THE ERRORS OF HISTORY

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Georges Canguilhem, it is well known, viewed Michel Foucault's work favourably; he often framed this evaluation in terms of the strong connections he saw between this work and his own project on the history of the life sciences ("On *Histoire de la folie*" 30; "The Death of Man" 81, 85, 90). He specifically praises the "non trivial achievement" of Foucault's injection of "fear of anachronism" into the practice of the history of science ("The Death of Man" 79). The gesture of affiliation has credible points of reference across Foucault's corpus. Aside from the remarks he makes about French rationalism in the 1978 Introduction he wrote to Canguilhem's *The Normal and the Pathological*, there are two places in particular in which Foucault seems to acknowledge the connection: his 1968 response to the Epistemology Circle, "On the Archaeology of the Sciences"; and various passages in his 1969 *Archaeology of Knowledge*, including a reworking of his earlier response to the Epistemology Circle, in which the methodology underpinning his approach to history is tentatively set out. In addition to such moments of explicit acknowledgement in Foucault's early writing, there are strong points of thematic contact that extend into what is commonly understood as the later, so-called "genealogical" period and whose presence there diminishes the heuristic value of attempts to strictly "periodize" Foucault's writing. Just as he shows that the term "madness" does not name the same practices, or objects and categories of knowledge in his early archaeological period, neither is "power" usefully considered through the prism of "legitimizing" practices of the state

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in the later (*History of Madness* 178–79; *Power/Knowledge* 95). In both respects, Foucault might plausibly be said to follow one of Gaston Bachelard's dictums regarding the need to remove epistemological obstacles in order to get at what is going on in a field of practices. In both instances, the ideal of historical continuity sheltered by the unifying effects of a name is the culprit to be expelled. However, it is notable that in those passages in which Foucault references this idea, he uses it to problematize if not reject modes of argumentation that focus on the nebulous category of "influence."[1] Might not Foucault's approach to "madness" and "power" across these two

periods equally be described as a type of historical nominalism and thus without any real debt to Bachelard? How useful are the references to such points of connection when they tend to establish networks of influence, which quickly take on a life of their own? The question is especially important if we consider that the relevant opposition in Bachelard is one between the scientific and non-scientific mind and that it refers the polemic to forces that impede scientific revolutions. Foucault is not a polemical thinker,[2] so the vocabulary and tone used in Bachelard's "psychoanalysis of the mind" is of a different temper and style to Foucault's usual commitments. Further, one might reasonably point out that the category of "historical progress," which attracts Foucault's critical attention, is a good deal more nebulous than the types of erroneous ideas that Bachelard aims to "expel."

In this article I would like to closely examine the evidence for the connections between Foucault's approach to history and specific precepts in Bachelard's and Canguilhem's epistemology. My focus will be on the points of connection between the epistemological approach to the history of various sciences and the status of historical knowledge in Foucault's writing. My contention is that this category of historical knowledge is usefully considered as distinct from the approach to epistemology of the sciences in Canguilhem and Bachelard. Moreover, the treatment of this point identifies some of the ambiguities in the status of "history" as an object of epistemology, or a category of knowledge in these earlier thinkers. Some of these are highlighted in Foucault's late period of "problematizations." In conclusion, I will argue that Foucault can profitably be understood as a sceptic not just about values and institutions but knowledge as well. This aspect of his thinking places it distinctly apart from the major approaches to science in early twentieth-century French epistemology.[3] The case is important to make in detail; the assimilation of Foucault to the rationalist tradition has become an uncontested verity of the scholarship in the field.

epistemology and history in bachelard and canguilhem

"History" and its relation to "science" is one of the core issues for the rationalist tradition of epistemology in France. The topic of history cuts across the many different senses of "science" that can be identified as topics in this heterogeneous "tradition." The point can be elucidated in relation to the different sciences that Bachelard and Canguilhem write about. For instance, Bachelard proposes a division between the scientific and the non-scientific mind, which pivots on the revolution in twentieth-century mathematical physics and chemistry. His advocacy for a psychoanalysis of the scientific mind aims to root out and clear away the sedimentations of pre-scientific conceptualizations, which he considers pre-historical. Briefly, these conceptualizations are reducible to frameworks endorsed in phenomenological-styled thinking: the uncritical focus on the "given," or on the "immediacy" of experience. Bachelard articulates the horizon of contemporary movements in science against the pertinence of such appeals to the "given" or the "immediate." He does so through the vocabulary of "phenomeno-technics." The procedures and techniques of modern science are those in which the "given" must give way to the "constructed" (*Philosophy of No* 122–23). For natural observation and the objects which supply it, modern science substitutes phenomena that are in a fundamental sense the constructs of the equipment and procedures of the science itself. The point has several implications, not least the inauguration of "regional rationalisms," given that it is in laboratories that these phenomeno-technics "work." General notions of "reason" or philosophical concepts from pre-scientific models are redundant for the analysis and comprehension of these new artefacts and the modes of their functioning. Scientific concepts earn their status only if they can be realized in these technical contexts (Bachelard, *Formation de l'esprit scientifique* 61). Bachelard argues accordingly that scientific method is rational in so far as its "object" only

exists in light of its theoretical justification. The methods of science cannot be separated from their theories: determinate scientific facts are established in the application of a coherent technique (*Nouvel esprit scientifique* 176). In different ways – his opposition of the scientific and pre-scientific mind; in the notion of epistemological obstacles; and in the conception of phenomeno-technics – the false concept of historical continuity is an error that Bachelard exposes. This error persists in the conventional practice of the history and epistemology of science as well as in the common-sense appeal to truth as the "immediacy" of sensations (Canguilhem, *Études d'histoire* 179). Bachelard is particularly uncharitable towards the presumed relevance of the assumptions and ideas of traditional philosophy. Philosophy is the name for the obstacles that obstruct contemporary science. Metaphysics neither registers the break that contemporary science represents with other forms of understanding nor the accelerated time in which science now operates. The new structure of science is one in which internal epistemological ruptures are the norm. And this means that it is now only at the level of particular examples that the philosophy of science can give general lessons (Bachelard, *Matérialisme rationnel* 223). Philosophy of science needs to follow science; its relevance depends not on a canon of concepts but solely on its scientific literacy.

