

WHIGS AND STORIES: HERBERT BUTTERFIELD AND THE HISTORIOGRAPHY OF SCIENCE

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1. INTRODUCTION: CRITIQUES OF WHIGGISHNESS

For many years I knew only a handful of things about Herbert Butterfield: that he had been Regius Professor of History and Vice-Chancellor of the University of Cambridge; that as Chairman of the Cambridge History of Science Committee he had played an important role in the consolidation of the subject as an academic discipline in the post-WWII years; that in *The Whig interpretation of history* (hereafter *WIH*) of 1931 he had applied the terms ‘Whig’ and ‘Whiggish’ to present-centred historical writing; and that in *The origins of modern science (OMS)* of 1949 he had declared of the Scientific Revolution that it “outshines everything since the rise of Christianity and reduces the Renaissance and Reformation to the rank of mere episodes”. The little I knew puzzled me. How could Butterfield’s enthusiasm about the origins and progress of modern science be squared with his disapproval of presentism? Why do historians of science so often, and mainstream historians so very rarely, follow Butterfield in using the terms ‘Whig’ and ‘Whiggish’ to designate and denigrate presentism? And why should historians of science in the 1970s and ’80s have become so excited about a critique of presentism dating from 1931? My puzzlement deepened when I read *WIH*, for Butterfield’s principal concerns in that book seemed to me far removed from those of present-day historians of science who denounce as Whiggish the imposition of our categories on the deeds and works of past agents who lacked such categories. What relevance, I wondered, does Butterfield’s polemic really have to history of science today? This paper is the record of my attempts to answer these questions.

Life is short, and negative general hypotheses are notoriously hard to confirm. However, my admittedly superficial, if time-consuming, study of the reception of *WIH* by mainstream historians has confirmed my initial impression that among them few approved or adopted Butterfield’s extended use of the terms ‘Whig’ and ‘Whiggish’. Several reviewers criticized Butterfield for characterizing as “the Whig interpretation” failings equally evident in the writings of Tory and Catholic historians.¹ My perusal of twenty or so recent historiographical works turned up only a couple of appreciations of Butterfield’s extended usage²; and my skimming through the runs of several historical journals was just as poorly rewarded.³

In fact, Butterfield’s use of ‘Whig’ and ‘Whiggish’ flouted a well-established and much more precise usage. For at the time he wrote, the terms were already entrenched in their application to histories which celebrated not progress in general, but specifically the progressive triumph of English representative institutions and

constitutional liberties, typical exponents of the genre being Charles James Fox, Thomas Babington Macaulay and G. M. Trevelyan.⁴ Moreover, in the preceding four decades, objections similar to Butterfield's to such histories had been widely voiced.⁵ Thus they were criticized for their anachronisms resulting from their assumption of a continuous English historical tradition culminating in the present form of parliamentary government. And the new brand of 'professionals' in university history departments viewed askance the Whig constitutional historians' concentration on similarities rather than differences between past and present institutions as well as their political partisanship, at odds with the impartiality of a more 'scientific' approach based on the critical assessment of sources. Further, the historiographical defects to which Butterfield pejoratively applied the terms 'Whig' and 'Whiggish' were ones that historians had been accustomed to describe, and were to continue to describe, in more perspicuous terms. Thus 'anachronistic' had long been routinely applied to writings that located things outside their proper historical times (the clock in Shakespeare's *Julius Caesar*, for example); and the term was applied also to accounts that treated events and institutions proleptically, that is, with an eye to subsequent developments (as when *Magna Carta* is described as the source of our constitutional liberties).⁶ In the twentieth century, accounts showing such failings were often characterized as "present-minded" or "present-centred" as opposed to "historical-minded" or "historical".⁷ No wonder then that mainstream historians (including Butterfield himself in *The Englishman and his history* of 1944 and subsequent writings) should have proved resistant to his drastically extended usage of the terms 'Whig' and 'Whiggish' in *WIH*.

As for the history of science, I have been able to find no following in the three decades after the publication of *WIH* of Butterfield's idiosyncratic usage of 'Whig' and 'Whiggish'. The first instance that I have traced comes in a response by Henry Guerlac to a commentary delivered in 1961 by the social and demographic historian Peter Laslett in a conference session devoted to "problems in the historiography of science".⁸ One of the talks on which Laslett commented was Guerlac's "Some historical assumptions of the history of science".⁹ Guerlac had pleaded against specialization, urging the integration of the history of science into the general "study of cultural and societal change".¹⁰ Laslett went much further, calling in question the very notion of science in the seventeenth century, and hence the identity of the history of science.

My comments, then, are to be parochial, the comments of an historian on one particular society, English society, at the time of the Scientific Revolution. And I start with this question: What did it mean to be a scientist in the seventeenth century? Science was not, for the men themselves, what might be called an activity in itself, and it is not to be made so by using their own term for it, the term natural philosophy. Rather it was what might be called a series of epi-phenomena, epi-phenomena of activities which were activities in themselves.... The epi-phenomena I have talked of are not to be made into a whole activity in itself by free use of the word anticipatory, with evolutionary added where

necessary, by maintaining in fact that wherever we find that men were right (scientifically right) or on the right track in the seventeenth century, there we have the history of science. To do this is to commit the one and only error of general principle which the historians can commit, for it is to read history not forwards, as it happened, but backwards.¹¹

