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Can history be a science?

I.

It would be pointless to try to discuss the question, "Can history be a science?" without clarifying its central terms, "history" and "science". For there is no general agreement about what these terms mean; and indeed, it is doubtful that they mean anything very specific, taken in isolation from the various contexts of discourse in which they may appear. A discussion based upon vague and contested terms is bound to be without profit. What we need to do is to stipulate meanings for the sake of our present discussion, after which we can reflect upon the conclusions to which our stipulations have led us. Perhaps we will be satisfied with our work; or perhaps we will become convinced that the stipulations that we made were misleading or fruitless.

II.

Let us first say that *science is the systematic and critical search for the apposite understanding of law-governed phenomena; a search that is grounded in the application of recognized standards of evidence, inference and sound practice.*

By saying that science is *systematic*, we mean that one scientific investigation takes account of, and is correlated with, others, both past and present. Science as a human activity is collective and cooperative, at least globally speaking; and the various sciences are interconnected, results in one area having significance for other areas. Scientific projects are not undertaken at random, or in isolation from previous work. Speaking of science as systematic supposes a community — however diffuse and inexactly circumscribed — within which investigations, hypotheses, and findings are communicated and which takes collective responsibility for the practice of science.

By saying that science is *critical*, we mean that all investigations, hypotheses, and results communicated to the scientific community are meant to be received and evaluated with an eye to the methodological standards recognized and supported by that community.

Taking up a view set out by Aristotle, it is here stipulated that science is concerned only with *law-governed phenomena*. This does not imply that only such phenomena are worthy of study, nor that other phenomena could not be studied in a critical and systematic way; but it does imply that any study of non-law-governed phenomena would not be scientific. The significance of this limitation to law-governed phenomena is in fact uncertain, since it is not entirely apparent — and is indeed debated — which phenomena may be considered to be law-governed and which not. It is not settled how the notion

of "law-governed" is to be understood; and even if this was stipulated, the matter would still be unclear as to cases. Phenomena assumed to be law-governed might turn out not to be so, and the converse is likewise possible. Whether or not a given type of phenomenon is law-governed is not self-evident; it is a matter that can only be resolved through investigation, and such an investigation may be quite subtle and long-reaching. We will have more to say about this matter presently.

By the *apposite understanding of law-governed phenomena* is meant the sort of understanding appropriate to law-governed phenomena *as* law-governed phenomena. Just because a given phenomenon is law-governed does not mean that a given approach to understanding it must be concerned with its law-governed nature. For example, suppose for the sake of argument that meanings are law-governed. A theory of meaning might be aimed at describing the principles that govern meaning. Now literary criticism might aim at grasping the meaning of a certain text, say, a poem by Yeats. But the point might be to interpret the text — we can call the understanding aimed at *interpretive* understanding — and giving the interpretation might not appeal in any way to the principles governing meaning. Indeed, this attempt at understanding might be completely unconcerned with the question whether or not meanings are, or are not, law-governed.

The two last exegetical points indicate that our definition of science supports a certain idea as to how scientific understanding is to be achieved, although the idea is not strictly entailed by our definition. The idea is that science aims at discovering the laws or principles that govern various domains of phenomena and at explaining the phenomena that fall within those domains by showing how they derive from the laws that govern them. This is scientific explanation as conceived by John Stuart Mill, Carl Hempel, and a host of others. The apposite understanding of law-governed phenomena is achieved through providing explanations of this kind.

When we characterize science as a search for understanding *grounded in the application of recognized standards of evidence, inference, and sound practice*, we refer once more to the methodological standards recognized and supported by the scientific community. These, we said, underlie the critical aspect of science, for it is with an eye to these standards that investigations, hypotheses, and results communicated to the scientific community are meant to be received. But these standards are also what shape the search for understanding to which we here attach the name *science*. They are the standards that scientific education and training are meant to inculcate in those who would become part of the scientific community; indeed, an understanding of, and respect for, these standards may be viewed as the (only) true credential of membership in that community.

The standards in question are accepted standards of *evidence, inference, and sound practice*. There are important realms of inquiry to which no such standards apply. Philosophy, which may be characterized as a systematic and critical search for understanding — and indeed as a paradigm of such — may be contrasted with science in precisely this respect. For in philosophy, the standards of evidence, inference, and sound practice are all a part of what is debated.

