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What is a problem?

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ABSTRACT

By way of a selective comparison of the work of Georges Canguilhem and Henri Bergson on their respective conceptions of 'problematology', this article argues that the centrality of the notion of the 'problem' in each can be found in their differing conceptions of the philosophy of life and the living being. Canguilhem's model, however, ultimately moves beyond or away from (legislative) philosophy and epistemology towards the question of *ethics* in so far as his vitalism is a means of signalling the refusal of the supposition that all of the dimensions of life are or might be in our possession. Michel Foucault's project, though directed for the most part to very different subject-matter, worked out a similar logic in the historical problematology of the sciences of 'man' and mentalities of government and power; and the results were equally ethical in so far as Foucault's nominalist historical problematology entailed the refusal of any idea that all of the dimensions of our anthropological 'essence' are, or could be, likewise, in our possession.

Key words Bergson, Canguilhem, ethics, Foucault, problematology

This article puts the case for the idea of *historical problematology* as being a good collective description of the endeavours of thinkers such as Georges Canguilhem and Michel Foucault. Historical problematology is not the same thing as the history of ideas, historical sociology or normative philosophy; although it does have interesting, if contrasting, relations with other strands of philosophy, in this case – as we shall argue – with that of Henri Bergson and, by extension, Gilles Deleuze. This article is not meant, however, as

simply one of those rather vain exercises in the juxtaposition of a few thinkers that might happen to be of some interest when compared with each other. Rather the aim is on the one hand to specify what it is that links the 'problematological' concerns of French historical epistemologists such as Canguilhem and Foucault, in spite of their ultimately quite divergent empirical interests and methodological outlooks; and on the other hand, to open up the suggestion of a degree of difference – albeit scarcely of 'opposition' – between what might be regarded as a Canguilhem–Foucault axis of problematology and that of Bergson–Deleuze.

It is not, of course, that the attention to questions of problematology is unique to thinkers such as Canguilhem or Bergson. It has certainly been quite frequently the fashion in the human sciences and philosophy to highlight the importance of problems at the expense of solutions (Meyer, 1986). In a superficial way, one could find such problematology just about everywhere. It is there in a certain way in Marx: humankind only sets itself problems that it can solve. Or in Popper: 'all life is problem-solving' (Popper, 1999: 99–104); as well as in various strands of analytical philosophy; or in the intellectual tradition of R. G. Collingwood and his forceful insistence on the priority of problems and questions over answers as the key to philosophical explanation (Collingwood, 1939: 6).

But what is the meaning of such a 'problematological' emphasis? We might take it to mean simply that we should read this or that author for the problems they pose, not the solutions they propose. But what is the status of such a claim? Is it simply that problems are more perennial than solutions, or even just more interesting? What, after all, *is* a problem? And what would be the territory and limits of a 'problematological' human science?

This last question may sound like an epistemological one, and indeed it is. Yet the answer to such a question might have to do – as we shall see – as much with the status of *life itself* as with the niceties of epistemology. Or at least the one emphasis is not necessarily unconnected to the other. In terms of philosophical anthropology humans are, no doubt, problematizing animals, and we are thereby in a sense anthropologically 'committed' to problematology. That, at least, is the possibility that shall be explored in the following remarks, which take as their main witness a particular epistemologist of the sciences who was also an epistemologist of the living being, Georges Canguilhem (cf. Gordon, 1980; Gordon, 1986; Osborne and Rose, 1998). Indeed, is not the fact that humans are problematizing beings the greatest lesson of the French school of historical epistemology as such? If so, we shall find that this is surely also a lesson in *ethics* as much as a lesson in epistemology. In what follows we shall pursue some of the ramifications of this ethical problematic not just in relation to Canguilhem's own questioning of the sciences of life, but in relation to other fields such as those of politics and governance in the work of Michel Foucault.

PROBLEMS AND PROBLEMATOLOGY

Why do 'problems' matter? For Canguilhem the notion of life and the notion of the problem were inseparable issues. In his well-known essay on Canguilhem, Foucault noted that Canguilhem's first book *The Normal and the Pathological* (written in the early 1940s) retains its significance for the current era *because* and not in spite of the huge changes that have occurred in the relations between the domain of concepts and that of life, most particularly under the impact of information theory. This is because 'the problem of the specific nature of life has recently been inflected in a direction where one meets with some of the problems that were thought to belong strictly to the most developed forms of evolution' (Foucault, 1994a: 774).