And he went on to refer to “what we call the Whig interpretation, reading history backwards”.¹² Guerlac, sensitive to the threat to the coherence of his discipline, responded defensively:

While I agree with Mr Laslett about the dangers of writing retrospective or ‘Whig’ history, and have stressed the importance of seeing early science, good or bad, as cultural manifestations of earlier periods, I feel we have a legitimate right to be especially curious about those aspects of early thought which prepared the way for science as we know it today.¹³

By the mid-1970s, it had become commonplace among historians of science to employ the terms ‘Whig’ and ‘Whiggish’, often accompanied by one or more of ‘hagiographic’, ‘internalist’, ‘triumphalist’, even ‘positivist’, to denigrate grand narratives of scientific progress. At one level there is, indeed, an obvious parallel with the attacks on Whig constitutional history in the opening decades of the century. For, as P. B. M. Blaas has shown, those earlier attacks were part and parcel of a more general onslaught in the name of an autonomous, professional and scientific history, on popular, partisan and moralising historiography.¹⁴ Similarly, in the 1960s and ’70s, the period of consolidation of the history of science as an academic discipline, the attacks on ‘Whiggishness’ (which sometimes appears as ‘Whiggism’ in this era of isms), ‘triumphalism’ and ‘hagiography’ were of a piece with a general repudiation, in favour of more professional and disinterested approaches, of the didactic and often moralistic writings that had dominated the field right up to the 1960s. At the level of content, however, there are significant differences. Many of the anti-Whig historians of science did indeed share with Butterfield and his precursors a dislike of approaches that concentrate exclusively on origins, anticipations, and the great men who have fostered progress. But in Laslett’s intervention, as in the subsequent polemics against Whiggishness by historians of science, the main concerns are far removed from Butterfield’s. Thus, critical though he was of the notion of continuous progress at the hands of great men, Butterfield showed no qualms about the notion of scientific progress itself, or about the application of the term ‘science’ to ancient and early-modern mathematics and natural philosophy. In fact, among all the various types of present-centredness denounced by him in *WIH*, conceptual anachronism, the application of our categories to the works and deeds of those who lacked such categories, is conspicuous by its absence.¹⁵ Nevertheless, by the 1970s and ’80s it was above all the conceptual anachronisms associated with narratives of scientific progress that historians of science had in mind when they inveighed against Whiggishness.¹⁶

When we take into account the very different contexts in which Butterfield and his

post-WWII emulators wrote, the differences are unsurprising. As already noted, Butterfield's *WIH* followed forty years of fierce attack on Whig constitutional history, the critics being out to vindicate an autonomous research-based history against didactic histories linked with the teaching of law and the practice of politics. Accordingly, these critiques focused on the presentist "common-law mind" which, in appealing to historical precedents to justify present practices and policies, fails to appreciate the dissimilarities between past institutions and present ones.¹⁷ For post-WWII champions of the newly professionalized history of science the targets were quite different. Above all, they were out to establish a critical distance between the history of science and the teaching and promotion of the sciences. In particular, they were suspicious of the grand celebratory and didactic narratives of scientific discovery and progress that had proliferated in the inter-war years.¹⁸ Such narratives traced modern science and its disciplines back to the Renaissance if not to classical Antiquity; and in so doing they recast past factual and theoretical claims, often drastically, in modern terms. It is no wonder, then, that it was the presentism that imposes modern categories on past periods that lacked them — Aristotle's "biology", medieval "bubonic plague", Descartes's "epistemology", Saccheri's "Riemannian geometry", etc. — that came under the most intense fire.

Here, I believe, the linguistic turn was, as in so many other fields, a turn for the worse. As we shall see, in *WIH* Butterfield had raised serious questions concerning the impacts of present-centredness on the practice and uses of history; but by the '70s and '80s many historians of science had reduced the serious issues of presentism to quibbles about the proper uses of individual words. I have argued elsewhere that conceptual anachronism is indispensable for the purposes of historical interpretation and explanation; and, moreover, that vicious conceptual anachronism, the kind that makes nonsense of past deeds and works, is in fact rare in recent writings by professional historians of science.¹⁹ But it is one thing to adopt a relaxed attitude towards conceptual anachronism, quite another to be complacent about Whiggishness in Butterfield's sense. For Butterfield's *WIH* raises a whole series of practical historiographical problems of genuine importance, difficulty, and topicality.

2. BUTTERFIELD'S HISTORICAL PRECEPTS

To set the stage let me outline Butterfield's general views on the ends and means of history.²⁰ First and foremost, historians should study the past as an end in itself, seeking to understand and "resurrect" past people, their deeds and their works. Indeed, they can and should seek to understand past agents better than those agents could understand themselves, by grasping the ways in which their thoughts were unconsciously conditioned by their circumstances and by exploring the unforeseen and unintended consequences of their works and deeds.²¹ The historian should not pass moral judgements on past agents, but be a mediator between past and present, "neither judge nor jury but expert witness".²² As for the scope of history, the admittedly unattainable ideal is the total history of civilization — and in this connection Butterfield protested at the domination of his field by constitutional history, pleading

for a major role for the history of science.²³

As for means, the first step in all historical study is to recognize the distance of past people from ourselves. Thus in his Cambridge inaugural lecture in 1944, a time when the behaviour of American troops was causing considerable ill-feeling amongst the British, Butterfield announced:

The English soldier who declared that he had once hated the Americans, but had discovered that relations became satisfactory when he ceased to regard them as “cousins” and began to look upon them as foreigners, had taken the first step towards becoming an historian. It was tantamount to the discovery that the anomalies are removed (or at least their harmful results are neutralised) if they are regarded as subject to historical explanation, and if we cease to expect other people to be like ourselves.²⁴

With regard to historical understanding itself, an indispensable first step is rigorous analysis of the sources. As Chairman of the Cambridge History of Science Committee, Butterfield worried that scientists and ex-scientists were leading the subject astray. All-too-evidently supposing that such persons were not always careful in their handling of sources, Butterfield was, when addressing them, especially insistent on the need for strict source criticism.²⁵ But scholarly rigour alone is not enough. In addition to close engagement with the sources, what Butterfield called “historical resurrection” requires the virtues of the historical novelist: insight, imagination and elasticity of mind.²⁶ Here partisanship and passion play a role, awakening sympathy and leading the historian to question orthodoxies.²⁷ Thus Butterfield, reviewing the first volume of George Sarton’s *Introduction to the history of science*, praises him for his “marvellous spadework” and “outstanding range”, adding: “For if in one sense historical inquiry necessitates that the heart stand still and the blood be cold as ice, there is a sense in which historical interpretation and reconstruction can be achieved only by a man willing to do his thinking through his sympathies.”²⁸ In this connection it should be noted that Butterfield never objects to prejudice *per se*; distortions arise only when the prejudice is an “unexamined habit of mind”.²⁹ Uncritical history is a “warped mirror” in which such dangerous prejudices are confirmed; whereas history that pays proper attention to the difference of the past and the mechanisms of radical change encourages a healthy scepticism about the inevitability and stability of present assumptions and institutions.³⁰

3. PROBLEMS OF THE WHIG INTERPRETATION

In the preface to *WIH* Butterfield declares that his examination of the fallacies of the Whig interpretation

... raises problems *concerning* the relations between historical research and what is known as general history; *concerning* the nature of a historical transition and of what might be called the historical process; and also *concerning* the limits of history as a study, and particularly the attempt of the Whig writers to gain from it a finality that it cannot give.³¹

I am going to consider these three enigmatically expressed sets of problems in turn. First, a word of warning. Butterfield was above all a pedagogic writer — but though his tone is sermonic (he was a Methodist and in his early years an occasional lay preacher) he is basically a Socratic teacher.³² In *WIH* and his other historiographical writings he rarely propounds and defends doctrines. Rather, he takes up problems, turning them over and over, trying out arguments pro- and con-. Out of context some of his dicta may seem pretty heavy and moralistic — indeed, at odds with his own strictures on historians who presume to pass judgement. But in such cases one often has only to read on to come across a partial retraction, toning down, or counter-argument.

For a start there is the problem “concerning the relations between historical research and what is known as general history”. Obscure though this sounds it is, I think, the key to an understanding of Butterfield’s real concerns in *WIH*. Butterfield emphasized the didactic importance of general history, by which he meant history that ranges widely in topic and period, taking “a bird’s eye rather than a microscopic view”,³³ or, as he put it elsewhere, “studying deep subterranean movements rather than surface events”.³⁴ Such histories depend upon what Butterfield calls “abridgement”, that is, the narration of a selection from the raw findings of historical research. Inevitably abridgement distorts; and there is one particular type of such distortion to which we are all instinctively prone, namely the Whig interpretation, which so selects its materials as to condemn or exclude all that does not belong to a triumphal progress converging on present beliefs and institutions.³⁵

Now it is at first glance tempting, as many have done, to see Butterfield as inconsistent on this score, on the grounds that his own later works openly celebrate progress — in science in *OMS*; in historiography in *Man on his past*; in constitutional democracy in his war-time inaugural lecture *The Englishman and his history (EHH)*. Thus, in *What is history?* of 1961 E. H. Carr accused Butterfield of a “reversal of outlook” on the Whig interpretation, having attacked it in *WIH* where he espoused it in *EHH*.³⁶ This Carr cited as evidence of the way in which “the work of the historian mirrors the society in which he works”. Butterfield in turn rebutted Carr’s charge of a change of mind, claiming that the passages Carr had cited from *EHH* had in fact been written long before its publication.³⁷ Be that as it may, in *EHH* Butterfield’s war-time enthusiasm does lead him to celebrate the roles of the Whig interpretation as “the Englishman’s alliance with history”, one that has formed the English character and English statesmanship, and which “has proved — against the presumption and recklessness of blind revolutionary overthrows — the happier form of co-operation with Providence”.³⁸ He even pokes fun at his own earlier self, warning critics of Whig history “to take heed when they sally forth in carpet slippers against this entrenched tradition”.³⁹ But a careful reading reveals little real inconsistency with his earlier pronouncements on the score of historical method. For in *EHH* he explicitly contrasts the positive contribution of the Whig interpretation to the English tradition of political moderation and compromise with its failure to contribute to historiography and “the point of view of the modern historian”.⁴⁰ Butterfield shifts his attitude not

towards the methods, but towards the uses of history. Where earlier he had damned the Whig interpretation for fostering complacency about British institutions, in his war-time propagandist celebration of Englishness he understandably drops this line of attack. As for the general issue of progress, it should be noted that, though Butterfield in *WIH* and elsewhere often calls in question mankind's moral progress, he never questions the reality of other types of progress — technological, scientific, historiographical, constitutional, and so on. Indeed, his very opposition to the Whig interpretation actually presupposes a concern with progress and its causes. For one of Butterfield's main reasons for objecting to accounts that exclude the enemies of progress is that in order to understand how progress has occurred we need, as he puts it, "to take account of mistakes and blind-alleys".⁴¹ It is not progress itself that Butterfield questions, but the linear view of history that fails to realize "how crooked and perverse the ways of progress are, with what wilfulness and waste it twists and turns, and takes anything but the straight track to its goal, and how often it seems to go astray, and to be deflected by any conjuncture, to return to us — if it does return — by a back-door".⁴² (How nicely this sentence mirrors the meanderings of historical progress!)