Is the fact that an action would produce the best balance of happiness over unhappiness evidence for its being morally estimable? John Stuart Mill says yes; Immanuel Kant says no. What is contested here is not just what particular

actions are morally estimable (indeed, there might not be much disagreement about that) but rather what sorts of considerations would be material to considering an action to be so. This is a question about what to count as *evidence*. If observed instances of *A* have all been instances of *B*, may we legitimately conclude that instances of *A* yet to be observed will likewise be instances of *B*? Most philosophers of science think that we may; but Karl Popper and his school think that we may not. This is a question about what to count as *legitimate inference*. Is a notion that we are unable to explicate or analyze in terms of sense–experience (say, the notion of obligation) to be dismissed as nonsensical? Or may notions of this kind be given a place — even a central place — in our accounts of the world? Many so-called "empiricists" have made the former claim, while many so-called "rationalists" have made the latter. This may be understood as a disagreement about what constitutes *sound practice*.

These are the sorts of differences that we find in philosophy, but not in science. Philosophy may be thought of as a search for standards of evidence, inference, and sound practice that might someday be accepted as forming a framework for certain realms of inquiry. When such a framework has been achieved, we speak of "science". Until such a framework is achieved, we speak of "philosophy". This may explain the common sentiment that philosophy never gets anywhere — simply, when it does get somewhere, we switch our terminology. On the view here presented, philosophy is the mother of the sciences. Sciences come to exist in the wake of philosophical creativity, reflection, and debate. A subject–matter becomes scientific when philosophy has created a framework within which it may be investigated on a common ground.

We should note that science is not, on this view, a domain within which all, or most, matters are settled. On the contrary, science may be — as it seems in fact to be — a hotbed of controversy. But it is a domain within which controversy is carried on within a framework that provides the basis for eventual settlement, because there is a common understanding of the kinds of evidence that may count for or against a given view and of the ways in which this evidence may be applied to the case at hand.

In developing our characterization of science, we have stressed that science is a human activity, rooted in a community that applies normative standards to practice, to theory, and to results. These standards may change over time. What characterizes science is not the standards to which it cleaves at any given moment, but that it cleaves to some such set of standards at every moment. But every science has an historical dimension, and may be seen as the development of understanding within a certain tradition.

Our way of characterizing science is not philosophically impartial and is not a characterization that anyone could be forced to accept. It is, however, a view that many have accepted, at least in its essentials, although most often without formulation or announcement. It captures — or is at least meant to capture — one of the leading ideas about science.

We can add to what we have so far said that science may be *observational*, *explanatory*, or *technical*; these three modes of scientific practice are distinguished by their aims.

Observational science is concerned to *describe* what happens, both in particular instances and as a rule. In other words, it describes both individual

events or conditions and also regularities. Observational data constitute its basis; it is not here implied that "what happens" may be simply observed (eg it was not simply observed that the planets revolved around the sun in elliptical orbits). On the contrary, "what happens" must often be hypothesized in the wake of certain observations and these hypotheses tested against further observations. There is in fact a certain sort of explanation which belongs primarily to observational science: the sort of explanation that "organizes and makes plain" a given body of observational data (to borrow a phrase from Nancy Cartwright).

Explanatory science is concerned with *explaining why* what happens happens. It is concerned with framing causal explanations. Explanatory science presupposes observational science. On the other hand, it might be said that observational science anticipates explanatory science; for in isolation — without the explanatory goal in prospect — observational science would hardly be recognizable as science.

Finally, technical science consists in the *application* of the results of observational and explanatory science to practical endeavors: to the development of technology. Technology need not be scientific, by the way; it may be the offspring of practical know-how and experience. It should be thought of as scientific just to the extent that it depends upon the application of observational and explanatory science.

A typical scientific discipline combines all three of the modes just described, rather than restricting itself to any one of them.

III.

Let us now say that *history is the systematic and critical search for the understanding of past events, selected and treated with a view to their human significance; a search which is grounded in the application of recognized standards of evidence, inference, and sound practice.*

Here again we give a characterization that no one would have to accept. History can be described differently. But it does not seem unreasonable to describe it as we have. Our description is modest and seems at first glance to describe the kind of activity in which many historians are engaged. Let us look more closely at the elements of the description.

We see immediately that this characterization of history reiterates many of the elements that were included in our characterization of science. History is described as a *systematic and critical search for understanding*, and this — particularly as regards the implications involved in describing history as *systematic* and *critical* — is to be understood in more or less the same way as before. We said earlier that in attributing these features we made tacit reference to a certain community. In the present case, rather than referring to the scientific community as a whole, we refer to a smaller group, which may simply be described as the community of historians. We leave open for the moment the question whether this community is to be viewed as a part of the scientific community.