The style is polemical and assured: the twentieth-century revolutions in science confine the phenomenological perspective to the pre-scientific epoch. On the other hand, later in Bachelard's career the phenomenological perspective has more forgiving attention, although the evaluative framing of its pre-scientific status is never fully revoked (*Poetics of Space*). The crucial point, however, is that history itself is divided between its pre-scientific and scientific eras. Bachelard advocates a new approach to the history of science, one that follows the revolutions of contemporary science: his approach to history is "epistemological" in the sense that he evaluates history in reference to criteria that exclude non-scientific schemas of value.

The different note that is struck regarding the significance of history in Canguilhem's research on the conceptual history of the life sciences is notable. The history of concepts that he traces in the case of the life sciences has a more nebulous path than the epistemological ruptures that Bachelard charts. Nonetheless, his work accentuates the centrality of history as a core issue in twentieth-century epistemology: in Canguilhem, Bachelard's absolute contrast between the pre-scientific and the scientific mind is not made. His history is less "epistemological" than it is a history of "epistemology" (Canguilhem, *Vital Rationalist* 43).

Canguilhem casts his approach to the history of science against the positivist tradition: in his phrasing the history of science is truly a history and that means that it is a series of ruptures and innovations (*Ideology and Rationality* 116). He stands opposed to the "epistemological inquisition" that takes the present standards of scientific theory as a complete doctrine. Such a position reduces the task of the historian of science to an application of these standards to a past science. Such a stance is blind to the fact that the past of a present-day science is not the same as that science in the past. The approach to epistemology is historical, because it defines scientific truths not as statements of fact or definitive impressions of characteristics of reality but as the provisional results of the constructions of scientific work. A science becomes scientific when it breaks with its "pre-history" in which it sought its objects in the sensible world as givens. It becomes scientific when it constructs its own objects with its own theories and instruments. Scientific proof, Canguilhem emphasizes, "is a work," which "reorganizes the given" and "constructs its organs" (Canguilhem, *Études d'histoire* 192). The "construction" involved in the life sciences has more of a conceptual hue and frame of reference than Bachelard's theory of science as "phenomeno-technics." I will return to this point.

The historian of science must mimic scientific practice in two respects. First, the history of science must take its bearings from the epistemological task of constructing "the ways and means by which knowledge is produced"

(Canguilhem, *Ideology and Rationality* 7). This does not mean that philosophical epistemology has nothing to say in relation to the conditions of production of knowledge. It is here that the relation to Foucault is strongest: no factor that has a role in the production of a specific scientific concept – be it the state of contemporary epistemology, the model of scientificity formulated in an adjunct scientific domain, practical requirements imposed by the economy or political system, or the ideologies and metaphors of the social imaginary – should be left out of the history of that science on the pretext that it is not considered scientifically relevant by the present norms of scientificity. For Canguilhem, "there is no history of science which would be *only* history of science," as Balibar puts it (Balibar 66). Science is precisely a "progressive process of [discovery] governed by *norms of unification*" (Canguilhem, *Ideology and Rationality* 39). Hence the importance that "scientific ideology" has in the history of science.

The second way the historian of science must mimic the scientist is in the awareness that her object is not given but constructed – knowledge is not a process of getting close and seizing hold of the object but of producing consistent results. "Ideology is mistaken belief in being close to truth." The historian of science, like the scientist, "stands at a distance from an operationally constructed object" (39–40). For Canguilhem as for Bachelard, the history of science is an inquiry that mimics the practice of the scientist, notwithstanding the fact that it "is not a science and its object is not a scientific object" (Canguilhem, *Études d'histoire* 22).

Canguilhem consistently maintained that scientific activity must finally be grounded in the normative activity that life as such is. This is not to deny the autonomy of the sciences, that is, to question the truths of science in an external fashion, but to make clear that these truths are preceded by a normative decision in favour of the true, which can only be understood in reference to the normative character of the living's relation with its environment. If he holds that "there is no other truth but that of science" he also holds that the idea of science

is not scientific, that is, it cannot be scientifically justified (quoted in Balibar 58–62).

History can belie the claims of a science, just as, inversely, it may bestow the dignity of science on a theory that was regarded as ideology at the point of its inception. He cites in this regard Darwin's theory of natural selection, which had to wait for population genetics to receive experimental proof and thus properly scientific credentials (*Ideology and Rationality* 104–06). There is a recursive nature to the history of science. The study of the progress of the sciences requires that the historian adopt a position within scientific discourse. If the historian wishes to go beyond recounting pronouncements that claim to state the truth because they are sanctioned by the contemporary norms of science, then it must bring to bear on its history a theory of what counts as scientific knowledge. This epistemological measure is provided by the "present notion of scientific truth" grounded in the "present scientific culture" that contains a whole series of norms. These include instruments of experimentation, methods of observation and proof, and heuristic principles for formulating problems. The epistemologist proceeds from the present model of science towards the beginnings of science, which is the object of study so that only a part of what was thought to be science is confirmed to be scientific. On the other hand, the reference of the epistemological notion of scientific truth to the present norms of scientificity makes it clear that for Canguilhem this point is never more than a "provisional point of culmination of a history" (4). Only by being historical is epistemology scientific in the sense that it mimics the scientific discourse in which the claim to truth is governed by the possibility of critical correction, and is thus inherently historical: "If this discourse has a history whose course the historian believes he can reconstruct, it is because it *is* a history whose meaning the epistemologist must reactivate" (18). By the same token, the epistemologist's history of a science can never be a definitive history since each new constellation of scientific norms carries with it the possibility of a modification in the trajectory of the

