

Conceptual Change in the History of the Humanities

FLORIS SOLLEVELD*

ABSTRACT

Was there ever a ‘scientific revolution’ in the Humanities, and to what extent is that notion applicable to the Humanities at all? In this article, I formulate various ways in which to answer that question. These options emerge from a discussion of what I identify as the ‘Standard Account’ of developments in the Humanities around 1800, the essentials of which are in the work of Michel Foucault, Hans-Georg Gadamer, and Isaiah Berlin. Without calling it as such, the Standard Account amounts to a description of a scientific revolution. However, this Account works as a model and a set of tacit assumptions rather than as an explicit article of faith, and all of its tenets have been criticized. Making its assumptions and shortcomings explicit leaves one with four alternatives: 1. in spite of all shortcomings and criticism, the Standard Account is largely correct; 2. there was a revolution, but it was different; 3. there were various breakthroughs and more or less revolutionary events rather than one revolution; or 4. there was no revolution in the Humanities at all. Evaluating these alternatives also throws a new light on the dynamics of conceptual change – how the humanities bring forth new ideas.

Keywords: Humanities, scientific revolution, conceptual change

Was there ever a ‘scientific revolution’ in the humanities? The term ‘revolution’ is rarely used in relation to such disciplines as history, linguistics, or philology, if only because the Anglo-Saxon term ‘Sciences’ does not cover them.¹ However, there is a consensus among

* Radboud University Nijmegen, Department of History. E-mail: f.solleveld@let.ru.nl.

¹ Notable exceptions are R. Bod, *A New History of the Humanities: The Search for Principles and Patterns from Antiquity to the Present* (Oxford 2013); E.F.K. Koerner, ‘The Concept of “Revolution” in Linguistics: Historical, methodological and philosophical issues’, in idem, *Linguistic Historiography: Projects & Prospects* (Amsterdam/Philadelphia 1999), and, oddly enough, A. Grafton, *Defenders of the Text. The Traditions of Scholarship in an Age of Science, 1450–1800* (Cambridge, Mass. / London 1991). Several German authors speak of a ‘paradigm switch’: G. Bickendorff, *Der Beginn der Kunstgeschichtsschreibung unter dem Paradigma “Geschichte”* (Worms 1985); H.-J. Pandel, *Historik und Didaktik. Das Problem der Distribution historiographisch erzeugten Wissens von der deutschen Spätaufklärung zum Historismus (1765–1830)* (Stuttgart 1990); M. Gierl, ‘Change of Paradigm as a Squabble between Institutions: The Institute of Historical Sciences, the Society of Sciences, and the Separation of Cultural and Natural Sciences in Göttingen in the Second Half of the Eighteenth Century’, in: A. Holenstein e.a. (eds.), *Scholars in Action. The Practice of Knowledge and the Figure of Savant in the 18th Century* (Leiden 2013).

historians of ideas that in the decades around 1800, a general shift took place in the study of language, history, and culture on both a conceptual and an institutional level. This shift led to the establishment of new fields of study and the formation of new academic disciplines, making possible new insights that were not just out of reach for earlier scholars, but literally unthinkable. If that consensus is correct, then there is reason to call that shift a scientific revolution.

If that consensus is correct. The institutional changes – particularly in Germany and France, with the spread of the Prussian *Bildungsreform*, and the abolition of universities and the creation of the *Instituts* and the *Grandes Écoles* after the French Revolution – are well documented, but the conceptual shift is harder to define, hence harder to prove. In this article, I will be concerned with the ideas that underlie that consensus – what I shall call (following Ian Hacking's reflections on 'how something fundamental happened to the way in which we think about language' around 1800²) the 'Standard Account' of transformations in the humanities around 1800.

Particularly, the question is what that consensus consists of. As I will argue, the Standard Account is not an ideology that has been coherently expressed or that is unanimously shared. Rather, it is a compound of assumptions and accumulated scholarship that predispose further research in a certain direction by supplying a set of standard references and anchor points for describing the intellectual history of the period. The advantages of following such an account are obvious: it is clear, well-documented, supplies a chronology with key figures and events, and it allows for sufficient flexibility in picking and choosing from that set of references and anchor points. However, when that Standard Account is made explicit, its shortcomings become apparent. As Ernest Gellner has argued, 'The only choice we have is whether we make our vision as explicit, coherent and compatible with available facts as we can, or whether we employ it more or less unconsciously and incoherently'.³ Or to speak with Andrew Cunningham and Percy Williams, 'Like it or not, a big picture of the history of science is something which we cannot avoid'.⁴ This applies to the history of the humanities as well.

The assumption of a scientific revolution in the humanities raises three issues. First of all, does the Standard Account offer a coherent picture of processes of conceptual change, and to what extent are these conceptual changes on a scientific level, rather than shifts in mentality or on an institutional level? Second, applying the notion of a 'scientific revolution' to the humanities requires a scrutiny of what is meant by 'scientific revolution', conceptual change, or 'scientification'. Can we apply the same criteria that have been introduced into the philosophy of science by Thomas Kuhn's *The Structure of Scientific Revolutions* (1962) and refined and contested in subsequent debate, or do we need to think about it in different terms? And third, it implies a re-assessment of the ideologies behind the Standard Account. This applies both to the self-conception of scholars *within* that process of scientification and conceptual change, and to the historical self-conceptions *supported* by that account of the scholarly past.

2 I. Hacking, 'How, Why, When and Where did Language go Public?', *Common Knowledge* 1:2 (1991), 74–91; reprinted in idem, *Historical Ontology* (Cambridge (Mass.) & London 2002) 121–139.

3 E. Gellner, *Plough, Sword and Book. The Structure of Human History* (London 1988) 11.

4 A. Cunningham and P. Williams, 'Decentering the 'Big Picture': 'The Origins of Modern Science' and the Modern Origins of Science', *The British Journal for the History of Science* 26:4 (1993) 407–432, esp. 407.