We have also described history, like science, as *grounded in the application of recognized standards of evidence, inference, and sound practice*. While we leave open the possibility that these standards differ in certain respects from the standards applied by the scientific community, they are broadly speaking

standards of just the same kind. Taken together with the systematic and critical character that we have attributed to history, we may say that these features suffice to characterize history as a *discipline*. Whether it is a scientific discipline is a matter that we will go on to consider. The position taken here is that every science is a discipline, but that not every discipline is necessarily a science. It is perhaps a bit unnatural to describe science globally as a discipline, but there seems little harm in doing so; so in addition to saying, on the basis of the features just mentioned, that physics, chemistry, biology, and so on are disciplines, we will also apply the term discipline, at a higher level so to speak, to science as a whole. As a discipline, history is evidently to be thought of as being at the level of the individual scientific disciplines just mentioned, and not at the more global level.

Having looked at the elements common to our characterization of science, on the one hand, and history, on the other, let us now turn to the special elements included in our description of history.

We have characterized history as concerned with *past events, selected and treated with a view to their human significance*. Now the term *events*, as used here, is meant to cover human actions, both individual and collective. It would arguably be too narrow to restrict the domain of history to human actions, since various events, such as floods and famines, have had human significance and have, indeed, led or forced human beings to act, singly and collectively, in various ways. But much of what historians have to tell us concerns what people have done, for instance that Caesar led his legions across the Rubicon, thus defying the Roman republican government; or that on 1 January 1863, Abraham Lincoln issued a proclamation abolishing slavery in the United States; or that Parisians stormed the Bastille on 14 July 1789.

The past events with which the historian is concerned are first and foremost human actions. But even with this firmly in mind, most past events — most past human actions — are of no concern to the historian. It is only those events whose human significance is robust that belong to the subject matter of history. The idea of "human significance" is not clearly fixed; in fact, one might look upon it as contested among historians (and among others as well). One can clarify by example the kind of thing that is meant in mentioning this as a key feature of the events that concern history. An event has human significance if it is constitutive of or affects central elements of human social life such as language, culture, political organization, economic organization, class structure, family structure, or modes of employment; this list is of course not meant to be complete. Thus, Napoleon's presenting the Empress Josephine with a gold necklace in 1807 would not have human significance in the sense meant here; but his reconciling with the Emperor Alexander of Russia in 1807 would.

That said, however, it seems that historians have quite different ideas about the events that have human significance. A long tradition in history selects mainly particular acts of powerful political figures as having significance of this kind. Perhaps the greatest part of written historical work focuses upon the struggles of such figures to gain and retain power, and upon the acts that they performed in exercising that power (eg levying taxes, suppressing religions, building fleets, commissioning calendars, mounting wars, and reforming laws). This selection could, of course, be seen as merely reflecting the personal interests of the bulk of historians. But historians typically pretend to be doing more than writing about the matters that fascinate them individually; they say to us in effect, "Look, *these* are the events that made a difference to human social life

in their time; *these* are the events worth writing about." When historians remain silent about events in the lives of common people, for instance — as they have indeed done until quite recently — they reflect their judgment that such events are of little consequence or in our terms lack "human significance".

Historians not only select for treatment events or actions whose human significance is judged to be robust, but they also investigate and write about those events in such a way as to bring out or explain their human significance. That seems to be the point of researching the past in the historians' way and of writing history: to grasp, and then to convey to an audience, the human significance of salient past events.

History may be descriptive, concerning itself with *what* happened — for instance with the question whether Richard III of England did, or did not, murder the little princes in the Tower — or it may be aetiological, concerning itself with *why* certain things happened — for example with the question of why so many Oklahoma farmers migrated to California in the 1930s.

IV.

We can now ask whether history, as we have briefly characterized it, could be a science in the sense described earlier.

In this regard, we need to consider first the question whether the phenomena studied by history are law-governed. These phenomena are, we said, past events, including past human actions, both individual and collective; indeed, it is primarily past human actions of which historians seek understanding, and we may thus restrict our attention to them here. If human actions are not law-governed, then that would mean, according to our formulations, that history could not be a science.

