My self-as-philosopher and my self-as-scientist meet to do research in the classroom: Some Davidsonian notes on the philosophy of educational research

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Abstract

In this paper I argue that it is both feasible and desirable to have an organised for of inquiry into pedagogical issues of a normative —about what ought to be done— and analytic —about the meaning of pedagogical concepts— carried out in close contact with classroom and classroom-related situations, that makes use of ideas obtained in an empirical way. On the side of desirability, the fact that this form of inquiry depends on the particularities of the local situations would help take them into account when deciding on what pedagogical actions or strategies to follow in order to improve pedagogical practice. It contextualises pedagogical decisions. On the side of feasibility for normative issues, an analysis based on Donald Davidson's philosophy of language shows that there is nothing that compels empirical observations to be descriptive and to not be normative. And normative occasional beliefs acquired empirically can serve as a general confrontation or testing field for ideas about the justification of pedagogical actions or strategies. Analytic issues, as a consequence of giving up the analytic-synthetic distinction, can also be explored by means of occasional beliefs acquired empirically, when confronted with the implications of the definition of any pedagogical concept.

Keywords

Empirical observation, normative issues, analytic issues, educational research, holism

1. Introduction: What do we need to know, in order to improve pedagogical practice?

When it comes to the improvement of pedagogical practice, people from a number of different disciplines contribute in their own different and sometimes contradictory ways. Scientific educational researchers and philosophers of education are two such different groups, traditionally contributing along different pedagogical dimensions. These different contributions are also related to different forms of inquiry. This way, a large part of pedagogical research has been concerned with describing what goes on in classroom situations, and with understanding how they could be changed in some previously defined, desired direction. Such research can usually be seen as trying to answer questions of the form "*what works?*" To this end, empirical classroom observations —observations made in the classroom obtained in more or less formal or systematic ways, in either natural or experimental settings— have been used as a central mechanism by researchers of all tendencies, both to describe classroom realities, and to understand how they could be improved[1]. Most usually, given the practical purposes surrounding the field of pedagogy, this understanding will help teachers better manoeuvre their way through classroom

[1] In the literature, the expression "what works?" has been very much associated with experimental or quasi-experimental types of research (Slavin, 2002; Olson, 2004). Nevertheless, I think that this expression also describes appropriately what is important for other alternative approaches such as action research, in which teachers' and administrators' learning about what works may be a main result sought after —even if it is not translated into formal generalising theories.

situations, either strongly predicting or simply getting some mild sense of anticipation of the possible results of implementing some pedagogical strategy in some particular educational context.

Taken in this predictive sense, "what works?" questions are *causal questions*. A proposed canonic form of the propositions that help answer them is "if (pedagogical action or strategy) ***X*** is applied, in (context) ***Z***, then it is likely that (result) ***Y*** will be produced." As noted, ***X*** usually refers to a pedagogical action or strategy. ***Y*** is the description of an expected result in terms of one or more variables. ***Z*** limits the possible contexts in which the causal relation between ***X*** and ***Y*** applies, understanding "context" in a broad sense that includes the actors' characteristics. "What works?" questions, I have no doubt, must be pursued, even if the answers we produce are only locally strong, but weak for generalisations. If we —teachers, educational administrators, legislators, or whoever— can better anticipate the likely consequences of implementing some pedagogical strategies, in a given context, we would be able to take more informed decisions as to whether we should actually implement them and how.