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In the first section of this article, I will first summarize the Standard Account, its main proponents and its different varieties. Next, I will point to some inconsistencies and list some recent criticisms. With these criticisms in mind, we are in a better position to ask what it is we mean by a 'scientific revolution' and how we define the domain of the humanities. These issues fill the second and third section, respectively. Rather than putting forward a 'Rival Account' (which is, within the scope of this article, an impossible task) the article concludes by outlining different ways in which this question could be answered, defining the burden of proof for these various options, and drawing some implications for further research along these lines.

The Standard Account

What I call the 'Standard Account' can be summarized as follows: Around 1800, a wholesale 'historical turn' took place in the study of language, history, and culture, emphasizing the particular over the general, infused with a sense of 'national character' and cultural/historical relativity. This development originated with the insights of renegade Enlightenment and Romantic thinkers into the organic and expressive nature of language (Johann Georg Hamann and Johann Gottfried Herder), the historical relativity of culture and morale (Giambattista Vico and Herder), and the sublime character of art (Johann Joachim Winckelmann, Friedrich Schelling). As such, this development is intimately connected to German Romanticism and the rise of nationalism. On an institutional level the turning point is the founding of the Berlin University (1810), which reverses the hierarchy between the faculties and establishes a new model of the unity of research and teaching. The success and spread of this model leads to an academization and professionalization of research, and the establishment of chairs in new disciplines especially in the humanities. Within the humanities a 'hermeneutic' form of understanding forms the basis of investigation, formulated by Friedrich Schleiermacher and his biographer Wilhelm Dilthey and with antecedents in law and theology. Through these developments, ideas about language, history, and culture change so much that one can speak of a conceptual shift from or *epistemic break* with previous 'a-historical' Enlightenment thought.

Although there is no single source where this Standard Account is made explicit in its full form, its origins are in a neo-Kantian tradition stretching from Dilthey and Friedrich Paulsen to Friedrich Meinecke and Ernst Cassirer.⁵ As it figures now, its essentials can be found in the work of Michel Foucault (*Les Mots et les Choses*, 1966), Isaiah Berlin (*Vico and Herder*, 1976), and Hans-Georg Gadamer (*Wahrheit und Methode*, 1960). Subsequent scholarship has of course amended, criticized, and reformulated these ideas but in doing so largely extended the consensus. Current thought about the humanities is still overshadowed by Foucault and Gadamer, and to a lesser extent Berlin.

Gadamer's contribution to this Standard Account is his reconstruction (or invention) of a *hermeneutic tradition*, dating back to Kant and Herder, brought to full historical consciousness by Hegel, and elaborated methodologically by Schleiermacher, Dilthey, Leopold von Ranke, and Johann Gustav Droysen. Berlin's contribution is in defining the Romantic movement as a *counter-enlightenment*, inspiring the study of history and language in the

5 W. Dilthey, *Einleitung in die Geisteswissenschaften* (1883); F. Paulsen, *Geschichte des gelehrten Unterrichts* (1885); *Die deutschen Universitäten und das Universitätsstudium*, (1902); F. Meinecke, *Entstehung des Historismus* (1936); E. Cassirer, *Zur Logik der Kulturwissenschaften* (1942).

early nineteenth century, with its precursors in Vico, Hamann, and Herder. Foucault is the maverick element in this Standard Account, with his outright rejection of hermeneutics, his French focus (encompassing the domain of *sciences humaines* rather than *Geisteswissenschaften*), and his emphasis on discursive practices rather than ideological foundations. On the other hand, he gives the conceptual change its most explicit formulation as an epistemic break, and a date: 1775–1825; and his main example for the epistemic break, in *Les Mots et les Choses*, is the linguistic work of Franz Bopp and Friedrich Schlegel, not the economic work of David Ricardo or the naturalism of Georges Cuvier.

Consensus does not mean replication. The Standard Account itself heavily depends upon previous work in a neo-Kantian tradition stretching from Dilthey to Cassirer; but it also diverges from it in important respects. The Standard Account has and has had followers among cultural conservatives and liberals, deconstructivists and postcolonialists. The conservatives may have preferred Gadamer, the liberals Berlin, and the postmodernists Foucault, but in general the Standard Account has proliferated through 'elective affinities' rather than linear descent. The simple fact that scholars build upon each other's work accounts for the ongoing pervasiveness of the Standard Account, even in an age when people distrust canons. Some shortcomings of the Standard Account are obvious:

1. It is *Germanocentric*: it presents German thinkers and scholars as both the initiators and the implementers of this change, often without taking into account developments in other countries.
2. It is *whiggish*: it represents the dawning of historical, linguistic, and cultural awareness as a linear process brought on step by step through the original insight of subsequent thinkers.
3. It is a *mystification* rather than an explanation: the conceptual change is defined in such holistic notions such as 'hermeneutics', 'historicity', and 'epistemic break', and catches hold of people's minds as if by divine grace.
4. The perspectives of Foucault, Berlin and Gadamer are *redemptionist*. Foucault famously promises that 'Man will be effaced like a face in the sand'; Berlin states that the Counter-Enlightenment has achieved the opposite of what it aimed at and given us a richer insight into human nature, effectively complementing rather than countering the Enlightenment; Gadamer urges his readers that understanding engulfs us in an ongoing 'process of truth' where we should trust rather than believe.⁶

These objections are not sufficient to prove the Standard Account wrong. A Germanocentric, whiggish, redemptionist story can be made of largely true facts, but would be problematic if read as a description of a scientific revolution. This is also a problem of perspective: many accounts of shifts around 1800 that fit in the Standard Account are formulated in terms of the history of ideas and mentalities rather than the history and philosophy of science. Some of the criticism levied against aspects of the Standard Account in recent years, by contrast, are specifically about method and discipline formation:

⁶ 'Wir sind als Verstehende in ein Wahrheitsgeschehen einbezogen und kommen gleichsam zu spät, wenn wir wissen wollen, was wir glauben sollen' – H.-G. Gadamer, *Wahrheit und Methode: Grundzüge einer philosophischen Hermeneutik* (Tübingen 1960, 1975⁴) 465.