conceptual progress that the history of that science must trace. Such modifications range from shifts of emphasis to constructions of new trajectories. The recursive nature of history of the sciences in Canguilhem, which he takes over from Bachelard, sets their approaches apart from the positivist tradition, which views history as a continuous and cumulative progress of the mind determined by "logical laws" whose stages are fixed once and for all (Andreski 19–64). The history of science is truly a history; that is, it is a series of ruptures and innovations (Canguilhem, *Ideology and Rationality* 116).

The history of science is never a history that is recounted but first and foremost a history judged. Bachelard identifies mathematics as the principle of orientation for the judgement of this history, whereas Canguilhem takes his bearings from the question of the vital meaning of knowledge (Canguilhem, *Vital Rationalist* 43). Bachelard distinguishes the history of science from other histories; it consists in the "defeat of irrationalism" and is "the most irreversible of all histories" (*L'Activité rationaliste* 27). The history of a science is a recurrent history because it is one that is *able* to be recurrently judged and evaluated (ibid.). For Canguilhem, knowledge is fundamentally the activity of forming and deploying concepts; and this latter is, as Foucault puts it, "one way of living"; that is, one way of exchanging information with the environment ("Introduction" 21). The two concepts that allow Canguilhem to question knowledge from the perspective of life, namely normativity and error, are also those that define, according to him, the manner of the existence of the living (Ross and Ahmadi 96). "Even for an amoeba living means preference and exclusion" (Canguilhem, *Normal and Pathological* 136). Life is the judgement of value. Hence being normal is defined as being normative, that is, transcending the prevailing norms in favour of establishing new ones (196–97). Equally, human life is defined by him in terms of error. The human being "makes mistakes because [they do] not know where to settle." Humans negotiate with their environment through movement. They gather information "by moving around, and by

moving objects around, with the aid of various kinds of technology" (Canguilhem, *Connaissance de la vie* 105–06). Their existence is one of errancy and normativity, borne of dissatisfaction with the meaning of their environment.

The modest tone of Canguilhem's approach to the history of epistemology is reflected in the provisional tone that Foucault self-consciously adopts when formulating his position on history. Similarly, Foucault uses specific Bachelardian concepts – such as the notion of the epistemological obstacle – in various contexts (even in loose ways, such as his reference to the "very heavy blockage" that is attached to the use of literature as a way of understanding and criticizing political institutions) (*Politics, Philosophy, Culture* 310). These Bachelardian concepts are also relevant more generally as a way of understanding Foucault's relation to the philosophical tradition, and the motivation for discarding some of its terminology and concepts on the grounds of their contemporary explanatory inadequacies (mention might be made here of his critique of the orientating status of the notion of "legitimacy" in classical political philosophy, which effectively shields from view the erosion of the very perspective from which its claim might be measured) (*Power/Knowledge* 95). The shift is simultaneously historical and methodological. For instance, it is in describing how institutions operate rather than what power is and where and how its legitimate exercise might be breached that the historical shift in power relations is legible, according to Foucault (97). Each of these thinkers endorses in some way the notion that a decisive historical shift occurs in (scientific/historical) practices that requires an adjustment to the approach and topics of a field that would be set by the object of study of this field itself. However, this is not a precise enough idea to warrant unqualified claims of "influence."[4] The diversity of the projects that can be attached to this idea is ample evidence for this claim. And the distinction between a scientific and an historical practice that defines the field of their respective analysis needs to be kept in view and even emphasized. Similarly, the claim that a degree of influence

can be detected in the cautious and provisional tone with which Foucault and Canguilhem approach their work on conceptual history is also not strong enough to support either the claim of "influence" or the reference made in some of the literature to a "shared project."[5] Foucault takes epistemology itself as an object of study, whereas the predominant status of epistemology in his precursors is that of a practice.[6] There is a significant divergence here that can best be registered by the scepticism with which Foucault approaches historical practices, institutions and values. Above all, this scepticism is most consistent in the thread that runs through Foucault's writing on "knowledge" bearing practices. My claim here is not that the idea of influence is weak and requires qualification, but that his approach to knowledge is fundamentally irreconcilable with the approach to epistemology in Bachelard and Canguilhem.

The significance of this point may be registered against the background of the treatment of this issue in Foucault scholarship. It is common for commentators to invoke these specific French epistemologists as the salient intellectual lineage for Foucault's writing and to use it as a corrective to other interpretative modes of approach. There has been, to be sure, a recent growth in the attention given to twentieth-century French rationalism, but the tactic of correction in the case of Foucault is not a new one. In anglophone Foucault scholarship the significance of the twentieth-century revolution in the mathematical sciences for French philosophy has been consistently recorded. However, the reasoning used to present this connection has not been critically considered.