Nevertheless, let us notice that stepping into action and going on to implement ***X*** in context ***Z*** would be justified only if at least two additional conditions are met: (1) That what is correct, what ought to be done, is to attempt to obtain ***Y***; and (2) that ***X***, ***Y*** and ***Z*** are all three rightly understood. That is, the path that leads from some pedagogical causal understanding to pedagogical practice, goes through these two assumptions: that *what* ***X***, ***Y*** *and* ***Z*** *consist in*, and the *desirability of* ***Y***, are already known. Let me call the dimension involved in the first of these assumptions, *analytic*, and the dimension involved in the second one, *ethical* or *normative*. Now, although technocrats and many politicians may take these two assumptions for granted and think they are not really an issue, it is common to think that inquiry into them is the job of philosophers of education. But activities of philosophers of education may be very different from those of scientific educational researchers. The latter, trying to obtain explanations about what works and what does not work in the attempt to produce some specific results, will visit the classrooms and observe by various means what is happening there. The former will very probably sit on their office armchairs to read, write, and discuss with others about the meaning and worth of possible pedagogical strategies, outcomes, and contexts. But why is there such a difference in forms of inquiry? Is it a purely practical issue? That is, is it that solid conclusions are arrived at *more easily* through some inquiry processes than others, depending on the type of question? Or is there is an essential epistemological difference between causal and descriptive issues on the one hand, and normative or analytic issues on the other? And is this separation in forms of inquiry justified? Can empirical observation be brought to help on normative and analytic issues such as those usually engaged by philosopher of education? The relation between educational research, science, philosophy, and empirical observations, has been hotly debated as part of the debates about methods and approaches for research that could help improve pedagogical practice (see Kaestle, 1993; Hargreaves, 1997; Thomas, 1997; Slavin, 2002; Maxwell, 2004; Olson, 2004; and Phillips, 2005).

In this paper, however, I will attempt a different strategy, and focus on a somewhat different issue as compared to the discussions in the literature. By examining the notion of *empirical observation*, and separating myself from current accounts of it, I will attempt to show that pedagogical inquiry in close contact with classroom situations is feasible as well as desirable for addressing questions of a normative or analytic nature, as well as for the more traditional causal ones. My account of what "inquiry in close contact with classroom situations" means is, however, somehow radical: it suggests that we can have empirical observations of a

normative kind as well as of a descriptive kind. It also suggests that all those empirical observations can be inputs for addressing analytic questions. In order to develop my argument in section 2 I will first provide an account of what an empirical observation is, for the case in particular of descriptive observations —those that say something about the way the world *is*. For this explanation I will strongly follow Donald Davidson's philosophy of language, and in particular his arguments and conclusions about the relation between world and language. In section 3 I will go on to argue that normative occasional beliefs acquired empirically can also be of help when addressing normative questions, even if they should not be taken to constitute ultimate testing criteria. They help take into account the particularities of the local pedagogical situation when assessing what ought to be done. In section 4 I deal with the other kind of question that this paper is about: analytic. There, I explain how issues about the meanings of expressions involved in pedagogical proposals can be assessed and explored, by means of empirical observations. Finally, in section 5 I present some final reflections about the significance of these conclusions.

2. "Let's look and see": On empirical research about the descriptive and the causal

As mentioned above, empirical observations have been of central importance for the purposes of getting to know better what our pedagogical situations are like, and what we could do in order to obtain some desired results in them. Their importance lies somehow in their strength for putting to the test other hypothetical beliefs that we may have, in many cases of a causal nature. "Now there'll be more active students raising their hands and willing to participate in our classrooms", some head teacher may say. "I don't think so", replies the skeptic parent. "Let's look and see." Then they can set up some observation process to be carried out, and so head teacher and skeptic parent may be able to settle their dispute. Of course, we may and usually have uncertainty about many aspects, such as those about what exactly causes the students' behaviour, and so on. But we frequently use accordance with empirical observations as the ultimate testing criterion for simple descriptive assertions, even if we are reminded that, as Quine's (1969) theses have shown, sometimes they cannot take this role. In this section, based mainly on Donald Davidson's philosophy of language, I will provide now an account of what it is to make empirical observations of a descriptive nature, such as those that scientific educational researchers obtain in order to improve their understanding of causal and general descriptive pedagogical issues[2].