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Several authors from Ernst Cassirer (*Die Entstehung des Historismus*, 1932) to Hugh Trevor-Roper (*History and the Enlightenment*, 2010) have pointed out the neglect that intellectual historians since the nineteenth century have shown toward the historical awareness in Enlightenment scholarship. Peter Gay sees history and the humanities at large at the heart of the Enlightenment ‘science of freedom’;⁷ Trevor-Roper, without abandoning the idea of a later historical turn, describes Edward Gibbon and Montesquieu as the true inventors of secular historiography. Peter Burke, in an article ‘*Ranke the reactionary*’, describes the rise of Ranke’s predominantly political archival history as destructive of the multiversal, more culturally oriented approaches to history in the late Enlightenment.⁸

Hans Aarsleff blames the history of linguistics as canonized by Rudolf von Raumer, Theodor Benfey, Holger Pedersen, and Vilhelm Thomsen for perpetuating the idea that ‘[first] the modern study of language was created in the second decade of the nineteenth century by such figures as Bopp, Rask, and Grimm; its archetype was comparative and historical Indo-European philology; and all language study before that date was irrelevant or prescientific, to be treated, if at all, only in an annalistic fashion as a series of fumbling anticipations of what progress had at last brought into the light of day. Second, [...] that Germany was the home and source of language study; thus the history of the discipline became also the history of its academic institutionalization.’⁹ According to Aarsleff, this has led to a neglect of the philosophical tradition of language study that existed in the eighteenth century, and particularly a neglect of the role of Condillac and the *Idéologues*, whose importance was downplayed in favour of a strictly technical conception of linguistics.

Anthony Grafton, in *Defenders of the Text: The traditions of scholarship in an age of science, 1450–1800* (1991), and again in *Bring out your Dead: The past as revelation* (2001) holds that the methods of source criticism on which authors in the historicist tradition pride themselves were in fact already familiar to and used by 16th-century chronologers, whose procedures were scientifically rigorous even though they were pursuing a dead programme. In studying such dead programmes, Grafton equally emphasizes the essential difference between what scholars did then and do now – but to call that difference revolutionary would be, for him, an impermissible generalization. His avowed interest is in the luminous historical detail, not in conjecture about processes of broad conceptual change; in a 2009 lecture, he argued that historians of scholarship should be ‘truffle-seekers’, not ‘parachute-throwers’.

Suzanne Marchand’s *Down from Olympus* (1996) and *German Orientalism in the Age of Empire* (2009) draw a picture of archaeology, philology, and orientalism in Germany as scientific disciplines that, after initial promises of cultural rejuvenation through a ‘new Hellenism’ and a romantic ‘Oriental renaissance’, quickly became institutionalized as something that Kuhn would have called *normal science*, shying away from the revolutionary rhetoric of Winckelmann, Schlegel, and Friedrich Creuzer while paying lip service to them as founders. This supports the idea that some crucial change took place in the decades after

7 P. Gay, *The Enlightenment: an Interpretation. Vol. 2: The Science of Freedom* (New York 1967).

8 P. Burke, ‘*Ranke the Reactionary*’, in: G. Iggers and J. Powell (eds.), *Leopold von Ranke and the shaping of the historical discipline*, (Syracuse (NY) 1990) 36–44.

9 H. Aarsleff, *From Locke to Saussure: Essays on the study of language and intellectual history* (London 1982) 5.

1800, but downplays the role of such crucial tenets of the Standard Account as cultural/historical relativity and the expressive nature of language.

Pim den Boer denies the pivotal role of the Humboldt reform as a myth propagated by Paulsen's *Geschichte des gelehrten Unterrichts auf den deutschen Schulen und Universitäten* (1885). 'Paulsen considered this the most decisive moment in the history of education. It was actually an intermezzo of fourteen months in Humboldt's career as a diplomat and leisured scholar in Rome'.¹⁰ In philology at any rate, the change in perspective is not so much towards a more scientific as towards a more nationalistic point of view, and as a cultural backwater, Berlin was not quite as important in the spread of philhellenism as Paris and London.

Den Boer's *History as a Profession: The study of history in France, 1818–1914* (1998) – together with Jo Tollebeek, *Fredericq en Zonen* (2011) and *Mannen van Karakter* (2011), and implicitly John Kenyon, *The History Men* (1984) – argues for 1870 rather than 1800 as the turning point. The deciding factors here are not merely the increase of institutionalization in this period, but also the formation of a professional ethos (described by Tollebeek, with reference to Lorraine Daston and Peter Galison's *Objectivity* (2007), as 'epistemic virtues') that definitively does away with dilettantism and the pursuit of erudition; and the disappearance of the 'independent scholar' working outside or not exclusively within the university.

Johan Heilbron challenges the Germanocentric bias in modern university history by describing the Humboldt reform as a movement that contributed little to discipline formation, and in many respects a *reactionary* movement.¹¹ Rather, according to Heilbron, it was the revolutionary reform in France which gave a spur to discipline foundation through the creation of specialized institutes, textbooks, and scientific journals; whereas such notions at the heart of the Humboldt reform as *Bildung* and the Unity of the Sciences rather obstructed discipline formation.

Most explicitly, Rens Bod's *A New History of the Humanities* (2013) argues that 'If there was anything like a revolution, it was on an institutional rather than on a conceptual level'.¹² Bod rather sees a gradual change in the principles that scholars followed and the patterns they identified. If there ever was a revolution in the humanities, according to Bod, it was rather at the end of the Roman Empire and the dawn of the Christian era, when all scholarship was redefined in theological terms. However, Bod does follow the Standard Account in his choice of *dramatis figurae* and key moments in the shaping of the humanities before and after 1800, at least as far as Europe is concerned.

10 W. den Boer, 'Neohumanism: Concepts, ideas, identities, identification', in: M. Haagsma e.a. (eds.), *The impact of classical Greece on European and national identities*, ed. (Amsterdam 2003) 3.