I have now strayed onto Butterfield's second problem, that "concerning the nature of a historical transition and of what might be called the historical process". On this score Butterfield's prime objection to the Whig interpretation is that it leads us to scan history for the origins of present states of affairs; for "History is not the study of origins; rather it is the analysis of all the mediations by which the past was turned into our present".⁴³ In studying such mediations the historian should beware of the Whig tendency to regard progress as the work of "friends of progress" triumphing over obstacles placed by its "enemies".⁴⁴ Once we get away from this simplistic view, a more complex picture emerges, one in which, as Butterfield memorably puts it, the present state has come about "not in spite of but as the result of vicissitudes".⁴⁵ As for the factors that have brought about transitions in history, Butterfield insists, against the Whig historians, that interactions between adversaries, not the triumph of the progressive over the reactionary, has been the primary agent of change.⁴⁶ Against the Marxists and the Namierites he claims that consideration of social structures and vested interests is not enough; for human motivation is complex — history is not "all profits and places".⁴⁷ On the other hand, Butterfield repeatedly urged historians to learn from Marxist history. Where "bourgeois history" lists social factors as "pieces of scenery", it shows us how to integrate the various "departments of life" — religion, philosophy, politics, art, war, etc. Moreover, it rescues us from the view of history as the "field of activity of disembodied ideas".

The proper mix of ideas and social interests in explaining change varies from case to case: for instance, Namier's vested-interest oriented approach to eighteenth-century politics would surely be ill-suited to the idea-driven men of Puritan Revolution.⁴⁸ However, Butterfield constantly insists on the inadequacy of any approach that overlooks the power of ideas, and especially of scientific ideas, in history.⁴⁹ As for the narration of historical transitions, Butterfield advocates a concentration on

“significant details” and “pivotal moments”; indeed, he claims, it is the mark of a great historian to be able to convey the inner workings and texture of history through judicious selection of cases.⁵⁰

The third and last of the problems raised in *WIH* has to do with “the limits of history as a study, and particularly the attempts of the Whig writers to gain from it a finality it cannot give”. Under this heading Butterfield considers a whole range of issues concerning the methods, scope, and uses of history. For Butterfield the Whig interpretation, by presenting the past as convergent on the present, ratifies our prejudices and encourages historians to venture beyond the limits of history by delivering moral judgements. Once we break with the Whig interpretation, and start to appreciate the complexity and chanciness of history, we come “to see ourselves and our prejudices in historical terms”, and to realize that “all our judgments are merely relative to time and circumstance”.⁵¹ However, and this I think is crucial for an understanding of Butterfield’s position, he never suggests that we should or could shed our prejudices in the interests of a dispassionate scientific understanding of the past. For him, as I have already noted, partisanship and prejudice have their positive side — they foster the fascination with the past that motivates historical study and the sympathies that are required for historical understanding. Moreover, Butterfield is acutely sceptical about the prospects for any comprehensive scientific understanding of history, whether of the psychological sort pursued by Sir Louis Namier and his followers, or of the materialist sort pursued by Marxists, or of the biological sort promoted by H. G. Wells.⁵² Though Butterfield does not say this explicitly in *WIH*, it is evident from some of his later writings, notably *Christianity and history* of 1949, that he came to regard all grand scientific and philosophical schemes of history as presumptuous trespasses into the domain of Divine Providence that lies beyond the limits of historical study.⁵³ Further, despite his concession that much is to be learned from the scientific Namierite and Marxist approaches, and his insistence on rigorous and methodical source criticism, Butterfield conceives history as a craft in which the crucial operations of interpretation, selection and narration are matters of skill, not of rule-governed procedure.

4. BUTTERFIELD AND HISTORY OF SCIENCE TODAY

There is, of course, much in Butterfield’s historiography that is apt now to seem eccentric, dated or inadequate. Foremost among his eccentricities, or so it seems to me, allergic as I am to religion, is the obsession with a Divine Providence at once beyond the bounds of history yet such that history constantly yields intimations of it, especially to liberal Englishmen. Butterfield’s attitude to God’s hand in history is oddly reminiscent of Kant’s attitude to the thing-in-itself, as mocked by Goethe: “at one point appearing to set narrow limits to our perceptive capacity and at another beckoning us furtively beyond them.”⁵⁴ From the standpoint of historians of science a more damaging datedness is, alas, much in evidence in Butterfield’s *OMS*, where, for all his declarations about the importance of past mistakes and blind-alleys, of social and ideological factors, the story remains very much focused on a traditional

canon of great discoverers, and the treatment of contexts is by our standards gestural rather than substantial. A number of historians (including Butterfield himself in his later writings) have expressed reservations about his hard-and-fast “positivistic” distinction in his earlier writings between the uninterpreted objective facts which make up the “technical history” obtained by source-critical research, and the various interpretations — Whig, Tory, Marxist, etc. — that may be imposed on scientific history for explanatory, narrative, or didactic purposes.⁵⁵ Moreover, anyone looking for instruction in the handling of historical sources will be sorely frustrated by his all-too-general and bland dicta on the need for the historian to combine cold objectivity in source criticism with the passion and sympathy needed for insightful interpretation. But it is surely a mistake to read Butterfield in search of specific historiographical guidance. The excitement in reading Butterfield’s Socratic writings derives rather from the skill with which he problematizes the tacit assumptions that underlie the various practices of history. By way of a conclusion let me indicate why I think that Butterfield’s problems remain very much with us as historians of science.