Foucault's point in these remarks was in part substantive. It was that subsequent biological theory had invoked the informational concept of error, and that this gave Canguilhem's work a renewed relevance precisely in so far as the thesis of *The Normal and the Pathological* had prioritized the question of infraction – error – over that of normality in the development of the life sciences. For Canguilhem the specificity of life lies in its capability for error, which means that pathology is not an aspect of the normal but is separate from it; something, indeed, more akin to 'experiment' on the part of life. But it also seems that the key to the significance that Foucault accords *The Normal and the Pathological*, given the magnitude of the epistemological changes involved in the biological sciences since the time that Canguilhem was writing his thesis, must reside not only in the specific answers that Canguilhem gives but in a more formal sense, that is, in the tenacity of the problems themselves.

These are indeed the terms that Foucault uses; the significance of Canguilhem's work residing, for him, in the *problem* of the specific nature of life, and the *problems* thought to belong to the most developed forms of evolution. It needs to be emphasized that this vocabulary centred on the matter of 'problems' is important. For the significance of *The Normal and the Pathological* might in fact reside in its very approach not just to particular issues in the contents of the life sciences and in philosophy but to the notion of a problem itself; and not even in its only answering the question 'What *is* a problem?' but in the priority it affords more generally to problematology as opposed to (normative) epistemology; in other words, in the priority it affords to problems over theories as a way of giving substance to the history of thought. This prioritization of problems over theories needs to be explored further, especially if we are to appreciate the extent to which the problematological emphasis of authors such as Canguilhem or Foucault in historical epistemology puts their programme at such a remove from most sociologistic appropriations of their – especially Foucault's – work (cf. Gutting, 1989).

The question of the status of the problem and the problematic is certainly

at the core of Canguilhem's thesis in *The Normal and the Pathological*. The theme emerges perhaps most forcibly in an early chapter; in Canguilhem's treatment of the so-called 'Broussais principle' especially as it influenced Comte (Canguilhem, 1989: 47–8). Broussais held that physiology exerted priority over pathology in the development of styles of medical reasoning; and behind Broussais's view lies, for Canguilhem, a general rationalistic tendency to privilege the so-called normal at the expense of the pathological; whereas, in contrast, on Canguilhem's own account the abnormal and the pathological are at least 'existentially first'. This is of course an argument to do with medical explanation and the logic of interpretation in the history of medicine, as well as being – by extension – an argument about vitalism and life. But there are clearly further issues at stake here of relevance to matters other than those of medicine or even of vitalism. For Canguilhem is also interrogating the very nature of the *problem* – and 'the problematic' – itself. What is at stake for Canguilhem in the development of knowledge is always the posing of questions, the existence of obstacles, the establishment and mastery of problems. Hence, for him, the unit of analysis in the history of science, in historical epistemology, in the history of reason itself, has to be not the solution, the theory or the *post hoc* rationalization, but the *problem* itself.

Now, this 'problematological' emphasis is of course a line of prioritization that can be seen in a range of other thinkers, both before and after Canguilhem. It is there particularly in a variety of French thinkers, especially those of a structuralist or post-structuralist variety: in Michel Foucault's own substantive concern with something often rather misleadingly regarded as 'deviance' and exclusion as the basis of the development of the disciplines (cf. Gordon, 1992: 6–8) or his concern to found a historiography of 'problematizations' (Foucault, 1984a; Castel, 1994); or in Louis Althusser's account (itself very much indebted to Bachelard and Canguilhem) of epistemological problematics in Marx (Althusser, 1970).