11 J. Heilbron, 'A Regime of Disciplines: Towards a Historical Sociology of Disciplinary Knowledge', in: C. Camic & H. Joas (eds.), *The Dialogical Turn: New Roles for Sociology in a Postdisciplinary Age* (Lanham 2004) 23–42.

12 Bod, *A New History of the Humanities* (n. 1) 348. A more recent formulation in English is in the foreword to the *Making of the Humanities II* conference proceedings: 'In sum, this volume seems to indicate that if there was a revolution in the humanities as a whole around 1800, it was mostly on an institutional rather than on a conceptual level. A profound transformation of concepts – e.g. from the classical to the national – did occur, but this transformation was part of a longer and more complex process that already started in the seventeenth and eighteenth centuries, where input from the "East" (both from outside and from within Europe) was crucial.' R. Bod, 'Introduction: The Dawn of the Humanities' in: R. Bod e.a. (eds.) *The Making of the Humanities. Volume II: From Early Modern to Modern Disciplines* (Amsterdam 2012) 18.



Fig. 1: The pillars of the 'Serapeum' in Pozzuoli. Frontispiece of Lyell, *The Principles of Geology* I (London 1830). These columns were much debated in the late 18th and early 19th century, because molluscs left holes in them; therefore they must have been below sea level at some point in time.

The resultant picture is one which contradicts the Standard Account on every crucial point. We can equally well call the Enlightenment, in David Hume's words, 'the historical age': Enlightenment historiography introduced a global, comparative, cultural, and self-avowedly 'philosophical' perspective; many of the key figures of the Enlightenment were at least part-time historians (Montesquieu, Voltaire, Diderot, Hume, Gibbon, Leibniz); critical method was known before Ranke. In the study of language, three of the most important breakthroughs – the deciphering of hieroglyphs by Champollion and cuneiform by Rawlinson, and the study of Sanskrit by the Asiatic Society – were achieved outside German academia. Outside the humanities, Herschel's discovery of 'deep space', Lyell's geology, and Darwin's theory of evolution gave a drastically disenchanting view on man's place in history, with greater impact on the historical imagination than *Historicismus*. The German academic model was undoubtedly successful during the nineteenth century: it provided a framework for discipline formation and led to an unprecedented increase in scholarly productivity. But the greatest conceptual innovations seem to have taken place outside that framework.

Alternatives

Whether these combined allegations hold true or not, they challenge the Standard Account sufficiently to warrant the question: should we amend the Standard Account to meet them, or reject the Standard Account outright? And if so, should we construct a 'Rival Account'? Amendment does not seem to be an option. If one corrects the chronology, the key figures, the underlying ideology, and the Germanocentrism of the Standard Account, then there is nothing left that is identifiable as the Standard Account. One could, of course, amend piecemeal, add nuance to the less controversial issues and argue against the more pompous counter-claims. But such a defensive strategy makes the account by and large less coherent and convincing.

Discrediting the Standard Account does not imply that there was *not* a revolution in the humanities. But it does imply that there needs to be additional evidence to call it so, and that it should be described in different ways. In order to make such a case, however, it is first necessary to specify in more detail what is meant by a 'scientific revolution in the humanities', what would count as evidence, and what sort of domain is designated by the term 'humanities'. In the beginning of this article, I distinguished between well-documented *institutional* change and more elusive *conceptual change*. 'Conceptual change', in this context, is essentially a compound term: it applies to changes in methodology (archival research, source criticism, linguistic 'laws', comparative grammar) as well as ideology (romanticism, nationalism, *Bildung*); it could mean, in a radical sense, living in different worlds as well as, in a more commodious sense, the encounter with new phenomena, and the introduction of a scientific perspective into new domains, resulting in the creation of new fields of research. As far as this article is concerned, the question whether there was a revolution in the humanities, yes or no, is an open question. But with the criticism of the Standard Account, a few possible answers come into consideration:

1. In spite of all criticism, the Standard Account is largely correct.
2. There was a revolution, but it was different from what has hitherto been postulated.
3. There was not one revolution, but several revolutions and revolutionary events – events that cannot be combined into one coherent whole but still resulted in a general conceptual change.

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4. There was no revolution in the humanities whatsoever. Either there was only a gradual change, or the revolutionary changes took place on a different (political/social/institutional/cultural) level.¹³

Which of these options one chooses is not only a matter of weighing examples and counter-examples from the historical record. (That, in itself, is already a complicated judgement on which data count as relevant, and how representative they are of developments in general.) It also depends on how radical the break should be in order to be called a revolution. Floris Cohen urges us to distinguish between ‘The Scientific Revolution’ – a single historical event which did or did not mark the birth of modern science – and ‘scientific revolutions’ – radical shifts within science.¹⁴ The Standard Account, in most versions, amounts to a version of the former: it equates ‘a-historical’ with ‘unscientific’, and so the historical turn around 1800 marks The Birth of The Humanities.

Obviously, a revolution is not just ‘doing other things than were done in the past’ or even ‘doing things that were not done before’. In that case, normal scientific practice would be revolutionary at every moment for the simple reason of being innovative. Kuhn’s famous condition for a paradigm shift is ‘incommensurability’¹⁵ – if one theory operates by different units and denominators, uses different evidence, and constructs a model that has no direct correspondence to previous models, then that theory is incommensurable with a previous theory, and if that theory replaces the former as the guideline or example for standard practice, then there has been a ‘paradigm shift’. But that condition is not well-suited to the humanities: in a field of research without clearly defined units and denominators, no experimental evidence, and far less intricate model-construction, the notion of ‘incommensurability’ can only apply in a derived sense.

A less demanding condition would be that a new discipline has come into being when there is *accumulation*: when researchers can build upon and refine previous findings, adding more details, or bringing new subject matter into the same field. That condition does not yet say much about *conceptual change*: one can add more detail and new subject matter without substantially changing one’s mind, and continue to use the same concepts. So to speak of a revolution, there should be a *rupture* in accumulation: previous findings are written off as irrelevant. This can be done *explicitly*, by attacking or disavowing predecessors; *implicitly*, by simply not mentioning them and deliberately not using their works; or by introducing new *domain designations*, to indicate the novelty of one’s work and the difference from previous scholarly practice.