Gary Gutting emphasizes Bachelard's and Canguilhem's significance for Foucault's work. He invokes a contextual approach that supposes a continuity between an environment and a thinker. In *Michel Foucault's Archaeology of Scientific Reason*, Gutting writes:

> Foucault situates his work within the tradition of French history and philosophy of science […] Canguilhem, especially through his "history of concepts" and his concern with the status of norms in science and its

history, was the most immediate and strongest influence on Foucault's historical work. But Bachelard's philosophical view of science and, especially, of scientific change was also *a major presence in Foucault's intellectual environment*. (11–12; emphasis added)

Gutting later returns to the importance of the "intellectual environment' in the critical review he published just over a decade later on the occasion of the 2002 translation into English of Béatrice Han's 1998 book *L'Ontologie manquée de Michel Foucault*. Gutting chides Han for misreading Foucault on the topic of experience. He claims that her book "ignores Foucault's detailed discussion of experience" in the context of "the philosophy of science." He refers to the omission in her study of any comment on Foucault's short piece "Life: Experience and Science," which is the basis too for his earlier claim regarding how Foucault "situates his work." On the strength of his claim for the significance of this short text for Foucault's thinking Gutting argues that:

> Here, among other things, Foucault makes it clear that the individual freedom Han reads as existentialist autonomy is rather rooted in the deviations (errors) of an organism acting in a strong field of bio-social forces. ("Review of Béatrice Han")

Han's response to this point in her reply to Gutting's review makes due note of the origin of this short text of Foucault's as his English-language Preface to Canguilhem's *The Normal and the Pathological*, which was only later re-published in French. She comments:

> Apart from the beginning, where Foucault reflects on the status of the philosophy of science in the Twentieth Century, the rest of the paper is dedicated to introducing some of the main themes of Canguilhem's thought: therefore the views subsequently expressed apply to Canguilhem, not to Foucault's own position. This is particularly true of the one you mention, i.e., the idea that freedom is "rooted in the deviations

(errors) of an organism acting in a strong field of bio-social forces." This is explicitly referred by Foucault to Canguilhem's approach, itself seen as a "philosophy of error, of the concept of the living, as another way to approach the notion of life." […] Moreover, even in this context there is nothing about a "field of bio-social forces" in the paper. The "error" in question is defined in strictly biological terms, as a mutation ("an alea which, before being an illness, a deficit or a monstrosity, is something like a perturbation in the informative system, something like a 'mistake'"). ("Reply to Gary Gutting" 7)

The other details of Gutting's dispute with Han's work need not detain us here.[7] What is important is that to correct her approach, Gutting attributes to Foucault the vocabulary that belongs to the developed position of another thinker, one moreover that Foucault's piece and the context of its publication has explicitly framed not as the presentation of his "views" but as the topic for a survey and introduction to the thought of someone else.

Recent Foucault scholarship has also examined the extent of the affiliation between aspects of Bachelard's thinking and Foucault. Interestingly, the supposition is generally based in conceptual categories that Foucault's various research projects viewed with distrust. In his response to the "Epistemology Circle" he advocates dispensing with the "readymade syntheses, those groupings which are admitted before any examination, those links of which the validity is accepted at the outset" (Foucault, "Archaeology of the Sciences" 302). The point is admittedly a very broad one and likely to rule out a number of ways of presenting intellectual influence. Whereas Foucault saw in the use of the nebulous category of "influence," or the idea of significant precursors, pliable mechanisms for establishing connections where none necessarily exist, these types of syntheses are often the mechanisms used to establish the case for Foucault's affiliations with rationalist figures. This is notably the case even in scholarship which aims to set out the rationale behind Foucault's methodological scruples.

David Webb's 2013 book *Foucault's Archaeology: Science and Transformation* argues that Bachelard's "importance for Foucault is quite properly given wide recognition, but the focus tends to be on Bachelard's idea of the epistemological break, and other elements of his thought receive less attention than they deserve" (11). Although Bachelard's "analysis of science does not find its way into Foucault's archaeology, other aspects of Bachelard's work do, most notably his constructivism and his account of temporal pluralism" (146). More specifically, Webb claims that "Bachelard's idea of a 'distributed rationality' and his description of science as 'a well ordered dispersion' both set a precedent that Foucault's archaeology was later to follow" (11–12). He explains the basis for Foucault's divergence from Bachelard in relation to Foucault's conception of power. It is thus a particular stage in Foucault's thinking, namely the writing from the early to mid-1970s onwards, that is used to characterize the critical attitude of Foucault to science, and not a feature of his thinking that is independent of the model set by these French epistemologists, or indeed ideas drawn from any other period of Foucault's concerns:

> [Foucault's] interest in the operation of power in and through scientific discourses meant that he was less of an outright advocate for science than Bachelard had been, and less judgmental about the shortcomings of everyday forms of thought and experience. (12)

The specific treatment of "the operation of power" in fact postdates the *Archaeology of Knowledge*, and it does not extend in any significant manner past the first volume of the *History of Sexuality*. It cannot reasonably be the basis for the differentiation from Bachelard's influence, or the "precedent" he set for the early work that is the topic of Webb's study. Further, what remains of the Bachelardian ideas he mentions of "distributed rationality" and "science as 'a well ordered dispersion'" when the context of study is changed from science (Bachelard) to history (Foucault)? I do not wish to contest the general interest of these types of comparisons

between Foucault and French epistemology. My position is that the way such intellectual history is practised in the case of Foucault is incompatible with Foucault's preferred mode of dealing with history, and insensitive to his implied disagreements with twentieth-century French rationalism on the topic of knowledge. Clearly, this is not a point about sorting out the "influences" on Foucault as one might do in intellectual history, in which an immediate context (either the locality of the French scene, or even the material taught within it from the history of philosophy) furnishes them ready made and they need only to be pointed out. The problem cannot be solved by displacing Bachelard's or Canguilhem's influence for another context or figure, such as the Kantian formulation of the transcendental/empirical doublet as it is used, for instance, in Han's work. Admittedly, the case made for the affiliation between Foucault and French epistemology often has its own strategic basis, such as the polemical one of reducing the significance of phenomenology in debates over twentieth-century French philosophy (Peden). The aim of this paper, in contrast, is to be precise about the distinctive features of Foucault's work in which such ready-made syntheses are placed in question. Such precision can help us elucidate the specific reasons why his work is unable to be effectively absorbed within the immediate intellectual context of French epistemology.