I start with Quine's well-known rejection of the analytic-synthetic distinction. Adapting the Kantian idea, it has been said that there is a type of sentences —analytic sentences— which would be true solely by virtue of the meaning of the words that constitute them, independently of "the way the world is". A candidate for an analytic sentence would be "all triangles have three sides". Supposedly, it is part of the meaning of "triangle", to have three sides. On the contrary, the truth value of synthetic sentences would not only depend on the meanings involved in them, but also on the way the world is. A candidate for a synthetic sentence would be "currently, Haiti is the poorest of all Latin-American countries". Whether this sentence is true or not would depend on whether in the world, there is a country called Haiti, and it is one of the Latin-American countries, and among them it actually is the poorest one. The analytic-synthetic distinction would justify in a very natural way the

[2] I will not, however, deal with the much debated and very difficult issue of how we can derive causal conclusions out of empirical observations. That is beyond the scope of this paper.

separation between on the one hand the activities of educational scientists, doing fieldwork and observing the way the pedagogical world is; and on the other hand the activities of philosophers of education, reflecting in their offices about the meanings of pedagogical concepts. Logical analysis would be the tool used by the latter, and philosophy would be analytic philosophy. If this is true and philosophers deal with issues that do not depend on the way the world is, then there is no need for them to "look and see" what happens in the classrooms. For Quine, nevertheless, a proper distinction cannot be drawn between analytic and synthetic sentences. For him, all sentences have a connection with the world —an *empirical content*— and therefore empirical observation could in principle have a logical impact on any of the sentences we presently hold true (Quine, 1953). This would even apply to our belief that all triangles have three sides! However, for him the connections between the world and our beliefs are never logically compelling, and there would always be multiple possibilities of adjusting our system of beliefs in order to accommodate for an unexpected (empirical) observation. In terms of pedagogical research, this would mean that there is no essential philosophical justification for the fact that philosophers have hardly anything to do with empirical research. In Quine's words, the attack on the analytic-synthetic distinction brings about "a blurring of the supposed boundary between speculative metaphysics and natural science" (1953, p.20; see also Bridges, 2003, p.28).

Even though Davidson's ideas are derived from Quine's, they are much more radical in giving a much more holistic view of meaning, knowledge and interpretation. Let us notice that by arguing that all sentences have an empirical content, Quine presupposed the existence of a *logical* relation between the world outside us, or perhaps our surface sensory irritations, on the one hand, and our ideas on the other. There is still an extralinguistic judge of our ideas' truth value, even if it cannot judge them one by one and with the precision required to logically compel us into acquiring some particular belief. Davidson's revision of Quine, however, will show that the relation between extralinguistic objects or events, and our ideas, cannot be logical, and instead must be causal. As Davidson remarks, "nothing, however, no *thing*, makes sentences and theories true: not experience, not surface irritations, not the world, can make a sentence true" (1974, p.194; see also 1990). That is, our contact with the world, and the sensations produced in that contact, *cause* that we have certain ideas, that we hold certain propositions as true, but it cannot *confirm* or *refute* any of them: "No doubt meaning and knowledge depend on experience, and experience ultimately on sensation. But this is the 'depend' of causality, not of evidence or justification" (Davidson, 1988, pp.313-314). Wilfrid Sellars, some years before, had reached the similar conclusion that all that there is about the logical justification for any one of our beliefs must be located in what he called the *logical space of reasons* (Sellars, 1956; see also Rorty, 1979).

Why is it, then, that accordance with empirical observations is so frequently taken as the criteria against which some other of our ideas are tested, not only in research but also in everyday life? Simply, *we have learned* that beliefs we acquire by means of empirical observation are usually very reliable. But this reliability comes in their general agreement with the vast majority of other beliefs we hold, and particularly those we hold with a lot of certainty. Or, better, *we have learned* to distinguish, out of those beliefs we might acquire caused by a direct contact with the world, those which are reliable from those which are not. And we have reserved for the first, the expression "empirical observation". Typically, we deem reliable beliefs that are descriptive, and refer to objects which are in direct contact with our senses under normal conditions. Other beliefs we might acquire empirically are usually judged to not be so trustworhty, and therefore in our moments of reasonability we tend to either dismiss them or take them as uncertain —to various degrees— intuitions. Within this framework, to "look and see" must be understood as putting oneself in a situation with