Novelty, however, is a very uncertain criterion when it comes to concepts and theories. The novelty of digging up Pompeii, comparing Sanskrit with Latin and Greek, deciphering

13 Here option 1 would be the answer chosen by, among others, James Turner, Joep Leerssen, John Zammito and Ernst Behler. Option 2 would be espoused by Heilbron, who would relocate it; Tollebeek, who would postdate it; and Burke, who would globalize it. Trevor-Roper and Marchand would opt for milder alterations. Option 3 is represented by Ian Hacking, who presents local shifts in styles of reasoning rather than wholesale revolutions. Anthony Grafton, with his avowed dislike of generalizations, is harder to place, but likely to be somewhere between 3 and 4. Option 4 has Bod as its most recent and vocal proponent. Leerssen, Tollebeek and Grafton confirmed my guess when I asked them. Lorraine Daston, who rejects the notion of a ‘scientific revolution’ outright, is likely to support option 4.

14 H.F. Cohen, *The Scientific Revolution: A Historiographical Inquiry* (Chicago 1994) 21.

15 T.S. Kuhn, *The Structure of Scientific Revolutions* (Chicago 1962, 1970²) 148.

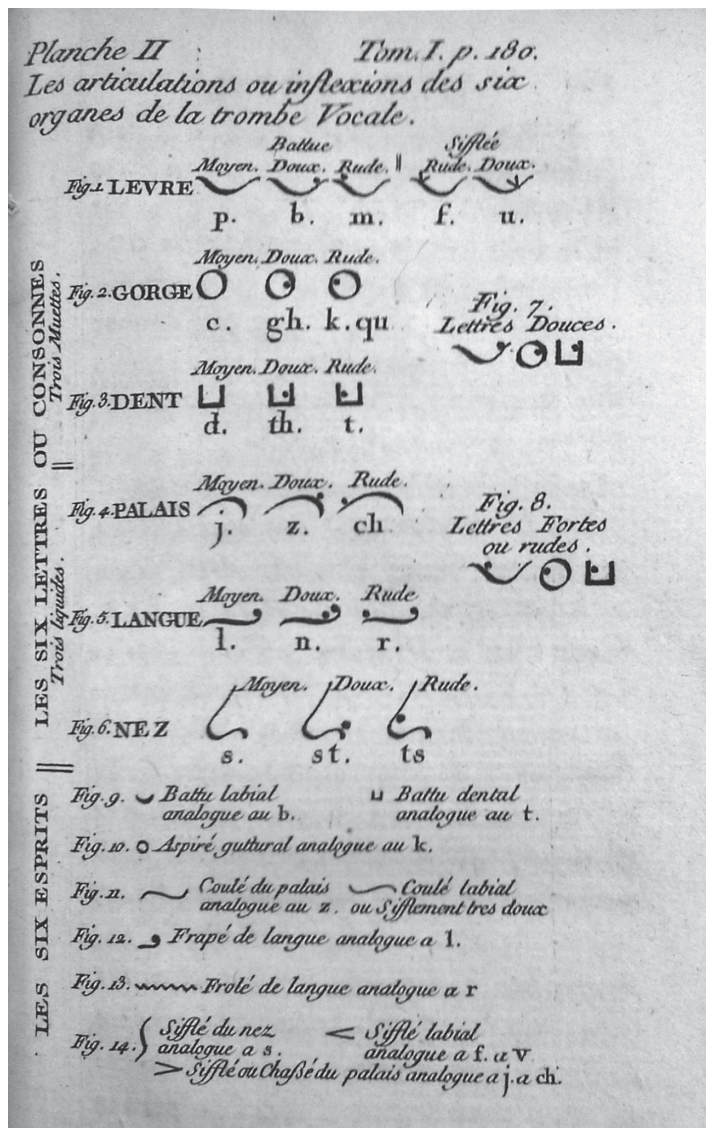


Fig. 2: The phonetic alphabet of Charles de Brosses, *Traité de la Formation Mécanique des Langues* (Paris 1765). These symbols represents labials, dentals, and gutturals through icons of lips, teeth, throat, etc. In practice, it was harder to understand than a phonetic alphabet based on standard letters.

cuneiform, or dating earth layers, is uncontroversial. Not so the ‘historical turn’. Given the functional vagueness of terms like language and history, there is no conclusive way of deciding whether scholars before and after 1800 had different concepts of ‘language’ and ‘history’. A very demanding condition – mentioned earlier in this article – is that scientific revolutions bring forth ideas which are not merely new, but were unthinkable before. But how can you prove that something was ‘unthinkable’ in the past?

Some of the innovations of the period around 1800 were indeed ‘unthinkable’ before, in a trivial sense: the relevant background knowledge was not previously available. Before William Jones and Friedrich Schlegel, the matter and method of Bopp’s *Vergleichende*

Grammatik was literally unthinkable for Étienne Bonnot de Condillac and Abraham-Hyacinthe Anquetil-Duperron. Adelung, whose grammar and dictionary remained the educational standard for decades after his death, could not have imagined the way in which Grimm superseded him. But given an update, they would not have been flabbergasted the way Einstein would have startled Newton.

If you compare eighteenth-century and nineteenth-century scholarly texts, some differences are obvious. Montesquieu's *Esprit des Lois* (1749) begins with God and general principles; Theodor Mommsen's *Römische Geschichte* (1854–1856) starts with the Indo-European origins of the Latin language and the tribes of Italy. John Horne Tooke's *Diversions of Purley* (1786) is a speculative dialogue; Bopp's *Vergleichende Grammatik* (1833ff) is a book filled with lists and tables. Universal history and *grammaire générale* are largely out of it by 1800; art history and archaeology, *Literaturwissenschaft* and musicology are just beginning. Cutting and pasting together one's work, as the Encyclopedians were still avidly doing, was not scientifically respectable anymore.