The first of these problems is that “concerning the relations between historical research and what is known as general history”. This evidently remains very much alive in the form of the question whether it is still legitimate for historians of science to aim at Big Pictures of the development of science. Here, for example, Jim Secord presents the problem in his splendid introduction to the 1993 *British journal for the history of science* special issue edited by him and entitled “The Big Picture”:

After years of expert demolition by specialists, the established stories in the field — from the origins of science in ancient Greece to the Darwinian and Einsteinian ‘revolutions’ — are in ruins. Most researchers have grave doubts about the viability of a ‘Scientific Revolution’ in the seventeenth century, although the concept remains central to the public presentation and image of the discipline. As a result, a construct founded on the primacy of method, genius and heroic discovery continues (albeit awkwardly) to organize a body of specialist literature devoted to criticizing the coherence of such concepts. Designing another kind of account is proving a difficult challenge.⁵⁶

Now, this is just as much a problem for monographic historians of science as it is for textbook and popular writers. For, as Secord so rightly observes, the traditional and generally rejected narratives of triumphal progress continue to structure the choice of research topics, so that even the most revisionist approaches still tend to concentrate on canonical figures, canonical disciplines, and canonical works.

As noted earlier, Butterfield’s doubts about the reality of human moral progress did not extend to other domains — scientific, cultural, and political. His quarrel with Whig treatments of progress had primarily to do with his second problem, that of “historical transitions”. On this score he opposed the Whig privileging of “friends of progress” as the agents of a continuous development. Instead, he emphasized the roles of chance, conflict, and compromise in historical transitions. In place of the continuity in events and ideas assumed and imposed by the Whig historian, the focus should be on the often radical changes in the practical and theoretical problems that

people have faced and tackled. Such a focus is, I believe, immensely profitable. Thus in *The scenes of inquiry* I have argued that attention to changing problems in the sciences, to the ways in which questions become real and cease to be real, opens the way to a new kind of Big Picture of the history of disciplines.⁵⁷ In particular, I show there how such an approach overcomes the internal/external division by tying the very content of the questions that provide the agendas of the sciences to the material conditions and social practices of the various disciplines. Thus it is possible to present Big Pictures of the development of scientific disciplines that overcome the separation of history of ideas from history of social structures and interests, the separation that so worried Butterfield.

All too often recent historians of science have abandoned common sense in their flight from presentism. Since it is presentist to appeal to knowledge we possess but that the subjects of our historical studies did not, we are supposedly not free to deploy in our interpretations and explanations such facts as, for example, our diagnoses of the diseases afflicting past persons, or our computed estimates of past coordinates in the night sky. Likewise we must, it is suggested, abandon as an object of historical investigation scientific progress as judged from the standpoint of current scientific orthodoxy. A moment's reflection, however, shows that a total ban on appeal to knowledge not possessed by the agents studied is a recipe for historiographical paralysis. Virtually all critical assessment of the provenance and reliability of source materials would be outlawed. So too would all appeal to events and actions subsequent to those under investigation — except in those rare cases where the agents had foreknowledge of them. Taken seriously, such a ban on presentism would appear to preclude not merely the narration of scientific progress, but all treatment of transitions in the sciences. For how can any such treatment avoid characterizing the initial phase of the transition in terms of the absence of its outcome; and how, if the transition is to be explained, can the historian dispense with selection in the light of the outcome of putative explanatory conditions present in the earlier phase?⁵⁸

On the issues of scientific progress Butterfield's injunctions in *WIH* directed against the hagiographic narratives of British constitutional progress are of great current relevance. Transposed to the domain of the sciences they indicate how commitment to a proper understanding of scientific progress can be separated from — indeed, requires separation from — the assumptions about doctrinal innovations at the hands of great scientists, the “relay-race” model, that structured the traditional didactic narratives of scientific progress. Instead, Butterfield insisted on the priority of questions over doctrines, and on the importance of chance, conflict, compromise, and unintended consequences in the explanation of historical development.

There is, however, a perhaps more important second-order lesson that can be gleaned from Butterfield even by those whose first-order beliefs about the nature and motors of change in the sciences are very different. The lesson is that of the need for discernment with regard to presentism. With Butterfield we surely should reject the hagiographical elevation of past “friends of progress”, the structuring of historical narratives as fated convergences onto present beliefs and institutions, and

the uncritical projection of present values onto the past. But there is no need to throw out the baby with the bath water. These historiographical malpractices can perfectly well be avoided without a general ban on our deployment of knowledge unavailable to those whose actions we are out to interpret and explain — a ban that would altogether deprive us of the capacity to provide critical historical interpretations and informative historical explanations.

