Why is it that of all the sciences it is those that study human behaviour that seem least human about it? You often get the feeling that the objects studied hardly belong to the same species as those studying them; they would be unlikely to share any jokes about their common lot. Warnock takes us up the garden path towards a little theatre in which he seeks to present a little play, about the two prevailing themes in contemporary talk about education; he brings on some pleasant puppet-like figures to act it out (symbolically, as puppets do); he seeks a comic ending. Why comic? Because that is the realistic way to reconcile differences where human beings are concerned, including differences of theme. And then, to our distinct unease, we find that we have come rather too willingly up that garden path ourselves; that isn't really a puppet up there.

Development and liberation: words to conjure with in education today. You can hardly be against either one. There is some question, however, whether when we get down to cases you can support both.

To help us examine the question of the relation between these two traditions, let us set the following scene. A bare, dark stage. The lights come up. Appearing, it seems, out of nowhere, standing now stage centre with indeterminate expression, we discover a character identified in the playbill as The Illiterate. From stage left, enter a prosperous-looking gentleman, in early middle-age, carrying a butterfly net. The playbill identifies this character as Jean Piaget (1). From stage right, enter another gentleman, dusting himself off, somewhat out of breath, carrying a battered suitcase with a Buenos Aires sticker on it. Using the playbill again, we identify this character as Paolo Friere (2). The two characters approach The
Illiterate, arriving on either side at about the same time. What happens?

This scene might be now developed in a large number of ways, absurdist ways among them. But I want to specify the following: first, that both Friere and Piaget will take a professional stance toward The Illiterate, a stance that the followers of the historical Friere and Piaget would recognize as being the kind of stance these men might take as professionals; and second, that as dramatists we aim for a comic ending, an ending, that is, in which we see that these two professionals can be reconciled - not a tragic or simply pathetic ending, in which, for example, The Illiterate goes mad and dies, Friere is again exiled, and Piaget dies at the hands of a passing sociopath.

Let us consider the possibilities for this drama by asking three questions and answering them, for now, on a somewhat abstract and hypothetical level. The questions are

1. What would each character assume, and what would each want to know, in his professional capacity, about The Illiterate?
2. How would each attempt to discover what it was he wanted to know?
3. Where would each be wanting The Illiterate to get to?

Piaget speaks

Let us allow Piaget to begin with a monologue, addressed to the audience. He might step forward and speak as follows:

"You know, this is the least bit awkward. They've asked me here to consult about this subject who is, they tell me, illiterate. But I've been arguing for a while now that in education we have tended to overrate the importance of language learning, let alone the simple skills of transcribing language. Much more interesting and powerful is the development of cognitive structures of a more general nature. Without such development, it is futile, even cruel, to expect and demand certain kinds of language performance, and among those certainly is the literate kind.

"Well, I shall assume, as one seems to be able to do with all organisms, that this subject here is capable of assimilation and accommodation. The question then is what specific forms of cognition these processes have thus far produced, or if you will, what stage has been attained. How do I discover that? In theory, simple enough. I simply try to think of ways of discovering what kinds of cognitive tasks the normal subject cannot do. You see, incompletely developed subjects can't do certain things - can't "conserve" quantity when one dimension of volume is changed. The important thing is not the specific task
that the subject cannot perform, but its logico-mathematical structure. What I'll be looking for here, then, is the logico-mathematical structure that best describes this particular subject's way of organizing knowledge.

"Let's see. I might ask the subject to do something like the following. I could seat the subject before a model of three mountains and ask the subject to choose cards that show how the scene would appear to someone viewing the mountains from another vantage. Younger children, you know, regularly choose the card that imitates their own view. They cannot 'de-centre' so as to adopt the point of view of another.

"I could do that. But the thing I find most awkward about this situation is that they seem to want me to do something with this subject. I mean, I can tell you where I think the subject will get to if development is not interrupted: the 'decentred' stage of formal relations, where it is possible for the subject to entertain hypotheses, deduce consequences and use these deductions to put the hypotheses to the test. But since I cannot 'teach' the cognitive development necessary to get to this point - it is developed through action, not 'learned' in the narrow sense - I suppose the best I could do would be to devise tasks for The Illiterate that would make manifest the untoward consequences of not decentring, and thus motivate his decentration.

"But I'm a scientist, not a pedagogue. I'm interested in accumulating knowledge about cognitive structures; application is for others. And if they won't let me redefine my situation and make The Illiterate into something more useful to my scientific purposes, I won't even be in their stupid play. They won't let me, so I'm leaving now. Don't tell anyone..."