Revolutionary rhetoric in the humanities is quite common in the 1750–1830 period; so common that Göttingen philosopher/historian Christoph Meiners complains, already in 1785, that everyone cuts and pastes together a few half-baked insights and calls it a new science.¹⁶ The term 'scientific revolution' is used explicitly to this effect only by Augustin Thierry in 1840;¹⁷ but earlier, Kant and Thierry speak of a revolution, Vico of a *Scienza Nuova*, Ludwig Wachler of an unprecedented progress in *Historische Forschung und Kunst*, Voltaire, Georg Forster, Horne Tooke and Barthold Niebuhr of a work without precedent, and Schlegel of a new Renaissance.¹⁸ The list can be extended further. Some of these proclamations were more successful than others, and none should be taken at face value, but together they show that the idea of a 'scientific revolution' in the humanities is not anachronistic.

Domain definitions

In order to posit a 'Scientific Revolution' in the humanities, one must presume that there is a substantial unity and coherence to that domain, at least after the event. This is not an implausible assumption: different fields in the humanities employ comparable historical and philological methods and borrow from each other. The domain definitions, however, are unstable: for the 1750–1850 period, we have '(rhetoric and) belles-lettres', 'schöne

16 'Es ist zwar nichts gewöhnlicher, als aus bekannten Wissenschaften einzelne Abschnitte nach einer besondern Absicht zusammenordnen, und diese neu geordnete Systeme alter Kenntnisse mit der stolzen Miene von Erfindern als neue Wissenschaft vortragen. Allein wenn man nicht bloß seiner Eitelkeit ein kurz dauerndes Denkmal errichten, oder unnöthige Verwirrung anrichten will, so darf man nie eine neue Wissenschaft ankündigen, wenn man nicht wirklich Sachen liefert, die man bisher entweder gar nicht, oder wenigstens nicht nach Würden untersucht hatte.' C. Meiners, *Grundriß der Geschichte der Menschheit* (Göttingen 1785) 2–3.

17 A. Thierry, *Dix Ans des Études Historiques* (Paris 1840) 195. Thierry's statement, however, relates to French historiography, not to the humanities at large.

18 I. Kant, *Kritik der Reinen Vernunft* (Riga 1781, 1787), Vorrede [B]; Thierry, *Lettres sur l'Histoire de France* (Paris 1830) vii–viii; L. Wachler, *Geschichte der historischen Forschung und Kunst* (Göttingen 1812–1820) Bd. 4, 427; Voltaire, *Essai sur les Moeurs* (Paris 1756), Avant-Propos; G. Forster, *Voyage round the World* (London 1783) iv; J. Horne Tooke, *Epea Pteroenta or the Diversions of Purley* (London 1785–1796) I, 218; B. Niebuhr, *Römische Geschichte* (1811–1812) I, xii; F. Schlegel, *Über die Sprache und Weisheit der Indier* (Heidelberg 1808) x.

Wissenschaften', 'humanities', 'sciences humaines', and 'Geisteswissenschaften' – the last one introduced only in the 1840s. There is a common core to these: history, philology, and the study of language. But a few caveats about the domain in which the Standard Account would localize a scientific revolution are necessary.

One first observation is that if one follows the French definition of *sciences humaines*, which includes economy, psychology, and sociology, rather than the German *Geisteswissenschaften*, then the French Revolution was a much more revolutionary event at least with regard to the institutionalization of these three disciplines than the Prussian *Bildungsreform*. The great revolutionaries, in these disciplines, are Adam Smith and Auguste Comte, with no obvious link to Romanticism, historical consciousness, or the rise of nationalism.

A second observation is that infrastructural changes in the humanities did not only take place on an institutional level. Around 1800, the term 'Republic of Letters' was also going out of use and the concomitant ideal of a 'commonwealth of learning' was waning. Partly this was due to specialization and the growth of the reading public: scholars increasingly wrote for peers in their own field *or* for the reading public at large rather than for an imagined scholarly community. Partly it was due to the disruption of correspondence networks by the Napoleonic wars. And partly it was to the sheer growth of the learned world from an estimated 1,200 around 1700 to an estimated 30,000 at the eve of the French Revolution¹⁹ – so that each scholar is no longer 'one correspondent away' from the rest but has local academies and societies to associate with rather than an imaginary constellation.

A third observation is that philosophy is a discipline often forgotten in discussions about the humanities (and still sits uneasily under that label). But there is no other discipline in which there was such an explicit aim at scientification in the period around 1800 as there was in philosophy, attested to in such titles as Kant's *Prolegomena zu einer jeden künftigen Metaphysik, die als Wissenschaft wird auftreten können* (1783), Johann Gottlieb Fichte's *Wissenschaftslehre* (1795–1804), or Hegel's *Enzyklopädie der Philosophischen Wissenschaften im Grundrisse* (1817). This lends support to the Standard Account all the more because of the involvement of German Idealist philosophers in the Berlin University and in Jena University, which was in many ways its testing station. Sadly, though, German Idealism not only paved the way for philosophy as a modern university discipline concerned with 'fundamental issues' and 'conceptual analysis', but it also was a dead programme. The great metaphysical systems died with Hegel in 1830 and failed with Schelling in his Berlin lectures a decade later; as for Arthur Schopenhauer's appeal to scientific rigour in his attack on Hegel, this was particularly unconvincing in combination with Schopenhauer's own cosmological speculations.

A fourth observation is that one of the markers of scientification is the shift in meaning of the labels *philosophie* and *histoire*. The *Encyclopédie* still follows the Baconian distinction in which all knowledge pertaining to memory belongs under *histoire*, and all the sciences

19 The figure of 1,200 is from M. Ultee, 'The Republic of Letters: Learned correspondence, 1680–1720', *The Seventeenth Century* 2:1 (1987) 95–112, esp. 100. The figure of 30,000 is from L. Brockliss, 'Starting-out, getting-on and becoming famous in the eighteenth-century Republic of Letters', in: A. Holenstein, e.a. (eds.), *Scholars in Action. The Practice of Knowledge and the Figure of the Savant in the 18th Century I* (Leiden 2013) 74. Both figures are not supported by statistics, which are hardly feasible for lack of a rigid criterion for who is a 'scholar'.