And perhaps most conspicuously this problematic has a presence in Gilles Deleuze's account of the essence of problems in *Difference and Repetition* where he argues for a prioritization of problematology over dogmatic 'images of thought' (Deleuze, 1996: 158–64). Deleuze even defines *stupidity* as the capacity for fabricating *false* problems (ibid.: 159). Now, Deleuze – influenced here no doubt by his debt to the work of Henri Bergson – regarded the analysis of problematics as being specifically a *philosophical* project. Yet, though both Canguilhem and Foucault were philosophers, they accorded a rather different place to the role of philosophy than did philosophical 'theorists' such as Deleuze – or, as we shall see, Bergson himself. This difference is actually worth opening up further in an age in which the work of Deleuze appears to be becoming more and more influential and is often more or less – and in some ways misleadingly – assimilated to that of writers such

as Foucault (Osborne, 2003). In what follows, though, we interrogate this difference not by staging a confrontation between Deleuze and Foucault themselves, which would be an arid exercise, but on the basis of a comparison of Canguilhem and Bergson on the question of problematics of life. We shall see that what is at stake is less a matter of dramatic divergence than differences of emphasis, differences of scope, but ones that have effects as to how we should habitually read the writings of the French school of historical epistemology.

CANGUILHEM OR BERGSON?

Why should we contend – as does Canguilhem – that the living being is inherently 'problematological'? For Canguilhem there are at least three answers to this. An initial strand of this centrality is, first, that life should be essentially defined in terms of the interaction of organisms with the environment; for instance, in a Darwinian sense. Life is the confrontation of problems: there is no vital normality in itself, but only in relation to the problems that are set by a particular environment:

> Taken separately, the living being and his environment are not normal: it is their relationship that makes them such. For any given form of life the environment is normal to the extent that it allows it fertility and a corresponding variety of forms such that, should changes in the environment occur, life will be able to find the solution to the problem of adaptation – which it has been brutally forced to resolve – in one of these forms. (Canguilhem, 1989: 143–4)

A further strand is, secondly, the close connection between the problems posed for and by life and the machinations of technology and human technique. There is a sort of zone of indiscernibility between the interests and ideals of life and technology in Canguilhem's thought: 'All human technique, including that of life, is set within life, that is, within an activity of information and assimilation of material' (ibid.: 130). In the end, this is what life is, whether human or animal, whether embracing complex technology or various 'technologies' of animal habitat: '*Sans doute l'animal ne sait-il pas résoudre tous les problèmes que nous lui posons, mais c'est parce ce sont les notres et non les siens. L'homme ferait-il mieux que l'oiseau son nid, mieux que l'araignée sa toile?*' [Without doubt the animals would not know how to resolve all those problems that we might pose to them, but that is because they are ours and not theirs. Could man build a better nest than a bird or spin a better web than a spider?] (Canguilhem, 1980: 10).

And then there is, thirdly, the centrality of problems in what is perhaps mainly a methodological sense; in the history of the sciences and especially

the history of the life sciences. What are such histories? They are not really straightforward exercises in philosophy, and still less exercises in 'history' as such. They are rather exercises in something connected to, but different from, each: exercises or case-studies, that is, in historical epistemology (Canguilhem, 1988: 1–23). One writes these histories (of the concepts of the normal and the pathological, of the concept of life, the cell, or the reflex), argues Canguilhem, not in terms of threads of influence or the heritage of ideas but in terms of the lineage of problems themselves. One even has to write this lineage in, so to speak, a backward way: beginning from a current or contemporary problematization and then working backwards according to a 'recurrent' method that would separate historical epistemology from the history of ideas or even the history of science; for 'the past of a present-day science is not the same thing as that science in the past' (ibid.: 5).

The point about this historical epistemology is, in fact, that it is not just 'epistemological' at all. It is not a methodology that can be assessed separately from the contention that *life itself* is a problematizing phenomenon. But what is interesting is really where Canguilhem takes this argument: it leads towards ethics and ultimately towards the kind of critique of the human sciences and even the particular kind of political anthropology later espoused by Foucault. To see how this is so, it is worth comparing – and contrasting – Canguilhem's conception of problematology with one that gives more *normative* primacy to philosophy as legislative theory, that of Henri Bergson.

Bergson's philosophy, of course, also accords a high centrality to problems. And in several ways. There is, first, the parallel centrality of problems as an aspect of the existence of the living being itself. Life, for Bergson, is more or less synonymous with the overcoming of obstacles. Life is not finality, determined evolution; its coherence is only retrospective. Life is a series of responses, a spiralling series of incompatible and antagonistic manifestations (Bergson, 1988: 103); an organ such as the eye is a solution to certain problems of action faced by the living being; but it is also something which is *effective* in the sense that it is capable of responding to future problems in the environment, future demands for action as they arise and which are at present unknown (ibid.: 93). Everywhere in Bergson, instead of finality and determination, we have the contingency of problems and their local solutions in ever-multiplying webs of vital ordering and sub-ordering.