history and knowledge in foucault

One of the motivating principles in Foucault's approach to historical material is the distrust of ready-made, synthesizing ideas. Some of the relevant cases have already been noted, such as the rejection of the idea of "legitimacy" as the relevant "limit" on the operation of government power (*Power/Knowledge* 95). We can also mention his critique of the use of the "repressive hypothesis" as the primary factor in the Victorian attitude to sexuality: the era, he shows, is one that produces new knowledge practices. It specifies and proliferates through them categories of sexual dysfunction in relation

to the norm of the Malthusian couple. Sex is not the target of repression; on the contrary, it is presented as a secret that needs to be unearthed and in this way it becomes the site of perpetual "scientific" interest and intervention (Foucault, *History of Sexuality* 78). Repression and elicitation each belong to the heterogeneous composite Foucault dubs the "apparatus of sexuality."

He often mentions explanatory adequacy as a rubric for his treatment of historical material (10–11). It is true that he did not think his "histories of the present" were exhaustive or that they ruled out other treatments of the recent past. He claimed in some places to be the author of "fictions" (*Power/Knowledge* 193). However, in the case of his treatment of disciplinary power in *Discipline and Punish* and of the emergence of the bio-political logic of the state in the *History of Sexuality* it is clear that certain approaches to history are inadequate to the material they treat. For instance, the focus on legitimacy in the case of power relations shrouds what happens in the prison system. This is less an oversight that could be corrected with further information than it is a consequence of the approach to the material, which is uncritical about the implications of its commitment to the idea of historical progress. The idea that the prison system is an improvement on earlier models of punishment makes the factors involved in modern punishment opaque. Similarly, the ideas that legitimacy is the relevant measure for the exercise of state power in the imposition of punishment and that knowledge is external to power are both exposed as inadequate perspectives. This is the corollary of Foucault's point that the role of knowledge practices in the modern judicial system represents an extension and intensification of power relations. Knowledge of the offender (their past motives and future prospects) is the instrument of the "political anatomy" of punishment, which through the disciplining of the body targets "the soul" (*Discipline and Punish* 29). Modern punishment intensifies the hold of power relations on the individual since it no longer aims to punish what someone has done but to transform what one is (*Power/Knowledge* 47). Knowledge is

its mechanism, rather than a resource for its contestation. The role of knowledge in power relations is shielded by the "test" of legitimacy as the basis for punishment. Similarly, the role of knowledge practices in eliciting interest in sexuality inaugurates an interest that is unable to be satisfied. "What is important is that sex was not only a question of sensation and pleasure, of law and interdiction, but also of the true and the false" (*History of Sexuality* 76). Here, the polarity of truth and falsity is significant not for the prospect of the revision of historical truths, as it is in Bachelard. It is significant, rather, because the polarity cannot resolve anything, the role of knowledge does not entail a practice of revisable judgements, but of perpetual ones, arrayed around a "norm."

The criticisms that Foucault makes of the Marxist framing of Victorian sexuality may also be mentioned here. He points out that the mutually incompatible theses of sexual repression *and* sexual liberation might be used to explain the arrangement of labour relations needed for the emerging capitalist economy. The first suggests labour efficiency; the second the reproduction of the labouring classes. The position that attempts to link Victorian repression to the emergence of industrial capitalism is thus too general to explain anything (Foucault, *History of Sexuality* 5–6). Or, better, the unifying historical thesis of the significance of "capital" cannot explain the contradictory elements involved in the modern idea of sex in the way that Foucault's notion of an apparatus of sexuality can.

We may consider the implications of his position on the intelligibility of social practices in the same way, that is, in terms of his account of how best to accommodate the dispersed rationales involved in diverse historical material. For instance, the intelligibility of social practices follows from the fact that they embody strategic ends, even if the means they adopt exceed or undermine those ends. Thus, the prison was the tool of reformers, but elements of its effective institutional functioning had a swarming effect across other social practices, and in the case of the prison it did not rehabilitate its inmates as the reformers had intended, but

became a breeding ground for criminality. It is, in the *History of Sexuality*, the calculation involved that makes it possible to identify and analyse power relations: "Power relations are both intentional and nonsubjective. If in fact they are intelligible, this is not because they are the effect of another instance that 'explains' them, but rather because they are imbued, through and through, with calculation" (*History of Sexuality* 94–95). This point, which bears on the intelligibility of institutional practices, needs to be distinguished from Foucault's criticism of the view that one could understand power through careful dissection of the motives of one who holds it. In the latter case, Foucault aims to show the institutional effects of power relations which operate without regard for a particular position or person who might occupy it, whereas in the former he is keen to emphasize that power is not some metaphysical force but can be understood in relation to strategies:

> [T]he analysis [of power] should not concern itself with power at the level of conscious intention or decision […] it should refrain from posing the labyrinthine and unanswerable question: "Who then has power and what has he in mind? What is the aim of someone who possesses power?" (*Power/ Knowledge* 97)

Hence the appeal to conscious intention or decision does not reduce the complexity of the field of history in the direction of clarification. It adds an obscuring perspective that is unable to accommodate one of the important features disclosed in Foucault's analyses of the past: the unpredictable effects of strategic behaviour. His interest in the category of unintended consequences is important for clarifying Foucault's attitude to his studies of the past.