As for Butterfield's third and final problem, the one concerning the methods, scope and uses of history, there are, as I have already suggested, aspects of his stance that seem idiosyncratic. One does not, for example, have to believe in an inscrutable Providential Plan in order to maintain a healthy scepticism about grand scientific and philosophical theories of historical development. But in many other respects his position seems admirable. In particular I find entirely convincing his claims, so oddly reminiscent of Gadamer, about the inevitable roles of passion and prejudice in historical interpretation.⁵⁹ He is surely right also in his general view of historical interpretation and historical narration as, in large measure, crafts resistant to codification. And there is much to be said for his cautious attitude to grand theory: at once welcoming it as a source of novel insights and distrusting it for its inability to do justice to what he calls the "earthiness" of history, that is, the complexity of human affairs and the individuality and variety of human personalities. But, of course, there is a danger in this sort of attitude to theory; for what could be worse than the all-too-current "cultural studies" approach with its irresponsibly promiscuous exploitation of theory — a dash of Bourdieu, a pinch of Greenblatt, beat in a little Foucault, and garnish with an epigram from Benjamin. Though Butterfield himself did little to resolve the issue of the proper uses of theory, he was surely right to agonize about it. How to make good use of theory — economic, demographic, psychological, sociological, anthropological — without glossing over human difference or falling into the frivolous cultural studies pick'n'mix style is surely *the* central issue for us as historians of science today.

Finally, there is the issue of the moral stance of the historian. Now of course many historians of science today take the scientific view that their work should not be informed by moral or political concerns, that the proper stance for a professional historian is that of the disinterested, dispassionate inquirer. On a superficial reading one might well suppose Butterfield to have held this view — after all, he often boasted of the objectivity of modern historical research, "technical history" he called it, and his strongest condemnations of the Whig interpretation relate to its fostering of intolerant attitudes to past agents and institutions and of complacent attitudes to present ones. But that would be a misperception. For Butterfield's view of history was, in fact, intensely moralistic. His attacks on the Whig interpretation were attacks on intolerance and complacency, not on the moral relevance of history. For him, the proper study of processes of historical transition must do full justice to their magnitudes and to the roles in them of chance. Such an approach is of value because it makes us reflect on the contingency and impermanence of current certainties. Thus, where the Whig interpretation makes for complacency, the approach Butterfield recommends

encourages a properly critical attitude to the present. Here, for example, is Butterfield on the value to historians of the study of the history their own discipline:

This is a comparatively new study but its results are not only proving to be important — they are calculated to alter the conduct of the practising historian who makes himself acquainted with them and takes them to heart. They have the effect of enabling us to bring a further range of our historical thinking not only under criticism but to a certain degree under conscious control. They enable us to get behind the historical interpretations which we tend to adopt or which have been handed down to us, because they put it in our power to see how often these very interpretations are themselves conditioned by one factor or another. The historian indeed learns to see many things — learns to see even himself — with much greater relativity, if he studies the history of historical science.⁶⁰

And in similar vein he describes how the study of the history of science may imbue scientists with a critical attitude to their own activities:

... by the use of history, the scientist may become more conscious of the forces that are liable to affect his work, more alive to the nature of the methods he is using, more sensible of the directions in which he is going, more cognisant of the limitations under which he labours, more aware of the things that ought to be regarded with relativity. If to all the other perceptions of the scientists were added an internal knowledge of the history of his own subject, that combination would be capable of producing a higher state of awareness and a greater elasticity of mind.⁶¹

On this score at least we should, I think, unreservedly endorse Butterfield's position. Of course, a whole range of regrettable factors — false ideals of professional objectivity, indiscriminating attempts to exclude of all forms of presentism, the isolation of academics from wider publics — militate against the practical, moral and political uses of the history of science. But should the history of science lose the critical functions Butterfield assigned to it, it would become pointless.

ACKNOWLEDGEMENTS

My thanks for constructive comments to Vicky Carroll, Anna-K. Mayer, Marina Frasca-Spada, Ian Maclean, and the participants in seminars at the Department of Philosophy, Logic and Scientific Method, LSE; All Souls, Oxford; and the Department of History and Philosophy of Science, Cambridge.

REFERENCES

1. See, for example, C. Becker, *Journal of modern history*, iv (1932), 278–9; E. A. Payne, *Baptist quarterly*, NS, xiv (1951), 90–91; D. C. Somerwell, *History*, NS, xvii (1932), 86. Reviews of Butterfield's books are fully listed in K. C. Sewell, *Providence and method: Herbert Butterfield and the interpretation of history* (Sioux Center, Iowa, 2001), 249–54.
2. In *Varieties of cultural history* (Cambridge, 1997), 1, Peter Burke writes of Butterfield's criticism of

“what he called the ‘Whig interpretation of history’, in other words the use of the past to justify the present”. In his “Retrospect” to the 1987 re-issue of his *The ancient constitution*, J. G. A. Pocock carefully distinguishes “whiggish” in the formal teleological-progressive sense given the word by Butterfield, that of tracing “development towards a pre-determined modernity”, from the “Whig history” which tells of the development of the British constitution. See *The ancient constitution and the feudal law: A study of English historical thought in the seventeenth century* (Cambridge, 1987), 264 and *passim*; though the index confuses the two.