Then there is, second, the epistemological aspect to this prioritization of the idea of the problem in Bergson. We have, for example, the characteristic insistence that life and knowledge are tied to each other; '*theory of knowledge and theory of life seem to us inseparable*' (ibid.: xiii). The second chapter of *The Creative Mind* on 'the stating of problems' is of obvious importance here in a theoretical sense. Here we learn that the goal of philosophy is to raise us 'above the human state' by posing problems in the right way; thus by freeing us from certain 'speculative certitudes'. The aim of philosophy, then, is to

take us beyond the seeming obviousness of most contemporary problems, using the method of intuition not to solve problems but to dissolve them in order to produce new, more productive, ones (Bergson, 1949: 50, 52).

Much of *Matter and Memory* is also taken up, in a practical way, with the rather more philosophically normative project, thirdly, of re-analysing *badly composed* problems into what Bergson regards as more adequately fabricated ones. In that work, the very task of philosophy and metaphysics is defined as that of dispersing 'fictitious problems' (Bergson, 1991: 16). For instance, superficial psychology has badly addressed the problem of memory, seeing in it merely the expression of cerebral processes; whereas a Bergsonian problematization of memory would, by taking materialism to its extreme, in fact find itself 'erecting spirit into an independent reality' (ibid.: 74). And of course memory is not just a particular problem here but a particularly privileged one; for only if we set it up correctly as a problem will the solution to the question of 'where the office of the body begins and where it ends' actually follow (ibid.: 76).

So for Bergson there are good, productive ways to problematize things and bad, that is, unproductive ways. But just as with Canguilhem, just about everywhere in Bergson it is the problem that takes priority:

> . . . the truth is that in philosophy and even elsewhere it is a question of *finding* the problem and consequently of positing it, even more than of solving it. For a speculative problem is solved as soon as it is properly stated. By that I mean that its solution exists then, although it may remain hidden and, so to speak, covered up: the only thing left to do is to uncover it. But stating the problem is not simply uncovering, it is inventing. (1991: 51)

Now, as Gilles Deleuze once observed of Bergson, this is not simply a question of stating – in the interests, say, of a certain kind of humanism – that the problems are more interesting than the solutions; but that the problems essentially determine what solutions are available (Deleuze, 1988: 16). It is to close the gap radically between the idea of a problem and the idea of a solution, but it is also to give sovereignty of explanation to philosophy and metaphysics, for only they can de-compose badly analysed problems into proper ones. In this sense, Bergson's is a metaphysical prioritization of the problem. It is as if the biological and psychological sciences, for him, have provided us with a valuable series of solutions to problems that are yet to be established; thus the role of philosophy is not only to re-organize badly composed problems into better composed problems but to legislate as to the very universe of problems and solutions that might be available to us.

This means that for Bergson what is at stake is not an historical epistemology of concepts of life – as with Canguilhem – so much as a normatively inspired critique of existing *knowledge* about life: 'A theory of life that is not

accompanied by a criticism of knowledge is obliged to accept, as they stand, the concepts which the understanding puts at its disposal: it can but enclose the facts, willing or not, in pre-existing frames which it regards as ultimate' (Bergson, 1988: xiii). Indeed the idea is to go beyond the existing 'frames of knowledge' to a more profound understanding of life, one derived from philosophy and metaphysics and posed, in certain respects, against the existing comprehensions of the sciences themselves.