reliable observational conditions, with direct contact between our senses and the objects our beliefs will be about, and *with the appropriate disposition* to acquire some beliefs about the particular events taking place then and there —that we may call, with Quine, *occasional*. Interestingly, while some observer may be able to acquire some reliable beliefs this way, by looking and seeing, another may be uncapable of acquiring those same beliefs in a straightforward manner. In this sense we could say that there is a built capacity for observation, which depends at least on previous training and knowledge. Additionally, when looking and seeing one has to make oneself be in a disposition to acquire particular beliefs; one has, so to speak, to point one's ears and turn one's eyes in the direction of the objects that one's observations will be about.

Such empirical observations then become of help, even if not the only source, for constructing or testing[3] other general descriptive or causal ideas. Even though a great deal has been discussed about how empirical observations can fulfil this role —giving rise to various different research methods and approaches— in general one looks for observations that could count as evidence for supporting either those other ideas themselves, or their negations. Of course, which observations could do the job, and how, may in many cases be difficult to determine. But nevertheless, in the domain of pedagogy, causal ideas such as those about the likely results of implementing some pedagogical strategy in some particular context, will be constructed and tested with the help of empirical observations obtained in classroom or classroom-related situations.

3. "And God saw that it was good": On empirical research about the normative

> 9 And God said, 'Let the water under the sky be gathered to one place, and let dry ground appear.' And it was so. 10 God called the dry ground 'land,' and the gathered waters he called 'seas.' And God saw that it was good. (The Bible, Genesis 1:9-10)

Can one actually see *that* something being the case is good, or that something ought to be the case, in the same sense that we say that something is the case? (Or is it some heavenly power not available to mortals?) Let us start by noticing that the discussion in the previous section provided an account of empirical observations, in which there was not any requirement that the sentences or beliefs involved were actually descriptive and not normative. In an empirical observation, I argued following Davidson and Sellars, the world causes some sensations in us, which in turn cause us to acquire some beliefs. And, given that this view of the relation between language and the world does not support any epistemological distinction between the descriptive and the normative (Davidson, 1994), in principle there is nothing that prevents that causal chain from resulting in normative beliefs. In such cases, we would have what we could strictly call a *normative empirical observation*. This conclusion may seem surprising, but it is only if we are still tied to some epistemological view that reifies facts as what our true sentences correspond to, that we will still be looking for essential differences in the way the world relates to our various sorts of sentences, to distinguish descriptive from normative ones. The radical Davidsonian view, on the contrary, does not impose any such differences, and therefore neither does it introduce any other objective-subjective distinction between kinds of sentences (see Davidson, 1988 and 1994). From this perspective, the only necessary and sufficient requirement for a sentence 's' to be true, is *that s* (appropriately modified to account for indexical features of time, place, or speaker, when

[3] The idea of "testing" should be taken here in a broad sense, and not necessarily as a process leading to a full confirmation (proof) or refutation of some hypothesis.

necessary). For example, the sentence "more than half of the students in my 8th grade biology class participated with their opinions today" as pronounced by a teacher on a certain date, is true if and only if more than half of the students in her 8th grade biology class participated with their opinions on that date. Similarly, the normative sentence "we should always promote the development of a critical consciousness in our students" is true if and only if we should always promote the development of a critical consciousness in our students.

But, just like in the case of *descriptive* empirical observations, the mere existence of causal chains resulting in normative beliefs —that is, the fact that normative beliefs may be triggered in us by the direct contact with the world— still does not provide a justification for those beliefs. If normative beliefs acquired empirically are to be of any use, the real issue will lie in how reliable they are, and whether they can serve the purpose of being a testing ground for other beliefs. In the case of descriptive empirical observations, as we saw, typically our declaration of reliability is only granted to a subset of beliefs, one of whose defining characteristics is that of being occasional. Normative occasional beliefs would be ones that judge the goodness of some particular event or situation, and in principle they probably stand better chances of faring higher in reliability than normative non-occasional beliefs, when acquired empirically. However, in this respect they are still very far from descriptive ones, and so their ability to serve as ultimate testing criteria is impaired. Nevertheless, as I will show below, they can still play a role in our improvement of our normative understanding of pedagogical practice.