3. In the “Review Articles and Historiography” section of the *The historical journal*, A. Vickery’s “Golden age to separate sphere?”, *The historical journal*, xxxvi (1993), 383–414, does mention “a Whiggish celebration of the rise of feminism”, but I take this usage to be close to the traditional acceptance of the term in referring to histories of progressive emancipation. In *History today* the only uses of ‘Whig’ and ‘Whiggish’ in Butterfield’s extended sense that I spotted were in a 1985 workshop on history of science.
4. On this genre of historical writing and its opponents see, for example: J. G. A. Pocock, *The ancient constitution and the feudal law: A study of English historical thought in the seventeenth century* (Cambridge, 1957); J. Hamburger, *Macaulay and the Whig tradition* (Chicago, 1976); P. B. M. Blaas, *Continuity and anachronism: Parliamentary and constitutional development in Whig historiography and in the anti-Whig reaction between 1890 and 1930* (The Hague, 1978); J. W. Burrow, *A liberal descent: Victorian historians and the English past* (Cambridge, 1981).
5. For a detailed account of these objections to Whig constitutional history see Blaas, *Continuity and anachronism*.
6. A notable critic of such anachronism, and one whose writing was well known to Butterfield, is F. W. Maitland; see, for example, his introduction to *Memoranda de parlamento* (London, 1893), and the concluding passage of his “Doomsday Book and beyond”, *Three essays in the early history of England* (London, 1897). On Maitland’s promotion of the “historical sense” which treats past actions and institutions in their own terms, see R. L. Schuyler, “Introduction”, *Frederic William Maitland, historian. Selections from his writings* (Berkeley, 1960), 1–45.
7. See, for example, J. H. Hexter’s witty “The historian and his day”, in his *Reappraisals in history* (London, 1961), 1–13; A. Wilson and T. Ashplant, “Present-centred history and the problem of historical knowledge”, *Historical journal*, xxxi (1988), 253–74.
8. “Commentary”, in A. C. Crombie (ed.), *Scientific change. Symposium on the history of science, University of Oxford, 9–15 July 1961* (London, 1963), 861–5. I thank Simon Schaffer for drawing my attention to this passage.
9. *Ibid.*, 797–812.
10. *Ibid.*, 811.
11. *Ibid.*, 862–3.
12. *Ibid.*, 865.
13. *Ibid.*, 876.
14. Blaas, *Continuity and anachronism* (ref. 4). In particular, he convincingly relates aspects of the attack on Whig history to the separation of history from law in the British universities at the end of the nineteenth century and to the concomitant revolt against the anachronisms arising from the search for precedents for present practices and institutions. Other aspects Blaas associates with the need perceived by reformers to liberate British legal and political practices from the burden of the past.
15. Concern with this kind of anachronism does not loom at all large in Butterfield’s other writings. Indeed, the only clear instance I have spotted is his charge of anachronism against disciples of Louis Namier, who had referred to the so-called “King’s Friends” of George III as “Civil Servants” — and even there Butterfield’s real objection is not to the anachronism *per se*, but rather to an inappropriate moral judgement that went with it, namely that the Whigs were wrong to oppose

- the King's Friends. See *George III and the historians* (London, 1958; hereafter *GIII*), 294–5.
16. See, e.g., A. Wilson and T. G. Ashplant, "Whig history and present-centred history", *The historical journal*, xxi (1988), 1–16; A. Cunningham, "Getting the game right: Some plain words on the identity of the history of science", *Studies in history and philosophy of science*, xix (1988), 365–89.
 17. On the "common-law mind" and Whig historiography see Pocock, *op. cit.* (ref. 2), 255–385; Blaas, *Continuity and anachronism* (ref. 4), ch. 4.
 18. On the didactic histories of the inter-war years see W. Sherratt, "History of science in education: An investigation into the role and use of historical ideas and material in education with particular reference to science education in the English secondary schools since the nineteenth century", Ph.D. thesis, University of Leicester, 1980; W. H. Brock, "Past, present, and future", in M. Shortland and A. Warwick (eds), *Teaching the history of science* (London, 1984), 30–41; A.-K. Mayer, "Moralising science: The uses of science's past in national education in the 1920s", *The British journal for the history of science*, xxx (1997), 51–70.
 19. See my "The uses and abuses of anachronism in the history of the sciences", *History of science*, xxxviii (2000), 251–70.
 20. Much of Butterfield's historiographical agenda can, I suspect, be related to the upheavals in the teaching of history at Cambridge in the 1920s and early '30s. Cambridge had a long tradition of teaching Whig history, and Butterfield was one of those campaigning for a more 'professional' approach and for a better integration of the various branches of history. These agitations achieved a measure of success in 1934 with the inclusion of teaching of research methods in the syllabus and the integration of the constitutional and economic history papers. See J. O. McLachlan, "The origin and early development of the Cambridge Historical Tripos", *The Cambridge historical journal*, ix (1947), 78–105; G. Kitson Clark, "A hundred years of the teaching of history at Cambridge, 1873–1973", *The historical journal*, xvi (1973), 535–53.
 21. *WIH*, 3, 98; *Herbert Butterfield — Essays in the history of science*, ed. by K. W. Schweitzer (Lewiston, 1998; hereafter *EHS*), 19–22.
 22. *WIH*, 10, 131.
 23. See, for example, "The historian and the history of science", *Bulletin of the British Society for the History of Science*, i (1950), 49–58, p. 51; "The history of science and the study of history", *EHS*, 1–17.
 24. *The study of modern history* (London, 1944), 13–14, cf. *WIH*, 38.
 25. See, for example, "The historian and the history of science", 52, 58.
 26. *The historical novel: An essay* (Cambridge, 1924), 28ff.; cf. *WIH*, 91–92, 99, 125, and *SMH*, 30–31.
 27. *WIH*, 94.
 28. *Scientific American*, lxxxviii (1953), 95–98, p. 96.
 29. *WIH*, 15, 30.
 30. See, for example, "Antidote to dogmatic history", *Time and tide*, xxvii (1946), 29–30.
 31. *WIH*, pp. v–vi.
 32. C. T. McIntire, "Introduction: Herbert Butterfield on Christianity and history", in *Herbert Butterfield. Writings on Christianity and history* (Oxford, 1979), pp. xi–lviii; M. Cowling, "Herbert Butterfield 1900–1979", *Proceedings of the British Academy*, lxxv (1979), 595–609.
 33. *WIH*, 15; cf. the comparison of microscopic and telescopic history in *GIII*, 200.
 34. *EHS*, 26.
 35. *WIH*, *passim*.
 36. E. H. Carr, *What is history?* (London, 1961), 35. Burrow, *A liberal descent* (ref. 4), 300, writes of "Butterfield's celebration — in time of war — of the Whig tradition, in *The Englishman and*