Canguilhem's vision of the place of philosophy in relation to the sciences is at odds with such a normative conception. Certainly it has to be acknowledged that on the specific question of problems and problematization he is in places in quite specific agreement with Bergson. Canguilhem embraces at least one aspect of Bergson's thought with admirable clarity; the so-called 'Bergsonian theory of disorder' (Osborne, 1992: 69). The notion of disorder is actually in itself a good example of a Bergsonian badly composed problem that needs to be overcome. As Bergson insists, in analysing 'the idea of disorder . . . we shall see that it represents nothing at all' (Bergson, 1988: 222); whereas disorder for Bergson properly denotes the absence of a certain order only to the profit of another, thus coming close to Canguilhem's own insistence that pathology is not the disordered form of normality but in fact another, albeit possibly diminished, order (Canguilhem, 1989: 183). Canguilhem unsurprisingly endorses Bergson on this issue:

> The example of neuroglioma disease seems to us perfectly suited to illustrate the idea that disease is not merely the disappearance of a physiological order but the appearance of a new vital order, an idea which is as much Leriche's as Goldstein's and which could correctly justify the Bergsonian theory of disorder. There is no disorder, there is the substitution for expected or loved order of another order which either makes no difference or from which one suffers. (ibid.: 193–4)

The fundamental difference between Canguilhem and Bergson, on the other hand – at least in the context of the discussion here – resides less in such specific conceptual issues than in two areas; that of the stance that a conceptual inquiry such as philosophy should take towards the sciences and that of the question of life granted by each. On the one hand, for Bergson one might say that it is philosophy that is the discipline that is closest to life – because philosophy is the discipline that proceeds precisely by discerning problematization; whereas for Canguilhem, philosophical problematization is essentially reconstructive and secondary; that is, one has to follow the problematizations of life itself as these are disclosed or 'exhibited' via the concepts of the life sciences. This makes Bergsonian philosophy essentially not a phenomenology of problems but, so to speak, a retrospective analytics of the historicity of problems, especially vital problems.

In short, both place the problem at the very centre of the philosophical

enterprise but with rather different results. Canguilhem's project leads into a historical problematology of the life sciences; a sort of naturalized epistemology even, if we take the problematizations of the sciences as in some sense the raw material of problems of life themselves. In other words, Canguilhem's is a naturalized epistemology in the negative sense – simply in that it is *not* a normative one, but one based upon the existing problematizations of the sciences as they exist in the present time. In a sense, although it is obviously informed by philosophy, Canguilhem's model is *historical* before it is anything else; it is historical problematology rather than philosophy *per se*. The sciences of life are for Canguilhem the arena not just for interesting epistemological investigations but for the disclosure of the meaning, as it were, of life itself; they are in a sense life's laboratory, life's theatre.

And this means, on the other hand, that in fact Canguilhem and Bergson differ especially in the kinds of vitalism espoused by each. Bergson might indeed *appear* to be of greater conviction as a vitalist; the very concept of the *élan vital* would seem to be obvious evidence of that (Ansell-Pearson, 1999: 157–8). Bergson's philosophical project is an unabashedly legislative one. Bergson weaves a normative vitalism into his every vision of philosophy. And for Bergson this entails the re-composition of problems on the basis of a philosophical method; the re-composition of problems *into* philosophy. But Canguilhem, as we have noted, moves in rather a different direction; not the re-composition of problems of life into philosophy but the philosophical reconstruction of problems with the history of the sciences of life. And this means that Canguilhem's vitalism is of an order wholly different from that of Bergson; a vitalism, one might say, not of phenomena but of *concepts*.

But such a conceptual emphasis actually opens onto an expansive *ethical* vision for philosophy and critical thought, albeit of a sort conceived modestly in original epistemological terms; that is, only in relation to the actual findings of the sciences themselves without seeking some normative higher ground beyond them. In any case, for Canguilhem the business of a vitalist philosophy is not at all to propose, normatively, a vitalist philosophical 'theory' but to keep the door open for the further mutations of vitalism. Canguilhem's is not as such a normative project so much as a programme oriented, ethically in fact, towards the possibility of *normativity*. Canguilhem's 'philosophy' – if it can be described as such at all – does not express the content of any particular vitalistic worldview, rather its role is formally ethical, critical, Kantian even, in attempting to keep us aware of the limits of our explanations as they stand and to hold us constantly open to new formulations, new problematizations and problematics. It is ethical, one might say, not in the sense of possessing any particular determinate content but in the sense that it entails the commitment to a holding open of, so to speak, the possibility of further possibility. It is a historical and ultimately *ethical* problematology. Thus if Canguilhem can sound like Bergson when

he writes that the 'business of philosophy is . . . not so much to solve problems as to create them', then this injunction has a rather different meaning in Canguilhem from its sense in Bergson. It is not to produce a problem–solution composite but to incite the open-ended provocation of the problematic; to scupper solutions in the name of the re-evaluation of values. Philosophy, on this measure, is an irritant; it can incite a certain unpopularity for itself; 'it cannot adopt anything but a critical attitude' (Canguilhem, 1994: 384). It is, then, as such, an ethical enterprise through and through; in other words, entailing an ethical commitment to the value of criticism itself.