One of the intermittent themes in his writing and interviews is a pessimistic conception of human history. For instance, he states in an interview in 1982 that it is necessary to be a "hyperactive pessimist": "My point is not that everything is bad but that everything is dangerous […] If everything is dangerous, then we always have something to do" (Foucault,

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"Genealogy of Ethics" 231–32). Well-intentioned motives are ineffective. Hence, faith in the project of designing well-functioning institutions to ameliorate human suffering is considered, as the case of the reformers shows, a naive aspiration. It seems to me that if we were to present in systematic terms Foucault's view of history its main feature would be the destructive capabilities of human knowledge. These destructive capabilities have no prospect of remediation since there is no reasonable possibility that human beings could possess the type of insight needed to alter them.

> Judgment is being passed everywhere, all the time. Perhaps it's one of the simplest things mankind has been given to do. And you know very well that the last man, when radiation has finally reduced his last enemy to ashes, will sit down behind some rickety table and begin the trial of the individual responsible. (*Politics, Philosophy, Culture* 326)

I will return to this point in my conclusion. Historical events are not correctible; they have none of the epistemological features that constitute the history of science as a practice of recurrent epistemological judgement. Instead, they call for an analysis whose sharpness and precision is not just the aim of Foucault's seemingly inexhaustible series of statements on methodology, but the basis for his view that such analysis may free a space for action (*Power/Knowledge* 193). This view is further explored in what he refers to as "problematizations" (*Fearless Speech* 74).

In *Fearless Speech* Foucault distinguishes the history of thought from the history of ideas. If the latter involves "the analysis of a notion from its birth, through its development, and in the setting of other ideas, which constitute its context," the former constitutes

> the analysis of the way an unproblematic field of experience or set of practices which were accepted without question […] becomes a problem, raises discussion and debate, incites new reactions, and induces a crisis in the previously silent behaviour, habits, practices and, institutions. (Ibid.)

This effect of rendering a field of experience so that it elicits attention and even "induces […]

crisis" is measured across the corpus by the utility that Foucault ascribes to his study of "history." In some interviews he specifically contrasts the political utility of his studies against a more "neutral" approach. This latter approach might take the importance of a science as the criterion for selecting it as a field of study:

> To me it doesn't seem a good method to take a particular science to work on just because it's interesting or important or because its history might appear to have some exemplary value. If one wanted to do a correct, clean, conceptually aseptic kind of history, then that would be a good method. But if one is interested in doing historical work that has political meaning, utility and effectiveness, then this is possible only if one has some kind of involvement with the struggles taking place in the area in question. (*Power/Knowledge* 64)

I would now like to step back from the detail of Foucault's comments on his approach to consider how his work compares with the tradition of French epistemology.

foucault's "archaeology of knowledge" in comparative perspective

It is possible to emphasize, as Foucault does, some of the points of connection between the reflections on history in Canguilhem and Bachelard and the methodology of Foucault's "project" as this emerges in the works of the late 1960s and early to mid-1970s. However, I think the emphasis on dispersion in Foucault's approach to history ultimately runs counter to the thrust of explanation in Canguilhem's conceptual histories and Bachelard's epistemological history. Foucault's claim in the Interview with the Epistemology Circle that we are dealing with "a population of dispersed events" entails an approach to history that is conceptually distinct from the position on history in these different takes on rationalism (Foucault, "Archaeology of the Sciences" 303).

There is no better place to start than with the *Archaeology of Knowledge* as the work that, together with the earlier Interview on "The Archaeology of the Sciences," which is partially incorporated in the *Archaeology*, formulates most systematically the ties between Foucault and the French tradition of epistemology. The objection could be raised against my position that his work in the so-called genealogical period moves away from the "influence" of French epistemology. For this objection, these texts from the "archaeological" period should provide the strongest case for the claim of influence. I would like to focus my remarks on two aspects of Foucault's discussion of this tradition. First, the rather crude analogy that he uses between "anthropology" and the schema of what he calls "total history," or in his more idiomatic phrasing: history that has a "face"; and his retrospective description of the "imperfect attempts" in *Madness and Civilization*, *The Birth of the Clinic* and *The Order of Things* "to measure the mutations that operate in general in the field of history" (*Archaeology of Knowledge* 15).

Now, it is possible to see in various references in the *Archaeology* a set of "obstacles" that Foucault wishes to overthrow. He uses this vocabulary here and in works after 1974 in which the polemic against what he calls "anthropology" is modified, if not discarded. Further, in the category of "mutations" one can identify the resonance with Canguilhem's sensitivity to the aleatory development of concepts in the life sciences. However, these "obstacles" neither have the same function as those non-scientific assumptions which Bachelard designates as "epistemological obstacles" nor, it seems to me, are they strictly compatible with the re-orientation in the approach to concepts that Canguilhem engineers in his "history of epistemology." In a fundamental sense this is because the obstacles that Foucault identifies are not in any uniform sense epistemological ones. Or rather, the "epistemology" they address concerns not what qualifies certain practices and propositions as science but more generally what would be an adequate body of evidence and an adequate way of arranging that evidence to advance a thesis about historical

mutation. If we recall that Canguilhem's approach to conceptual history focuses on the changes that occur when knowledge crosses thresholds of scientificity, and that Bachelard's attempt to identify and expunge the pre-scientific mind is orientated towards the defence of the mathematical basis of contemporary science, we need to ask whether the "mutations" in the practice of history have a comparable frame of reference, either in the epistemological sense or in the sense of the "obstacles" that obscure them. These obstacles include the intrusive assumptions of anthropology (in particular the "homeliness" of the assumption of consciousness as a harbour for consistent explanation), the idea that the sciences, broadly understood, follow paths of evolution, and the resilient assumption that particular ideas and categories are historically unified and continuous. More critically, one might ask what meaning can be ascribed to the category of "historical mutation." Looked at from the vantage point of Foucault's later writing, we might ask whether the category is relevant for analysing, too, points of historical continuity, such as the idea that disciplinary power colonizes and transforms rather than somehow "replaces" sovereign power (*Discipline and Punish*).