Recalling the discussion in the introduction to this paper, the decision to implement some pedagogical action or strategy ***X***, in context ***Z***, in order to produce results ***Y***, is based at least on causal, normative, and analytic assumptions. The normative assumptions are nothing more and nothing less than occasional judgements about the goodness of the events associated with ***X*** and ***Y***, in ***Z***. They, collectively, constitute the justification for implementing or rejecting any pedagogical action or strategy. Now, suppose, for instance, that some programme is proposed in some school to attempt to develop a critical consciousness in students about the place they live in and their involvement in it. The programme will have presupposed, at least, that the development of such critical consciousness is in general desirable. However, during the process of implementation some teacher may have noticed certain concrete situations with her students, in which without giving it much thought she intuits that other educational goals or values should be put first. Provocatively paraphrasing this, we could say that she has *empirically observed that* in those concrete situations the programme recommendations ought to be ignored, in order to give way to other educational goals or values. These are normative occasional beliefs acquired empirically; but this way of saying it does not mean that they are entirely reliable and should be taken as true —which is what we normally do with descriptive empirical observations. However, they do have an advantage: they will have been influenced by the particular characteristics of the local situations, therefore taking into account other issues of normative import that could not have possibly been included in the considerations that led to the design or adoption of the original programme for the development of a critical consciousness. Of course those normative empirical observations, even if acquired non-inferentially at the moment of observation, depend on the observer's previously held ideas, as well as on the local situation they are about. (As we saw in the previous section, that also happens with descriptive empirical observations.) But then it is precisely those other ideas that normative empirical observations depend on for their justification, that, as I will show in what follows, will allow some reflection and confrontation to take place.

The fact that they are not fully reliable prevents normative empirical observations from becoming an ultimate test for the truth of other beliefs and hypotheses. These observations, even though empirical, have to be confronted, and the result may in some cases be that they have to be abandoned or somehow modified. In the example used above, the normative assumption about the general desirability of the development of a critical consciousness will have to be confronted with the observations made by the teacher about the comparative worth of critical consciousness and other educational goals, *for the particular situations she has encountered in her classroom*. In that confrontation, the justifications for the programme's normative assumptions, as well as her previous ideas about what is worth seeking in educational contexts, which justify her empirical observations, will also have to be brought in. As the result of the confrontation between the programme's and her own previous normative views, she will have to attempt to save coherence in the whole of her beliefs, by either rejecting or modifying one of the two, or creatively finding a new way for coherently accommodating both, with a smaller or greater certainty. These are, of course, only possibilities, as the precise results will depend on the situation as well as on the systematicity and rigour employed by the teacher, and any conclusions will still be open to discussion. Furthermore, it is doubtful that as a result of the inquiring process, general normative principles will be found. This is so because in any pedagogical situation a number of principles and values will be relevant, and may enter in conflict with each other. Moral dilemmas are the rule and not the exception. Given this, a critical normative assessment of every new situation encountered will be unavoidable, as no normative general theories will help one get rid of the responsibility of having to ethically choose a path for action every time. The kind of inquiring process I have suggested here can be of help for that purpose: the teacher's normative understanding of her classroom situations, of the programme for developing critical consciousness, and of her own ideas, will have been enriched. And with that, presumably her educational practice will also be improved. This is not the kind of certainty that many would have liked to obtain from research, and even less if we take into account the difference in reliability between descriptive and normative empirical observations. Nevertheless the process described here points at the possibility of improving educational practice along the normative dimension, something that has been left out of scientific and technocratic endeavours. But then, we must find ways —manifested in protocols, conversational spaces, and so on— in which this inquiry process can take place in an organised, systematic, and rigorous way.