So it is the very vision of philosophy that is at stake here; tentative, open, ever-revisable, inherently problematological: its very normativity resides in 'the confession of a lack, the recognition of a gap between an existence and a need' (ibid.: 378). The normativity of philosophy is one which rests upon an on-going problematization of itself and its tasks. This is not a question of a determinate 'methodology', however; again, it is more like an ethical injunction, an orientation, an outlook.

> Now we can understand why philosophy has attracted hostile reactions through the ages; philosophy is a questioning of life and therefore a threat to the idea that everything necessary to life is already in our possession. (ibid.: 384)

This, in essence, is the ethical moment which is central to Canguilhem's thought. For in the final instance this is what Canguilhem's vitalism actually means: not an epistemological doctrine but something more akin to an ethos, a way of being – '*une exigence plutôt qu'une méthode . . . une morale plus qu'une théorie*' [an obligation rather than a method . . . a morality more than a theory] (Canguilhem, 1980: 87–8). Of course, by invoking the notion of a morality here, Canguilhem means something rather different from what Foucault will call a morality; yet – as we shall see – in both cases, what is distinctive is the idea of opposing this conception to the will to legislative closure, to something like *theorization*. Those who work with problems are *not* legislators or theorists.

AFTER CANGUILHEM

And this is why Foucault in his tribute to Canguilhem's work observed both that Canguilhem's invocation of a philosophy of the concept was at odds with the prevailing philosophies of the subject in France and elsewhere, including presumably those of someone from a previous generation such as Bergson; and that a discussion of the question of *enlightenment* – not as doctrine but as 'way out' or ethical *Ausgang* – was of such integral relevance to any conception of what Canguilhem was trying to do (Foucault, 1994a;

and especially Gordon, 1986). It is also why Foucault remained always, in his own way, loyal to Canguilhem's model of research. For the theme of the science of 'life' in Canguilhem, we might read in parallel the theme of the sciences of 'man' in Foucault and especially the question of enlightenment and freedom.

Indeed Foucault himself elaborated towards the close of his life, albeit briefly, some of the aims of a historical problematology that would confront issues beyond the life sciences, to embrace questions of the historicity of ontology more generally (cf. Hacking, 2002; and cf. Foucault, 1984a). Foucault's own essay on Canguilhem, dating from the end of the 1970s, was part of this moment. But instead of the problematizations of the life sciences, Foucault's own emphasis in research was upon either the human sciences or those texts – practical, political, ethical – that, as he put it, were typically 'practical texts that were the objects of a practice' (Foucault, 1985). And as he argued in the Introduction to *The Use of Pleasure*, historical problematology would have to situate itself somewhere between the analysis of behaviours and the analysis of ideology; to work at the level of '*problematizations* through which being offers itself to be, necessarily, thought – and the *practices* on the basis of which these problematizations are formed' (Foucault, 1985: 11).

Even today, many of those who work in the human sciences seem incapable of perceiving the specificity of this 'problematic of problems'. Historians are particularly prone to miscegenation on this score. James Davidson, for instance, completely misreads Foucault's own problematic when – taking his negative opinion of Foucault's work as the starting-point for his study of ancient Greek attitudes to food and sexuality – he writes that 'discourse is more or less the same thing as "attitudes" ' (Davidson, 1997: xxii). And this precisely when Foucault is absolutely clear that his own mode of questioning has nothing to do with attitudes and everything to do with the problematizations to be found in such practical texts as functioned to inform the objects of practices themselves (Foucault, 1985: 12; cf. Foucault, 1984a: 388–440). Foucault's entire problematic was, so to speak, driven towards analysing – and thus specifying, isolating – this level of problematics and problematizations itself and *not* towards the depiction of actual behaviours or attitudes. Historians such as Davidson invariably miss this problematic, since, rather like Marx's bourgeois political economists, they tend to assume without question that everyone shares their own particular construction of what is at stake. 'In fetishizing a culture's representations of the world in this way, Foucault and his followers sometimes seem to forget about the world itself' (Davidson, 1997: xxiv). But, then, it is clear that Davidson's own problematic is entirely different from that of Foucault: not with a historical problematology of sexual relations but precisely with a history of sexual (and other) behaviours and their forms of representation.

