the traditional-sounding implications of these. It is the direction of the “progressive/traditional” cut which requires realignment here, so that progressive teachers can incorporate these strategies into a pedagogy which allows for creativity, spontaneity, and difference.

Parents gravitate to the familiar in schooling. This does not mean that they want to return to a so-called golden age and to have an elitist education system. Neither does it involve abandoning the attempts to give children space and time to re-cast what we, as teachers, provide within their own lives and stories. However, we can instruct and we can require children to memorise, as their parents and many of us were taught. Including these strategies in our teaching does not mean a return to some authoritarian and didactic pedagogical mode. Rather, it means that, as progressive educationalists, we must have faith in children as authors of their own stories, as speakers with their own voices, and as *thinkers*.

Notes

[1] See the writings of Ivan Illich (*Deschooling society*) and Paulo Freire (*Pedagogy of the oppressed*) for a further explication of alternative readings of the pedagogical relation to counter the traditional “knowledgeable/ignorant”.

[2] I have some difficulty with the notion of legitimate peripheral participation if it is genuinely to be conceived as virtually all-encompassing: “We should emphasize that legitimate peripheral participation is not itself an educational form, much less a pedagogical strategy or a teaching technique. It is an analytical viewpoint on learning. Legitimate peripheral participation takes place no matter which educational form provides a context for learning, or whether there is any intentional educational form at all. Indeed, this viewpoint makes a fundamental distinction between learning and intentional instruction. Such decoupling does not deny that learning can take place where there is teaching, but does not take intentional instruction to be in itself the source or cause of learning, and thus does not blunt the claim that what gets learned is problematic with respect to what is taught” [p. 41]. If we are to take this passage seriously, it seems to me that the implication is that learning is always taking place although it may not be possible to say what is being learned. Whilst this may be true—certainly many teachers and parents would agree that it was so for children—it is exceedingly unhelpful as a step towards theorising the pedagogical relation, or indeed, that “dimension of the social process” in which Jean Lave has herself expressed such a sustained interest.

[3] The writer who has recently explicated Jacotot’s ideas is Jacques Rancière, the author of the leftist critique of Althusser, *La leçon d’Althusser* [1974] and co-author with Althusser of *Lire le capital* [1965]. This quotation comes from *Le Maître ignorant* [1987] trans. as *The ignorant schoolmaster* by Kristin Ross.

[4] It is obviously not true that “middle class” parents “teach” their children in the context of the home whilst “working class” parents do not. The issue of what constitutes social class is complex and, in late twentieth century Western cities, riven by cross-cultural differences and non-income factors, it is almost impossible to use the classical categories of class. [See Bourdieu, 1977; Giddens, 1973]. However, certain parents, perhaps because they possess a confidence granted them by their own education, either in school or after leaving school, do take the education of their children more into their own hands, “teaching” them their tables, number facts, and often instructing them in the use of specific algorithms or procedures. This has demonstrable and well-documented advantages.

[5] This perceived lack of understanding usually refers to the learners’ inability to provide adequate mathematical reasons for getting from one step to the next. Thus a typical assessment task, designed to find out if children do “understand”, will attempt to tease out *why* the person is moving from step A to step B. “Why do you put a nought there?” The answer “because that’s how it works!” or “because the teacher says so!” will be taken as evidence of a lack of relevant understanding. However,

there is no evidence that the parent, or child, who is not able to provide the required type of account here is necessarily any less able to perform the algorithm

[6] A phrase used in another context by Jeff Vass [The dominance of structure in post-structural critiques of mathematics education, 1993]

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We have had in all history no experience of any society in which a large proportion of the members could take a good, hard look at life without breaking and running. The examined life has always been pretty well confined to a privileged class. Liberal thought has held that this confinement was deliberate: the members of the privileged class knew that knowledge was power, and excluded those subordinate to them so as to maintain the existing inequities. Liberal thought was here based on sound observation. But it was inclined to overlook certain converse processes.

The most important privilege of a privileged class is freedom from some of the vicissitudes of fortune. Its members are running the show and can divert much that is disagreeable elsewhere. It is often easier, therefore, for them to be honest with themselves about what they see and what it portends. They can afford to be, they have to be if they are not to lose control, and control is important to them. Ruling classes differ, of course, in the degree to which they understand this and can bear to go on understanding it. De Tocqueville, standing at the point of no return in history, noticed that the *ancien régime français* had forgotten it, and that the [American] had not learned it. Most elites do forget it, and become convinced that destiny, rather than equestrian skill, is keeping them in the saddle.

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