I have talked here of normative empirical observations. However, descriptive empirical observations can also contribute to the examination of normative ideas. For instance, the goodness of the implementation of some pedagogical strategy in a particular context depends on the kinds of impacts it produces on that context; that is, on its causal effects. Therefore, observations about what happens during and after the strategy implementation should be considered when deciding what to do. In fact, when addressing normative issues there may not be much of a difference between the processes guided by the two different kinds of empirical observations, normative or descriptive. In both cases, ideas about what is good or bad in the local pedagogical situation and about what is actually happening in the classroom, will be involved in the reflection that takes place in the *logical space of reasons*.

4. "I see what you mean": On empirical research about the analytic

Quine's argument against the analytic-synthetic distinction has as a corollary that there is no principled difference between sentences that merely specify the meaning of some word or expression, and sentences that do say something about the world. As a result, the distinction between the philosophers' and the scientists' inquiring activities cannot come from a

difference of essence between kinds of truths, or between kinds of sentences. Or, in the terminology I am using here, answers to analytic questions can also be influenced by empirical observations. Now, how will that happen in the case of pedagogical research? The holism of meaning and truth defended by Davidson suggests that interpreting the meaning of any one sentence involves producing another with the same truth conditions, in one's language. That it is in one's language simply refers to the fact that it is a sentence, that we *know how to use* (Davidson, 1967 and 1973; Mejía, 2001). In turn, knowing how to use some sentence *S* implies identifying some of *S*'s logical implications in connection with new sentences and ideas. If one rejects the analytic-synthetic distinction, then the connections that one needs to make if one can be said to understand *S*, cannot be specified in advance[4]. In the introduction I argued that the justification for any pedagogical action or strategy depended on a set of assumptions, one of which was analytic: the assumption that the meaning of the formulated pedagogical action or strategy (***X***), possible outcomes of its implementation (***Y***), and context it is implemented in (***Z***), are known or understood. Recalling the example I have been using in this paper, a programme for the development of a critical consciousness will work with some definition, explanation, or specification of what it attempts to develop. Understanding this definition implies, among other things, the identification of some of its implications and consequences in concrete classroom situations —that is, to make connections with other related classroom topics or issues. Because of that, if the teacher has understood the programme's definition of critical consciousness, then she must be able to identify some students' actions as manifestations of critical consciousness or of its opposite; she must be able to formulate reasonable hypothesis about which of her actions and strategies might be fostering or hindering it; and she must be able to identify other educational values or goals that in some situations may support or be in conflict with that of promoting a critical consciousness. Understanding the programme's definition of critical consciousness does not demand of her to make any specific particular connection with any one particular topic or issue. It is only necessary that she can make *many* reasonable connections. Some of these connections will be very basic and almost trivial; and then we can say that the richer the set of connections she establishes, the deeper the understanding she has achieved of the position on critical consciousness in question. Of course, the connections she will establish will depend on her previous knowledge.

Any of these connections or derived implications is impugnable; or even the whole set of them. In the example, that also amounts to our determination of that teacher's level of understanding of the programme's position on critical consciousness. But, also, those connections will be of use for the teacher herself to assess that position. For instance, she may non-inferentially identify some classroom events as manifestations of a critical consciousness, but realise that they do not fit in the programme's definition. In the light of this mismatch, she would have to make adjustments somewhere: she may drop the new ideas altogether, modify them, drop some of her previous ideas, modify them, or have some combination of these possibilities. These reflections will have been triggered by empirical observations in the classroom, and the close contact with the particular local situation that they depend on will put the observer in a better position to take into account the situation's particularities and their relevance to answer analytic questions[5]. In this case, again, the heart

[4] If the analytic-synthetic distinction could be made, then it might still be possible to establish a (limited) number of analytic sentences that define the meaning of any one sentence or word. To understand a sentence or a word would be to understand the set of sentences that define its meaning. In a holistic view of meaning that cannot be done.

[5] Given the above discussion about Quine's rejection of the analytic-synthetic distinction, the expression 'analytic questions' may be unfortunate. Nevertheless, I use it here for convenience, but

of the matter might lie in whether we can find ways in which this inquiry process can take place in an organised, systematic, and rigorous way.