What Foucault did not elaborate quite so overtly, perhaps because it was so much a part of the very fibres of his research, was the reason for the issue of problematology being so important on an *ethical* as well as a methodological level. No doubt for him, such questioning really bore the status of something akin to a 'spiritual exercise' in Pierre Hadot's sense (see Hadot, 1995). What was at stake was not just a question of the formal accretion of knowledge but an exercise in one's relations to truth that was thereby also an exercise in self-transformation and ultimately transgression; 'the historico-practical test of the limits that we may go beyond' (Foucault, 1984b: 47). Just as for Canguilhem the role of the philosophy of the life sciences was not to legislate to the sciences but to hold open the constant possibility of new problematizations of life, so Foucault's philosophy was not meant to legislate in a morally coded sense but to stimulate possibilities of imagination that were ultimately *ethical*. That is the very meaning of the distinction between morals and ethics in Foucault: where morality designates a kind of legislative 'code' and ethics the on-going practices of self that are as Deleuze put it, essentially optional or 'facultative' (Deleuze, 1988: 147: Osborne, 1999).

Foucault's late interest in the question of enlightenment was one way of marking out this ethical problematology (Foucault, 1984b). Hence the refusal of the idea that enlightenment has anything to do with theory or doctrine and the embracing of the notion of an 'ethos' that would be oriented to the question of the 'way out' as opposed to a morality holding us to this or that dogma of the present. Clearly, this whole theme is at a marked remove from the substantive concerns of someone such as Canguilhem. And yet the commitment to an open form of critique which, so to speak, makes way for the possibility of further possibilities of normativity is, in its fundamentals, a theme that is firmly traceable to the work of Canguilhem. So instead of the assimilation of enlightenment to any specific form of freedom, enlightenment becomes rather the name given to the endless work of freedom itself. It is in this sense that we can say that if Canguilhem's central 'problem' was vitalism, then Foucault's central 'problem' was *freedom*. But these are precisely *problems* and not either theoretical concerns, methodological norms, or mere 'fields' of study. Each is confronted, rather, as a kind of provocation to thought and is in consequence fraught with paradoxes and dangers, and is thereby inherently *problematic*; vitalism in the sense that in its worst forms it can be reduced to a dogma or an ideology, and freedom in the sense that, in the guise of the recourse to various enlightenment inheritances it can become a form of moralism, of *theoreticist* 'immaturity' or, as Foucault put it, a form of 'blackmail' (ibid.: 45). In each case, the cause is best served not by dogmatic adherence but, on the contrary, by a constant questioning and provocation.

Foucault's problematic could be encapsulated, then, as entailing the endless critique of technologies of freedom in the name of freedom itself, just as

Canguilhem interrogated the various vitalisms and anti-vitalisms of the life sciences as a way of endorsing a kind of open-ended vitalist 'hypothesis'. This attention to the question of freedom accounts, of course, for some of Foucault's concerns towards the end of his life which need only scant rehearsal here; first, those associated with a critique of political reason, above all in the form of the analysis of varieties of liberalism, and secondly, those associated with the analysis of various kinds of hermeneutics or practices of the self.

First, in terms of political analysis, this emphasis on freedom did not, it should be needless to say, make Foucault a neo-liberal, but it was no doubt what gave his work such exceptional currency in a neo-liberal age. It is to mistake the terms of Foucault's own problematic to imagine that what he was attempting in his studies of governmentality was a kind of sociology of liberalism and neo-liberalism. On the contrary, Foucault's problematic was to investigate and make problematic, as it were against the very 'obviousness' of liberalism, the actual novelty and initial contingency of liberalism as a peculiar technology of freedom and problematic of government. What was at stake here was not to show that ours were or are 'liberal societies' in any sociologistic sense but to show that there was a positive governmental logic to that political rationality we call liberalism (Foucault, 1989: 110–13). Far from being a retreat from the notion of government altogether or simply a systematization of 'negative liberty', early liberalism, for instance, embraced in fact a novel and positive model of governance, one that made a governing virtue of freedom itself (Foucault, 1991; Gordon, 1991; Dean, 1991; Osborne, 1998: 132–3).