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resulting from the operations of reason to *philosophie* (cf. ‘Système figurée des connoissances humaines’ at the end of the *Discours préliminaire*). Although the use of both terms before 1800 is not generally that systematic, the general trend is towards a narrowing down. An eighteenth-century book called ‘history’ can be a book of botany or physics, a reader’s digest of travel literature, or a dictionary; ‘philosophy’ can equally apply to Newton’s *Principia*, Guillaume Raynal’s *Histoire des Deux Indes*, or the Port-Royal Grammar. After 1780–1790, such uses become increasingly rare.

A fifth observation is that the corpus is vast. Johann Gottfried Eichhorn’s *Geschichte der Litteratur von ihrem Anfang bis auf die neuesten Zeiten* (1805–1811), which is effectively a *bibliographie raisonnée* of all scholarly work to that date, comes at 11 volumes and 6,000 pages; the index of historical tracts published by French academies and historical societies in the nineteenth century has 83,818 numbers, and the *Bibliothèque Historique de la France* fills five folios with 48,883 entries already in 1768–1775.²⁰ An increasing part of the corpus has been digitized and can be used for corpus queries, tracing first occurrences and the distribution of certain core concepts. However, such corpus queries – like google Ngram search – are inaccurate and full of noise, and they do not tell us what a concept means. People can say the same thing in different words, or use the same word to different meanings – and apart from the methodological problem that concepts are elusive entities and meanings are essentially underdetermined, there is also the practical possibility that people simply do not know what they are talking about.

Mapping Conceptual Change

All of the above yields no unequivocal answer to the question that opened this article. Is it an answerable question at all? One can always move the target by choosing a different definition of ‘humanities’, or ‘revolution’ – but that is semantic nitpicking. Everything depends on how you define everything. Ultimately the question is not about the label but about the extent to which the humanities have opened up new worlds, provided new concepts in which to define ourselves and the world, and have made progress that goes beyond accumulation and puzzle-solving. The problem is that the options listed on pages 230–231 are mutually exclusive. Shoving aside the question as unanswerable amounts to either accepting some degree of inconsistency, or to implicitly embracing a version of option 4. The best we can do, then, is to formulate conditions under which one would prefer one of the four alternatives listed above. What would count as proof for each of these options?

1. In spite of all criticism, the Standard Account is largely correct.

This would be true if the change in scholarly methods indeed correlates with the Prussian *Bildungsreform* and its precursors in Göttingen and Jena, and if it can first be noted there; if this change correlates with the introduction, increased frequency, and/or redefinition of a set of core concepts; if there is a ‘paper trail’ showing how these methods and concepts are next transmitted and exert influence abroad, more so than developments in France or elsewhere; if the names of scholarly disciplines change, and if this change coincides

20 R. de Lasteyrie, *Bibliographie générale des travaux historiques et archéologiques publiés par les Sociétés savantes de la France* (4 vols.; Paris 1888–1904); J. le Long and C.-M. Févret de Fontenette, *Bibliothèque Historique de la France* (5 vols.; Paris 1768–1775; originally 1 vol. (Paris 1719) compiled by Jacques le Long).

Tab. X.

Chronometriae diplomaticae specimen,
e diplomate Ottonis I. Imp. a. 970 sumtum.

Criteria	Saecula
I) ex Graphica petita	
1. Membrana magis lata, quam longa. Elem. meor. dipl. I. p. 32. (Regula haec Gudeniana non est omni exceptione maior) - -	5 6 7 8 9 10 11
2. Literis longioribus primus versus integer et subscriptio exarata sunt p. 89. n. 3. - -	—— 8 ^m 9 10 11 12 ^m
3. Scriptura minuta, mixta paullulum ex literis cursivis, p. 88. n. 3, 4. - -	—— 8 ^m 9 10 11 12
4. Abbreviaturae paucae, p. 58. - -	5 6 7 8 9 10 11 12
5. Litera <i>i</i> sine accentu acuto et puncto, p. 49. §. 50. - - - -	5 6 7 8 9 10 11 12 13 14 ⁱ
6. Syllaba <i>et</i> in verbo <i>scilicet</i> coarctata, p. 55.	5 6 7 8 9 10 11 12 13
II) ex Semiotica petita	
1. Chrismon secundae classis, p. 146. n. 2.	——— 9 ^m 10 11 ⁱ
2. Monogramma nominale, p. 248. §. 298.	5 6 7 8 9 10 ^f
3. Signum recognitionis lineare, p. 156 sq.	——— 9 ^m 10 11 12 ⁱ
4. Sigillum maius non maiestaticum, p. 280 sq.	5 6 7 8 9 10
5. Sigillum maius non maiestaticum quartae classis, p. 323, ad Epocham II - -	——— 10
6. Sigillum cereum impressum, p. 312 sqq. -	5 6 7 8 9 10 11 12 ^m
7. Inscriptio literalis sigilli: <i>Imperator Augustus</i> , p. 321. n. 1. - - - -	——— 10
Ex his criteriis apparet, diploma hoc esse saeculo X. scriptum; sed apparet etiam, diploma esse verum.	
	Saec. 10

Fig. 3: Johann Christoph Gatterer's 'chronometer' was a tool to establish the date and authenticity of a medieval manuscript. In the rows all the characteristics of a document are listed; in the columns, the centuries in which these characteristics occur. If there is a continuous line from top to bottom, that indicates the period the document is from; if there are breaks, it is rejected as false. Gatterer, *Praktische Diplomatik* (Göttingen 1799).

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with a change in method and/or subject matter; and again, if Germany is a precursor here more than any other country. The problem here is not lack of documentation. Most of the research on the history of the humanities more or less follows the Standard Account, and most of that research is not patently wrong. One can corroborate it further by closely mapping international networks of dissemination and reception, as Joep Leerssen is currently doing.²¹ But the burden of proof is also negative: the Standard Account is true if and only if other things did not happen.