Now this characterization of Piaget's address to The Illiterate and to the dramatic situation before us brings our play to the verge either of farce or of collapse, and we can't have either. We want comedy. For comedy we need our protagonists to commit themselves to some position with respect to The Illiterate and that position must not be so diluted or silly or distant as to cause us to be overwhelmed by irony. We need to find for Piaget a position that is both serious and plausible, and one in which he is committed to doing something about the situation in which he finds himself.

Two ghostly visitations

To achieve this I suggest using a device that was used by Charles Dickens to redeem, dramatically and morally, his theretofore arch-villain Ebeneezer Scrooge: the device of a ghostly visitation. Here we will restrict ourselves to a visitation from the future, but we will make up for omitting past and present by having two ghosts of Development Future. One ghost would appear in the form of Margaret
Donaldson, presented as the author of what will be an important critique of Piaget's work (3). Donaldson, speaking with a slight Scottish brogue, will tell Piaget about the results of an experiment to be conducted by a colleague of hers named Martin Hughes. In this experiment Hughes will pose children a problem that is the same in terms of logical structure as the three mountain problem, but he will make special efforts to present it in a way that makes sense to the children. Specifically, he will present the children with a situation in which they are asked to say in which circumstances a policeman would be able to see a child who was trying to hide from him. Piaget will be shown children in this experiment giving the right answer - decentring, if you will - at a very high rate. Thus, Donaldson will suggest it is possible that it is the experimenter, Piaget who failed to decentre in the earlier experiments by failing to appreciate the ways in which the task set the children might simply not make sense to them, or not be understood by them.

Exit Donaldson, humming "Ye'll tak the high road and I'll tak the low road..."

A second ghost will now enter, and introduce himself as Urie Bronfenbrenner, an American psychologist. Bronfenbrenner will unceremoniously twit Piaget with the tendency of Piaget's developmental models to employ a scientific lens that restricts, darkens, and even blinds the researcher's vision of environmental obstacles and opportunities and of the remarkable potential of human beings to respond constructively to an ecologically compatible milieu once it is made available. "As a result," he will go on to say, "human capacities and strengths tend to be underestimated." He will go on to suggest forcefully that "the social significance of the setting for research subjects has to be established before their behaviour can be understood and its implications for development determined." To do this, he will argue, experiments should strive for "ecological validity". That is, they should try to take account of the experience of the subject, of the subject's role, and of relations among context, if they are to hope to be able to make secure findings about development. Finally, Bronfenbrenner will allude darkly to those researchers like Piaget who seek only to explain how the child came to be what he is, assuming that the question of how the child can become what he not yet is will take care of itself (4).

Piaget will appear to be shaken by these visitations. But not to his foundations. Nothing either of these ghosts has said would invalidate his basic assumptions about development, nor have they done more than urge an expansion of his experimental methodology. Furthermore, he will reflect, if these two were so great they'd be main characters.
Friere on stage

While Piaget has been addressing the audience and experiencing his ghostly visitation, Friere has been chatting with The Illiterate, and drawing pictures. He has thus been developing a basis for his literacy education, which will begin with Friere showing The Illiterate these pictures of what purports to be The Illiterate's situation, developing from these a list of "key words" which focus the experience of The Illiterate, and which will be used to teach the concepts and skills necessary to literacy.

Bronfenbrenner, lingering on stage, will smile a little smugly at this evidence of Friere's concern with ecological validity. As Friere's activities continue, however, the smile will fade; in fact Bronfenbrenner will begin to fade, as it becomes clear that Friere has taken yet another step, one which crucially distinguishes his aims from those recommended by Bronfenbrenner. It will become clear that one of Friere's purposes is to develop in The Illiterate a sense of agency in the control of The Illiterate's life (perhaps by pointing out how many of the things in the pictured scenes have been built by The Illiterate and The Illiterate's fellows). And it will appear further that Friere accepts, perhaps welcomes, the possibility that in his relationship to his student, he, the teacher, might be transformed, not just the student. Bronfenbrenner will have urged Piaget to consider the importance of the "transforming experiment", but Friere will be seen to contemplate, as Bronfenbrenner does not, the possibility that the experimenter, and not just the subject, might be transformed. This suggestion challenges the scientific stance more seriously than Bronfenbrenner would, and he will at this point fade from view, shaking his ghostly head.

While The Illiterate is doing a writing assignment, Friere will come down stage and describe to the audience the goal of his interaction with The Illiterate. Clearly he will not describe it simply in terms of acquiring the skills of literacy, nor will he imagine it in terms of acquiring a "purely" cognitive capacity to represent and manipulate the world in terms of formal relations. "Why, the way Piaget describes it," Friere will say, looking at Piaget askance, "people at the highest stage of their development would resemble nothing so much as a bunch of scientists, people rather like Piaget himself. Presumably they would all need then to be provided with a lab, access to subjects, and a grant."