Neo-liberalism itself, meanwhile, makes freedom, if anything, increasingly technological. If the notion of neo-liberal 'governmentality' has any meaning it is not as a realist, sociologistic concept but as a governmental *problematic* that seeks to activate the power of the 'delegates' rather than the putative 'sources' of power; whether these be doctors, managers, or whatever. It may well be that this means that our freedom is ever more a question of our being tied into what might be called networks of freedom. Not absolute freedom of course, whatever that would be, but networks of trust, risk and choice; networks in which we are invited to overcome the indeterminacies of our situation with acts of enterprise and will. Is this not a veritable iron cage of freedom (cf. Rose, 1999)? The idea of freedom here is, in any case, tied intimately to our senses of selfhood; yet in a sense such freedom is also post-subjective, post-human, in that the subject is not the end-point of freedom but a sort of modality of it, something through which the work of freedom passes. Freedom, in this sense, is not about communities or individuals but about *control*; perhaps even in the cybernetic sense entailing systemness, feedback and the elimination of noise (cf. Deleuze, 1995). Cybernetics, after all, derives – as Norbert Wiener tells us – from the word *governor* (Wiener,

1989: 15). On the basis of the neo-liberal problematic, we have freedom only at a price: *continuous assessment*. Wherever there is freedom in neo-liberal forms of problematization there is also assessment, audit, the modulation of norms; in other words, forms of freedom that keep us within the bandwidth of a certain range of acceptable conduct (economically, financially, educationally, pedagogically).

Secondly, aside from such political concerns, the investigation of problematics and technologies of freedom had a sort of cultural form in Foucault's work. Hence the studies of aesthetics of existence and practices of the self that Foucault undertook towards the end of his life (in particular, Foucault, 1985; and 1986: 37–68). Again, the last thing that was at stake here was any intention of building a 'theory' of the self in the manner of sociologists such as Erving Goffman. On the contrary. If anything, the problematic here entailed a constant freeing-up of conceptions of self in any finite sense. The aim of history was to invoke differences not possibilities of imitation. As Paul Veyne notes, for Foucault, 'the solution to a contemporary problem will never be found in a problem raised in another era, which is not the same problem except through a false resemblance' (Veyne, 1997: 226). Instead of being some kind of injunction to turn inward upon the self, Foucault's later work on ethical practices was actually saturated with this idea of finding an alternative to the contemporary *morality* of self, one which in its own field was quite congruent with Canguilhem's injunction to find a philosophy that would refuse the complacency of assuming that everything necessary to life was in our possession.

This concern focused on the on-going problematology of freedom was – again – no doubt why Foucault invoked the idea of enlightenment not as doctrine but as *Ausgang* and why he also linked this ethical, as opposed to moral, conception of enlightenment quite specifically to Canguilhem's work (Foucault, 1994a; Foucault, 1984b: 34). It is why Foucault invoked the idea of the aesthetic life as it appeared in the nineteenth century as a form of resistance against the morality of bio-politics (1994b: 629–30). It is why Foucault was critical of the Californian cult of the self in so far as it erected an epistemology or morality of selfhood (ibid.). And it is why Foucault invoked forms of subjectification such as those of the ancient Cynics as models of alternative kinds of truth from that associated with the tradition of a critique of reason (Foucault, 2001; Rajchman, 1991: 126; Osborne, 1999); not as theoretically grounded alternatives but as exemplars of the very principle of a difference from prevailing moralities.

In all these cases, it was a question of finding a provisional ethos instead of a determinate, legislative morality, a series of problems rather than a 'theory'; and, in methodological terms, a question of problematology rather than sociology, realist history or even – at least in a legislative sense – philosophy. Problematology entails, in this context, not just the diagnosing of problems

and not, certainly, the dictating of solutions; but, if anything, the multiplication of further problems such that we are constantly attuned to the tasks of an on-going ethics of the problematic as a sort of critical virtue in itself.

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