It is not easy to answer the question of whether human actions are law-governed for several reasons. One of the main reasons is that it is not clear what requirements apply to a phenomenon said to be law-governed. Another reason is that even were it in fact the case that human actions are law-governed on some reasonable construal of what this means, we have not yet come close to discovering the laws that govern them. Thus, we are not in a position to assert with any confidence that human actions are law-governed, even if they are.

The question we are now considering comes up not only in connection with history but applies to all of the social sciences. Interestingly, history is sometimes classified with the social sciences and sometimes with the "arts"; and this may reflect two different ideas about what history is or aspires to be. Be that as it may, if history is any kind of a science, then it is evidently a social science, or what John Stuart Mill would have called a "moral science".

The moral sciences, for Mill, were those whose target phenomena were grounded in the "laws of mind". Mill imagined that there were laws of mind, properly so-called, although these he considered largely undiscovered in his day. These would be the principles governing thought, feeling, intention and therefore human action. Just as physics and chemistry may be thought of as the fundamental natural sciences, studying the basic principles according to which all natural phenomena work, so psychology and ethology may be thought of as the fundamental moral sciences, studying the basic principles of mind and

action. And just as geology, biology and other special natural sciences might be thought of as investigating the ways in which the basic principles of nature work in special contexts, in application to particular subject-matters, so history, sociology and other special moral sciences might be thought of as investigating the ways in which the basic principles of mind work in application to particular spheres of thought and action. Hence, Mill thought of the natural and moral sciences as two separate, but structurally and methodologically similar, systems. By implication, the basic laws of mind would be counterparts of such principles as the law of gravitation: of the same kind from the logical or methodological point of view, but applying to very different phenomena. These would evidently be deterministic laws, expressible in the form of universal (that is unexceptionless) generalizations.

Mill considered the question whether the laws of mind might not be shown to reflect, and to be dependent upon, the laws of nature; whether, in contemporary language, the social sciences might not be reducible to the natural sciences. Mill thought that this possibility could not be ruled out, but that there was no real evidence that such is the case. He thought it anyway a very premature question, one that could not be seriously debated without a lot more being known than was known in his time.

Mill's approach, then, is to think of the social sciences, including history, as nascent sciences, making the reasonable assumption (as Mill thought it to be) that the phenomena which they study are governed by fundamental "laws of mind". History so conceived would be ultimately concerned with providing "covering law" accounts of past human actions. And these accounts would in many cases be causal accounts; not, however, in terms of physical causes but rather in terms of mental causes such as motives and intentions.

This is surely a possible point of view; but we have not come much further than Mill's contemporaries in discovering the basic laws of mind upon which the social sciences are meant to be built. It has, however, come to light in the interim that the idea of deterministic governance by basic laws does not hold even for physical phenomena. In other words, not even basic physical phenomena are "law-governed" in the sense imagined by Mill. Yet we are reluctant to give up the idea that the physical sciences are sciences. So we need either to abandon the view that law-governed phenomena form the subject-matter of the sciences, or we need to appeal to a different notion of "law-governed" than Mill (and many others) had in mind. Here, the second approach is recommended.

Michael Scriven has advanced the view that, for the purposes of history at any rate, human actions and other historical events need not be seen as governed by anything more than very loose *ceteris paribus* principles, expressible as "truisms" or what Scriven sometimes calls "normic statements". And I, among others, have argued that this may also apply widely to the phenomena studied by the natural sciences. If this view is correct, we may arguably be said to know already that human actions are law-governed and to know many of the laws that govern them. Without pursuing this question further here, let us imagine that the phenomena studied by history are law-governed and that history is not to be excluded from the sciences on that ground.

But now the question arises whether history aims at understanding past human events *as* law-governed phenomena. If so, that would mean that historical research should be heavily concerned with showing how particular past events fall under laws; or at least it should frequently invoke the laws governing

human actions in the descriptions and explanations that it offers. This seems not to be the case, even if it is granted that historians must assume, in offering such descriptions and explanations, that the events with which they concern themselves are governed by particular laws (which could perhaps be stated if necessary). Historians are also little concerned with discovering and articulating the laws, if there be such, that govern human actions; whereas natural scientists are very much concerned with bringing to light the principles which govern natural phenomena; indeed, this may be seen as the key to the understanding of nature sought by the natural sciences. Historians seem to be concerned with quite different matters, namely with bringing out the human significance, as we have called it, of past events. The understanding aimed at by historians might therefore be described as the understanding of the human significance of past events.