We should not imagine our goal, Friere will go on to say, only in terms of our ability to manipulate the world symbolically. Our goal must be to give The Illiterate both the ability to transform the objective conditions of his life, and the motive, the imagination to do so. This means, he will say, that we must help The Illiterate become "conscientized."
Conflicts and resolutions

At the use of this unfortunate word, Piaget will gain the courage to raise two important objections. First, he will accuse Friere of capitulating to his students, denying his professional authority. Friere can answer that his method rather acknowledges the true conditions of authority, that it avoids the common confusion of power with authority. Second, Piaget will charge that Friere is simply indoctrinating students, probably with Marxist versions of the objective conditions of their existence, rather than liberating them to discover and live through these conditions for themselves. Friere here could answer that this is in fact a danger to be guarded against, but that Piaget needn't think, just because he imagines his goal in terms of "unreal" formal relations, that he is indoctrinating his students any the less. He is simply less aware of the ways in which he is doing so. And to the extent that he is not creating the conditions in which his students can be agents in their worlds, and in his world, he is creating technocratic slaves, not free citizens, no matter what their formal abilities are.

Now, perhaps, a pregnant moment - while each of our characters ponders the next move. In the hope of a comic ending, we might have Piaget realize how Friere could help him maintain a special sensitivity to the requirements of action, since action is what Piaget again and again has seen as the key to development. He might see that Friere could helpfully push him toward an improved awareness of context, and of the actual experience of his subjects in their own worlds. He might wonder if Friere could help him do his future experiments not as a bureaucrat does, but as a lover or a friend might.

Friere might, after all, appreciate the special power and pleasure of the scientific knowledge that Piaget places at the apex of his life. He might appreciate the special usefulness of such knowledge in affecting the "objective conditions" of life in certain situations. He might appreciate Piaget's ingenious capacity to read his subjects' responses in terms of their xstructure. However, he would probably also expect that Piaget would be a much harder nut to crack than would The Illiterate when it came to becoming aware of the political context and motives of his work.

And The Illiterate? It is time to face a crucial omission in our account of this drama. We have not said how we would cast this character. One wonders how readers who have come this far have been casting him. As a him? Or as a her? Young or old? Brazilian? A Muhzik? (5) As what the Americans call a Basic Writer? However we have done it, we have had to go some way toward taking this category - The Illiterate - beyond caricature to character, making an abstraction into something recognizably human.

A radical step is required if all our protagonists are to
learn to see each other as people.

We would not exempt The Illiterate from our demands. What The Illiterate might give us is the same thing we would have to be brave and free enough to seek to give him: a proper name, and all that having a proper name implies.

NOTES

1. The historical Jean Piaget was, as it happens, the proponent, one might even say the father, of a kind of developmental study that is increasingly influential in education today. By the time this Piaget reached early middle-age, he had published The Language and Thought of the Child. Yet to come were a great many other publications. Though the historical Piaget was early trained as a zoologist, he did not, as far as we know, collect butterflies. Vladimir Nabokov, who lived in Switzerland but was not himself Swiss, is the one who collected butterflies.  

2. The historical Friere, still in history, might have been out of breath at several points in his life, since he has been expelled from two countries by the political authorities. He has not, however, as far as we know, had to take it literally on the lam. Nor do we know that he has ever been to Argentina, where he might have met that extraordinary man of letters Jorge Luis Borges. In each case then, we have reason to question whether the characters in our drama should be precisely identified with certain historical characters of the same name. It is also clear that we cannot appropriately rebut any of the arguments put forward by these two characters, if we are inclined to try to rebut them, simply on the ground that the real Piaget or Friere wouldn't have said (or done) that. 

3. An historical Margaret Donaldson has published such a critique: Children's Minds. 

4. An historical Urie Bronfenbrenner has written a book called The Ecology of Human Development, which offers arguments remarkably similar to those made by our character here. See especially pp.7, 128. 

5. Muhzik is the Russian word for peasant. Tolstoy's remarkable experiments in education were conducted among the Muhzikis on his estates. See Tolstoy on Education.
REFERENCES

Tolstoy, Leo. Tolstoy on Education. Chapter 5, pp.222-247. Associated University Presses, Inc., 1982. ("Should We Teach The Peasant Children to Write, or Should They Teach Us?")

John Warnock, Associate Professor of English and Law at the University of Wyoming, has directed university writing programs and state writing projects for school teachers in Wyoming since 1974. A recent publication is a critical bibliographical essay, "The Writing Process" in Research in Composition and Rhetoric: A Bibliographic Sourcebook, Greenwood Press, forthcoming. In summer, 1984, he will direct a Summer Seminar for College Teachers, sponsored by the National Endowment for the Humanities, entitled "The Writing Process: A Humanistic View".