Similarly, there is the question of what an "obstacle" could be in Foucault's work, given that the perspective on history is not epistemological but, to use the crude vocabulary of Foucault periodization, "archaeological" and/or "genealogical." Hence in some places where he talks about "obstacles," such as the heavy obstruction that the focus on literature represents, the accent is on the way such obstacles prevent a salient understanding of politics. There is a similar theme in Bachelard's conception of the work of the epistemologist who is to draw attention to the revolution that has occurred in contemporary science and which requires new conceptual practices in order for it to be adequately registered. It is certainly possible to acknowledge parallels in the two fields given the acceleration of change in population movement and management following the industrial revolution, and the technical advances of the modern sciences.[8] Nonetheless,

one may also query the strength of the parallel on the grounds of the precise role epistemology has in each conception. It is difficult to avoid the conclusion that it is the value of knowledge as an authority bearing practice in the post-classical age that is the object of Foucault's criticism, starting with *Discipline and Punish*. To the extent that the archaeological approach seems more compatible with Bachelard's mode of approach, the different contexts of Foucault's interest alter what is signified by "epistemology." It is neither a history of epistemology nor an historical epistemology that captures what Foucault does. The emphasis needs to be placed on history as the "object" of study and "epistemology" as one pathway to this "object." Indeed, the distinction between knowledge practices and epistemology is relevant here since what Foucault is describing is what counts as "knowledge" rather than, as in Bachelard, what threshold needs to be crossed for something to count as "science." Equally, Foucault's question has as its primary schema of justification whether the methodology yields adequate explanation and for that purpose he is resistant to reductive models; whereas in Bachelard, what works to qualify something as science is its technical competence; all other considerations are secondary.

Finally, we can mention the status of the "constructed" in Bachelard and Canguilhem and compare this with the focus on the procedures under which an object is defined as belonging to a particular category of knowledge in Foucault. This term is the pivot of Webb's argument for influence (14). Again, the surface similarities seem to fall away on closer inspection. There is a critical position on the authority bearing practice of "knowledge" which, although it has points of connection to themes in Bachelard and Canguilhem, leads Foucault to identify the pernicious consequences of the "will-to-truth." For instance, in Foucault's essay on "subjugated knowledges," the social and institutional "value" of knowledge practices is interrogated against the counter-claim of those who expressly reject intolerable conditions. The idea that their claims reach no discernible epistemological threshold, that their voices have no rational sound or aura, strikes a chord with some of Foucault's other sceptical claims about knowledge practices.[9]

conclusion: scepticism and knowledge

In Foucault's late work, even the attachment to describing his writing under the heading of a "project" has fallen away. The repudiation of "anthropological" themes and categories has receded as a principle of organization. Its function of demarcation does not surface in the writing after the *Archaeology*. And, to the chagrin of those who consider rationalism the antithesis of ethics, the dimming of his hostility to "anthropology" can be measured by his understanding of truth telling as a self-relation (see Ross, "Speaking the Truth"). Still, it might be objected that the tone of provisional claims, which is not compatible with crude relativism but signals instead some type of methodological rigour, and the focus in Bachelard and Canguilhem on how the historian of science needs to mimic science, or in Foucault's parlance "the dispersed field of events" ("Archaeology of the Sciences" 303), are the relevant points of comparison. It is precisely the way Foucault adopts these aspects of the "tone" appropriate for epistemological investigation that places him closer to the mood of scepticism than (French) rationalism. His study of historical practices leads him to scepticism about values and institutions. In this respect, Foucault is a sceptic of absolutisms. To be sure, he shares with Bachelard the view that philosophical ideas constitute epistemological obstacles that need to be removed; but in his case this removal is part of a general scepticism about the "values" and "institutions" that are formed around knowledge practices, even those attuned to their own errors. And like the ancient sceptics there is an attitude about the type of life one leads that drives many of Foucault's positions, even in his early work: wariness of the posture of authority, and of the pretensions of philosophical "theories" and "ideas" joins with a "personal" scepticism about the capacity of knowledge to change

anything. Scepticism about knowledge-effects is at the antipodes of rationalism, if for no other reason than it explicitly countenances the contradiction between knowledge and belief. In a 1982 interview Foucault states:

> for me, intellectual work is related to what you could call "aestheticism," meaning transforming yourself. I believe my problem is this strange relationship between knowledge, scholarship, theory, and real history. I know very well, and I think I knew it from the moment when I was a child, that knowledge can do nothing for transforming the world. Maybe I am wrong. And I am sure I am wrong from a theoretical point of view, for I know very well that knowledge has transformed the world. But if I refer to my own personal experience, I have the feeling knowledge can't do anything for us, and that political power may destroy us. All the knowledge in the world can't do anything against that. All this is related not to what I think theoretically (I know that's wrong), but I speak from my personal experience. I know that knowledge can transform us, that truth is not only a way of deciphering the world (and maybe what we call truth doesn't decipher anything), but that if I know the truth I will be changed. (Foucault, "An Interview with Stephen Riggins" 130–31)[10]