In pursuit of this sort of understanding, the historian must, of course, give an account of what has happened and also of why it has happened. Since it is mostly human actions that are in question, such an account is usually an account of what has been done and why it has been done. It has been frequently maintained that an account of what has been done — and even more so an account of why what has been done has been done — must indicate something about the intentions or purposes with which the agents in question acted. Actions fall under various descriptions, not all of which make reference to the intentions that underlie them. Intention-indicating descriptions seem, however, to be necessary elements of any account of why an action has been done, in the sense of "why" which looks for an agent's reasons for acting. Descriptive history may thus appear to be less dependent than aetiological history upon giving an account of intentions. But, in the way that we said that observational science anticipates explanatory science, descriptive history surely anticipates aetiological history. An historian could hardly consider the question whether or not Richard III of England murdered the little princes in the Tower without considering what reasons Richard would have had for murdering them.

Furthermore, the human significance of an action lies not only in its effects but in its underlying intentions. For we assess such significance not only in terms of an action's leading to economic ruin, to the growth of cities, to industrialization, to the decline of scholarship, to the dissolution of the nuclear family, to urbanization and the like, but also in terms of its being short-sighted, ill-considered, stupid, cruel, clever, generous, selfish, forward-looking, and so on. Bringing about economic ruin through design is a different sort of act, with a different sort of significance, than bringing about economic ruin through stupidity; and the source of the difference lies in the intentions that underlie the actions.

The necessary concern with giving an account of intentions gives us a clue as to why historians have traditionally refused to consider as historical data anything other than written accounts, eschewing, for instance, the ruins, gravesite bones, and artifacts which so occupy archaeologists. The idea must be that written texts are the sources out of which we are most likely to be able to read intentions. From any other point of view, this dogma of historians is hard to comprehend.

In any case, what we have described here as the sort of understanding at which history aims is evidently of a very different sort than that at which the sciences aim. And this is probably the strongest reason for saying that history is not, and indeed does not seek to be, a science.

V.

The sort of understanding at which history aims (according to our account) has sometimes been called "narrative" or "interpretive" understanding. The historian must tell a story about events in which their human significance (as the historian understands it) is brought to light. The significance of an event — even where that event is an action — is not something that it contains wholly within itself, but depends both upon its inherent qualities and upon our normative reactions to those qualities. Significance depends both upon the events and upon the interpreter. The story told by the historian must therefore embody (and convey to an audience) a certain normative stance — a perspective on human significance that is applied to the events that are treated. This perspective will influence the historian's account of what has been done and of why it was done, and it will also affect the way in which an event is placed into a horizontal narrative designed to reveal both its roots and its portent.

It is clear from what has just been said that history is thoroughly and inescapably normative. This might be thought to tell against its being a science, since it is often maintained that science is (or should be) "value-free". But that is no part of what has been maintained here. Indeed, we have claimed that science is grounded in normative standards respected and applied by the scientific community; this might be called the *constitutive normativity* of science. What we have claimed here about history is that it is also *perspectivally normative*, in other words, that it makes value judgments with respect to its subject matter. (These two types of normativity have often been confounded together in discussions concerning the "value-freedom" of science.)

Our characterization of science did not specify that it must be value-free in the latter sense (that it must avoid perspectival normativity). We required only that science aim at understanding law-governed phenomena as law-governed phenomena. In order to show that science must not be perspectivally normative, one would therefore have to show, given our account, that perspectival normativity is incompatible with understanding law-governed phenomena as law-governed phenomena. And I do not think that this can be shown.

Since ideas about human significance change over time (and are diverse even at any given time), history must be written in many versions, and re-written, even about the same events (or what might be identified as "the same events" under some thin description). This need not show that history cannot be objective in a certain sense. Of course it cannot be objective in the sense of being free of normativity. But it can objectively reflect what may be said about a given set of past events from a given point of view about human significance; and the historian can also be explicit about which point of view he takes.

VI.

The conclusions that we have reached about whether history can be a science, and about related matters, are of course very tentative ones. We have asked large questions and given overly quick answers. But our discussion was not meant to answer our large questions once and for all, but to show by example how such questions must be approached and to offer some food for thought to those who would like to pursue these questions more deeply.

This paper was originally presented on 7 December 2001 as a public lecture invited by the Department of Philosophy of the University of Genova. It was intended mainly for students, but was meant as well to have something to offer to academic colleagues in history and philosophy. The main point of the paper is not to answer its title question definitively or to provide a conclusive definition of history, but to show how questions of this kind may be approached in a helpful and illuminating way, as opposed to getting bogged down in fruitless argument.

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