- his history, which he had earlier so effectively criticised". J. G. A. Pocock poses "das Herbert Butterfieldproblem: that of seeing how the complacent progressivism criticised in *The Whig interpretation of history* could coexist with the complacent antiquarianism admired in *The Englishman and his history*": *Virtue, commerce and history* (Cambridge, 1985), 305.
37. V. Mehta, *Fly and the fly-bottle: Encounters with British intellectuals* (Harmondsworth, 1965), 211–13.
 38. *EHH*, 11; cf. 83.
 39. *Ibid.*, 3. A. J. Woolford mistakes this gentle irony for conclusive evidence that in *EHH* Butterfield rejects his own earlier critique of Whig history: see his review of *EHH* in *Scrutiny*, xiii (1945–46), 6.
 40. *Ibid.*, 78–79; cf. 35, 83ff.
 41. Herbert Butterfield, *The origins of modern science* (London, 1949; hereafter *OMS*), p. ix.
 42. *WIH*, 23.
 43. *WIH*, 47.
 44. *WIH*, 5 and *passim*.
 45. *WIH*, 41.
 46. *WIH*, 41ff.; cf. his endorsement of the Marxist recognition of the role of conflict in historical development in "History and the Marxian method", *Scrutiny*, i (1932–33), 339–55.
 47. *GIII*, 210. See also "Marxist history", *HHR*, 90ff.; this is not, as stated by Hinton, a revised version of his "History and the Marxian method" of 1933 — the two articles differ greatly, notably in the much stronger criticism in the latter of Marxist failure to do justice to the roles in the historical process of intellectual factors. See R. W. K. Hinton, "Bibliography of Sir Herbert Butterfield's writings (to 1968)", in J. H. Elliott and H. G. Koenigsberger (eds), *The diversity of history: Essays in honour of Sir Herbert Butterfield* (London, 1970), 317–25. For a full critical bibliography, see Sewell, *Providence and method* (ref.1), 224–45, "Bibliography of the published works of Sir Herbert Butterfield in the English language".
 48. Mehta, *Fly and the fly-bottle* (ref. 37), 198.
 49. See, for example, *EHS*, 25.
 50. *WIH*, 103; *OMS*, p. viii.
 51. *WIH*, 62–63, 75.
 52. See "History and the Marxian method", and "Marxist history" (ref. 47).
 53. For a masterly treatment of this issue see Sewell, *Providence and method* (ref.1); also McIntire, *op. cit.* (ref. 32), and R. Cabral, "Herbert Butterfield (1900–1974) as a Christian philosopher of science", *Studies in history and philosophy of science*, xxvii (1996), 547–64.
 54. Goethe, *Die Schriften zur Naturwissenschaft* (ed. of Akademie der Naturforscher, Weimar, 1947), ix, 95–96; *Goethe's botanical writings*, transl. by B. Mueller (Honolulu, 1952), 232–3.
 55. Butterfield introduced the term 'technical history' in *Christianity and history*. In his later writings he did, on occasion, note (with regret) the inextricability of description from interpretation and explanation: see, for example, *HHR*, 249–50. On criticisms of Butterfield's notion of technical history see Sewell, *Providence and method* (ref.1), chs 9 and 14.
 56. J. A. Secord, "Introduction", *The British journal for the history of science*, xxvi (1993), 387–9, p. 388.
 57. N. Jardine, *The scapes of inquiry: On the reality of questions in the sciences* (Oxford, 1991), ch. 7.
 58. Cf. Pocock's ironic understatement (in countering the charge of Whiggishness against his procedures in *The ancient constitution and the feudal law*) that if we are out to explain how certain capacities were acquired "there is much to be said for starting at a time when they did not exist and showing why they did not yet exist and what the changes were which led to their being acquired subsequently": Pocock, "Retrospect" (ref. 2), 257.
 59. H. G. Gadamer, *Wahrheit und Methode: Grundzüge einer philosophischen Hermeneutik* (Tübingen,

1960); transl. of 2nd edn by W. Glen-Doepel, *Truth and method* (London, 1975).

60. *EHS*, 22.

61. *EHS*, 4.