Foucault aims to describe knowledge practices and their effects; and not to "evaluate" or "judge" them, as Bachelard and Canguilhem do. In the *Archaeology* Foucault describes the "epistemological history" of Bachelard and Canguilhem as

> A type of historical analysis [...] [that] takes as its norm the fully constituted science; the history that it recounts is necessarily concerned with the opposition of truth and error, the rational and the irrational, the obstacle and fecundity, purity and impurity, the scientific and the non-scientific. It is an epistemological history of science. (*Archaeology of Knowledge* 190)

I have argued here that despite some general points of connection, in no respect does this stand as an adequate description of Foucault's

various projects or of the discernible temperament and approach that underpins his intellectual disposition.

disclosure statement

notes

1 Cf. Foucault's contrast in "What is an Author?" between the category of the "founder of a science" and "the initiation of a discursive practice." The latter "is heterogeneous to its [i.e., a science's] subsequent transformations" whereas the former "can always be reintroduced within the machinery of those transformations which derive from it" (218–19).

2 At least according to his self-characterization. See his comments in the 1984 interview with Paul Rabinow, "Polemics, Politics and Problematizations":

> I like discussions, and when I am asked questions, I try to answer them. It's true that I don't like to get involved in polemics. If I open a book and see that the author is accusing an adversary of "infantile leftism" I shut it again right away. That's not my way of doing things; I don't belong to the world of people who do things that way. I insist on this difference as something essential: a whole morality is at stake, the one that concerns the search for truth and the relation to the other. (111)

3 There are a number of varieties of scepticism, of course. In this article, I will propose that Foucault's scepticism about the value of institutions is one that does not propose to replace them with anything. It is outside the scope of this essay to make this point in further detail, but this brand of scepticism may be contrasted with another type found in certain circles of twentieth-century German philosophy. Hans Blumenberg, amongst others, practices a scepticism aimed at the "art of living" that

explicitly accepts the necessity of this "art," under the authorization of an anthropological thesis. The instinct deficiency of human beings means that they rely on such an "art" in order to adapt to an otherwise hostile environment (Blumenberg 8).

4 In this regard, we might note the moral code of Bachelard's *La Formation*. Michel Serres aptly characterizes this as "a work aimed at moral reform." Serres interprets Bachelard's epistemological obstacles as the deadly sins of: "covetousness (realism), libido, lust (sexualization of nature), sloth (non-science at large), pride (will to power and narcissism)." He adds, however, that "Bachelard turned two deadly sins, envy and anger, into scientific virtues" ("La Réforme," translation from Chimisso 149 n. 52).

5 Brenner and Gayon 8: "Foucault acknowledged his debt towards Canguilhem, who reversely considered that Foucault had accomplished his own program. He developed Bachelard's and Canguilhem's program, giving it a broader and more systematic orientation." We can see here how the idea of continuity between the projects is facilitated by the contextual approach of the history of ideas. The authors do not provide a reference for the cited view of Canguilhem on Foucault. The reference they provide for Foucault's relation to Canguilhem is to the later French version of Foucault's English-language Preface to Canguilhem's *The Normal and the Pathological*, also used by Gary Gutting and discussed in further detail later in this article.

6 There is an ambiguity here, which closely follows on the rhetoric of placing scientific activity before any philosophical commitment; the latter needs to be rooted out and examined in light of its suitability for the former. Does this approach to epistemology identify factors pertinent to these sciences themselves, or is the question of history really part of the (external) frame of their analysis? To be more specific, are we highlighting issues to do with the narration of science or those native to different scientific practices when notions like the epistemological threshold or the epistemological obstacle are used?

7 Han attempted to show that Foucault wavered between a mode of analysis that favoured the Kantian identification of the conditions of possibility for historical practices and an approach that sees the focus on these practices themselves as somehow resistant to the transcendental approach. For Han this is a characteristic tension

across Foucault's entire corpus (*Michel Foucault*). Her approach raised the question of the relevant theoretical sources for the analysis of Foucault's writing. Gutting countered that the question of norms in Foucault was explicitly treated in the framework of French epistemology of science (i.e., Bachelard and Canguilhem in particular) and that in this tradition the Kantian approach was problematized and superseded. In short, Han's approach imported the lineage of a philosophical problematic that was the explicit object of Foucault's critical attention (Gutting, "Review of Béatrice Han"; cf. Han, "Reply to Gary Gutting"). The question posed here is whether this exclusive marshalling of particular intellectual traditions, whatever its heuristic merits, captures some of Foucault's distinctive ambivalence about philosophy (e.g., Kant) or knowledge practices (e.g., French rationalism).

8 The rhetoric of adaptation to changed circumstances that both use has been overdone to the point of absurdity in some of Agamben's writing; neither Bachelard's nor Foucault's position should be confused with such excessiveness. See Ross, "Agamben's Political Paradigm of the Camp," for a comparative analysis of Agamben's and Foucault's positions on the topic of conceptual adaptation to change.

9 In his "Lecture One: 7 January 1976," Foucault describes "subjugated knowledges" as "incapable of unanimity […] [it] owes its force only to the harshness with which it is opposed by everything surrounding it" (*Power/Knowledge* 82).

10 Foucault is critical of the way in which some practices of knowledge are authority bearing, but this does not amount to a disrespectful attitude to science. The ambivalence expressed here in Foucault's scepticism regarding the capacity of knowledge to change anything, a feeling which he acknowledges runs counter to the evidence of the revolutionizing effects of advances in science, may be taken to parallel the perspective Bachelard has on the mind as both primitive and scientific. In each case there is a fundamental ambivalence of sentiment expressed.

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