2. There was a revolution, but it was different from what has hitherto been postulated.

This claim requires the same change in scholarly method, core concepts, and disciplinary domains. It furthermore requires that these changes exhibit a certain coherence: geographical, personal, and conceptual links between the various developments. But a revolution can take place in several places at once, as with the fall of the Central and Eastern European monarchies after World War I; similarly, in accordance with much of the criticism summarized on pages 227–228, the revolution in the humanities could be recalibrated to have taken place in both Paris and Berlin, as well as elsewhere.

3. There was not a single revolution, but several revolutions and revolutionary events – events that do not cannot be combined into one coherent whole but still resulted in a general conceptual change.

Here the requirements are the same as for (2), except that the last one is reversed: it should be shown that some of the great discoveries, institutional changes, shifts in the uses of source materials, and conceptual innovations occur independently. This can be done by a) identifying a set of revolutionary events and developments, b) showing how these mark a radical break, and c) indicating why there is no relevant direct relation between these different events and developments. Although this approach is intuitively plausible, its main challenge is to retain enough coherence to show that the change, eventually, was widespread and wholesale, but not so much as to make it one revolution after all.

4. There was no revolution in the humanities whatsoever.

This subdivides into two options: *a. there was only a gradual change.* There are, again, two ways of proving this. The weak thesis is to point out that many of the developments identified as revolutionary have previous antecedents, that older forms of scholarship continue alongside and contribute to new approaches, and that the introduction / proliferation / redefinition of core concepts does not significantly affect scholarly practice. The strong thesis is, rather, that revolutions take place all the time. This robs the term ‘revolution’ of any meaningful content. Thus Anthony Grafton, Joseph Levine (*Humanism and History*, 1987), and Paul Hazard (*La Crise de la Conscience Européenne*, 1934)

²¹ That is, mapping the dissemination of cultural nationalism combined with that of philological, linguistic, and historical scholarship. See the SPINnet database of correspondence networks and the related project creating an Encyclopedia of Romantic Nationalism in Europe: <http://www.spinnet.eu> (accessed 2 December 2014). Cf. J. Leerssen, *National Thought in Europe: A Cultural History* (Amsterdam 2006). For the reception of German scholarship in Britain and the USA from 1800 onward, see S. Turner, *Philology. The Forgotten Origins of the Humanities* (Princeton 2014).

identify a wholesale shift around 1700, but one might equally argue for 1650 or 1750.²² The problem is how to measure which one was most ‘revolutionary’, or whether these shifts were equally ‘revolutionary’ in terms of impact. But showing that previous and later shifts satisfy similar conditions for counting as ‘revolutionary’ goes a long way to proving the strong thesis.

b. the revolutionary changes took place on a different level. Here one could distinguish between a *contextualist* and a *superstructure* thesis. The ‘contextualist’ thesis describes scholarship as part of ‘what people do’, civil society, *Bildungsbürgertum*, print culture, salon culture – in short, a way of life. To show that there was no revolution in the humanities, accordingly, one should prove that even in case of important breakthroughs, local concerns and causes preponderate over scholarly considerations and influences to such an extent that a wholesale change in scholarship could not come to be without an antecedent change of life. (‘Correlated’ is not enough – then scholarship could still be the agent of change.)

The ‘superstructure’ thesis attributes change to large-scale rather than local developments. Here one could identify, for instance, the French Revolution and the Napoleonic Wars as effective causes, and the rise of the third estate, the emergence of the public sphere, and the formation of the nation state as underlying causes.²³ This would be true for the humanities if it could be shown that a) the changes in scholarly method, core concepts, and disciplinary domains are indeed caused or at least linked significantly to these larger developments, b) they could not or could hardly have happened otherwise, and c) there are no revolutionary changes *outside* these developments.

To put my cards on the table, I would opt for something in between option 2 and 3. The study of Sanskrit and the decipherment of hieroglyphs and cuneiform can count as *local* revolutions in that they indeed brought to light histories and literatures previously unknown, and even unimaginable. This did have repercussions for linguistics, philology and history at large; but how much coherence there is between this and other developments in the humanities, and whether these developments at large were also revolutionary, cannot be decided from that. Also, a closer analysis of the revolutionary rhetoric listed earlier in this article and the conditions under which these proclamations were successful speech acts could help to decide the issue. But that would require an article on its own.

A coherent narrative could also be elaborated from any of the other alternatives. They are, after all, plausible options. The great advantage of making that choice consciously

22 Levine’s turning point is the Battle of the Books; Hazard’s is the general ‘Crisis of the European Mind’ (1680–1715) resulting from the collapse of Biblical chronology and the encounter with people not accounted for in Genesis, and expressed by, among others, biblical criticism along the lines of Spinoza and Richard Simon, and the scepticism of Bayle and Fontenelle. Bacon and Descartes, before 1650, already mount a significant attack on the humanist cult of erudition, using a self-conscious revolutionary rhetoric that in many ways informs the *Encyclopédie* and the work of Diderot, Voltaire et al. at large.

23 For the original formulation of the emergence of the public sphere, see J. Habermas, *Strukturwandel der Öffentlichkeit: Untersuchungen zu einer Kategorie der Bürgerlichen Gesellschaft* (Frankfurt a.M. 1962); its proponents in the history of scholarship include D. Goodman, *The Republic of Letters* (Ithaca / London 1994) and R. Porter, *Enlightenment* (London 2000). Ernest Gellner has described the interrelation of state formation, education and scholarship in the process of modernization with the slogan ‘Every man a clerk!’ Cf. E. Gellner, *Thought and Change* (London 1964) 160.

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rather than tacitly is that it raises awareness of the dynamics of conceptual change – that is, whether and how the humanities brought forth new ideas. This entails that one should not only look at how ideas spread but also at how they emerge from and/or are imposed upon the accumulated data, guide the classification and accumulation of new kinds of information, and render older accumulations irrelevant: the creative and destructive process through which information is transformed into knowledge. That in itself would be a substantial change of perspective.