The example above is one in which descriptive empirical observations are used to explore analytic issues. Nevertheless, our normative judgements also have logical connections with our ideas about what linguistic expressions mean. For instance, it is rather obvious that our estimation of the goodness of some pedagogical proposal will depend on our interpretation of its meaning. But at the same time, and as a consequence of the *charity principle*[6], our interpretation of its meaning will depend on our assessment of what is good or bad about it (see Davidson, 1994). One might think that one first determines the meaning of the set of sentences that specify a pedagogical proposal, to only then assess its goodness. However, the holism of truth and meaning argued by Davidson renders meaningless any attempt to logically prioritise any of these issues over the other. As a conclusion, normative judgements —including normative empirical observations— can also be useful for examining analytic issues.

5. Concluding remarks

Based on my explanation of "empirical observation" in section 2, in the two previous sections I have attempted to show that inquiry into pedagogical issues of a normative or an analytic nature, carried out in close contact with classroom situations through empirical observations, is both feasible and desirable. That kind of inquiry can very fruitfully complement the more traditional one which only centres around causal or descriptive questions. As argued in the introduction, all of them are needed for the justification of the implementation of any pedagogical action or strategy in any context.

But can that sort of empirical inquiry into normative and analytic issues be appropriately called *research*? That is, of course, a very contentious issue, for which I am not willing to advance a position at the moment. But I do want to assert that the sort of inquiry described here can be a vehicle for improving educational practice, especially if those directly involved in the observation process are the ones who have to take decisions about what to do, and act, in the situation —such as the teacher in the example. This is just a conclusion derived from the fact that I have taken pedagogy to require answers to causal, normative, and analytic questions, and that inquiry that takes into account the particularities of local pedagogical situations is needed to construct those answers. The persons carrying out this form of inquiry act in ways that in some sense resemble those of a scientist: they put themselves in appropriate positions and dispositions to collect observations which are presumably relevant to pedagogical practice, then organise them, and confront them with other ideas that they themselves or others have. What is special about this process is that the questions and observations that it involves are not only of a descriptive or causal nature, but also normative and analytic. But, importantly, this form of inquiry is also philosophical, critically contrasting

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without trying to establish any clearcut distinction with other questions. The borders are fuzzy. Analytic questions would be those that, in Rorty's terminology, would tend to be answered more by looking them up in a dictionary rather than in an encyclopaedia (Rorty, 1991). Quine warns us against taking too seriously this distinction between dictionaries and encyclopaedias.

[6] Interpretation requires that the *charity principle* be observed. According to it, any interpreter has to grant truth to a great many of any speaker's beliefs, if she will be able to interpret any sentence that the speaker asserts, true or false. "Disagreement and agreement alike are intelligible only against a background of massive agreement" (Davidson, 1973, p.137). This is not a practical suggestion to make interpretation easier; it is rather an essential principle for meaning and language to make sense at all (Ramberg, 1989).

sets of ideas and exploring ethical issues related to pedagogical practice. Empirical science and philosophy are brought together in this endeavour. Furthermore, this inquiry can be seen as an instance of the hermeneutic circle: going back and forth between more general ideas and more local or situated ones; between the abstract and the concrete. What I have tried to show is that it can occur for three types of research questions relevant to pedagogical practice: causal, analytic, and normative. And the quality of the inquiry will partly depend on traditional scientific and philosophical values such as rigour, honesty, depth of reflection, discipline, and organisation.

I see these conclusions as having a special relevance to proposals that see teachers as active creators of their own pedagogical praxis on different levels and along different dimensions, rather than as appliers of educational strategies designed somewhere else. In those proposals, teachers may still encounter pedagogical strategies, but will take them only as a reference for possible action. Given that they will not entirely rely on those strategies, they will have to guide their own action by the continuous reflection on causal, normative and analytic questions. And in so doing, they can take advantage of their privileged position to collect classroom observations, in order to take into account the particularities of their local situations in their reflection.

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