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The Philological Apparatus: Science, Text, and Nation in the Nineteenth Century

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Abstract

Philology haunts the humanities, through both its defendants and its detractors. This article examines the construction of philology as the premier science of the long nineteenth century in Europe. It aims to bring the history of philology up to date by taking it seriously as a science and giving it the kind of treatment that has dominated the history of science for the last generation: to reveal how practices, instruments, and cooperation create illusions of timeless knowledge. This historical inquiry therefore asks how one modality of text interpretation could morph into an integrated complex of knowledge production, which ostensibly explained the whole human world. Ultimately, it advances a central argument: philology operated as a relational system, one that concealed diversity and disunity, projected unity and stability, and seemed to rise above the material conditions of its own making. The essay scrutinizes the composition of philology as a heterogeneous ensemble, the functioning of philology comparable to other sciences, whether human or natural, and the historical contingency in the consolidation of philology.

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Unless otherwise noted, all translations are my own.

Introduction

Philology is a science that once terrified the world. The historical study of text and language seemed to pose an existential threat to many onlookers in the nineteenth century. A technical work on Homer was thus compared to "revolutionary doctrines" in the Ancien Régime and a "perverse attempt...of explaining the world without a god." But Homer was only one hallowed author or received tradition threatened by this new science. B.G. Niebuhr judged Livy's early history of Rome to be a fiction; G. Grote cast doubt on Thucydides and celebrated liberal democracy in Athens; W.M.L. de Wette claimed fabrications to the true past of ancient Israel in the biblical narrative; and D.F. Strauss pushed Jesus out of the realm of history and into that of myth. As one observer noted, it was only a short step from the "annals of heroic Greece and of regal Rome" being reduced to fables or the unified authorship of the Odyssey and Iliad being split apart to the sacred accounts of Judaism and Christianity being totally dismantled.³ So tightly bound were politics and religion, on one hand, and the classical world and biblical tradition, on the other, that J.G. Lockhart could declare critical inquiry into the epics of ancient Greece "the Antichristian conspiracy." Before biology, before geology, philology was chipping away the very foundations of Western civilization: its heroes, its history, its structures - and with them, its self-understanding.

In this context, philology is best defined, with Lorraine Daston and Glenn Most, as "the rational, disciplined, and institutionalized form of interpersonal research, testing, and communication, directed to (above all, written) texts" (Daston and Most, "History of Science and History of Philologies," *Isis* 106, no. 2 [2015]: 378–90, at 379 n. 6).

William Mure of Caldwell, A Critical History of the Language and Literature of Antient (sic!) Greece, vol. 1. (London, 1850), 197; John Stuart Blackie, Homer and the Iliad, vol. 1, Homeric Dissertations (Edinburgh, 1866), 245 n. 2.

Thomas Henry Huxley, "Controverted Questions," repr. in idem, *Collected Essays*, vol. 5, *Science and the Christian Tradition* (London, 1894), 1–58, at 32–33.

⁴ [John Gibson Lockhart], review of A Critical History of the Language and Literature of Ancient Greece, by W. Mure of Caldwell, Quarterly Review 87, no. 174 (1850): 434–68, at 437.

With its claims to scientificity, this philology proved scandalous when it first appeared on the scene. Replacing erudition with expertise, it claimed to introduce into the production of knowledge not only a standard method for textual analysis but also the prospect of comprehensiveness. Even a century onwards, philology still haunts the humanities, through both its defendants and detractors. Some call us to look backwards, to a golden age when philology boasted pride of place or unified humanistic learning. While Lee Patterson praised its rigors and rationale for medieval studies, promoting a "return" or "restoration," and Michael Holquist, as president of the Modern Language Association, regretted that a philologist "is what you call the dull boys and girls of the profession," James Turner embarked on his Philology: The Forgotten Origins of the Modern Humanities in part with a distressed eye toward the fragmentation of knowledge in higher education.⁵ Others call us to look forward, humbling philology into a reading practice with lesser aspirations and fewer methodical claims and dismissing its epistemic primacy. Critics have deemed philological scholarship tainted by the sponsorship of nationalist, colonial, and statist regimes during the twentieth century and thus demanded a new philology, modern philology, feminist philology, radical philology, queer philology, or trans philology. So, too, thinkers as diverse as Paul de Man, Jonathan Culler, and

⁵ Lee Patterson, "The Return to Philology," in *The Past and Future of Medieval Studies*, ed. John Van Engen (South Bend, 1994), 231–44; Michael Holquist, "Forgetting Our Name, Remembering Our Mother," *Publications of the Modern Language Association of America* 115, no. 7 (2000): 1975–1977, at 1976; James Turner, *Philology: The Forgotten Origins of the Modern Humanities* (Princeton, 2014), esp. Prologue and Epilogue.

Cf., e.g., Matthew Restall, "A History of the New Philology and the New Philology in History," Latin American Research Review 38, no. 1 (2003): 113–134; Alton L. Becker, Beyond Translation: Essays toward a Modern Philology (Ann Arbor, 1995); Mieke Bal, "Virginity: Toward a Feminist Philology," Disputatio 12, no. 30/32 (1987): 65–82; Sean Gurd, Iphigenias at Aulis: Textual Multiplicity, Radical Philology (Ithaca, 2005); Jeffrey Masten, Queer Philologies: Sex, Language, and Affect in Shakespeare's Time (Philadelphia, 2016); Joseph Gamble, "Toward a Trans Philology," Journal for Early Modern Cultural Studies 19, no. 4 (2019): 26–44; see also Hans Ulrich Gumbrecht, The Powers of Philology: Dynamics of Textual Scholarship (Urbana, 2003).

Edward Said have written essays entitled "The Return to Philology" yet appropriated the term for close reading, with reading here understood less as a method than a repudiation of method.⁷ Geoffrey Galt Harpham therefore judges it not "a temporary fascination or even a recurrent mood" but "a permanent and characteristic feature of humanistic scholarship, a deep chord vibrating beneath literary studies in particular." Year after year, we witness new journals, books, and series as well as centers and events devoted to philology, from its global histories to its relevance for the humanities. This journal, as well, has welcomed meditations on

Paul de Man, "The Return to Philology," repr. in idem, *The Resistance to Theory* (Minneapolis, 1986), 21–26; Jonathan Culler, "The Return to Philology," *Journal of Aesthetic Education* 36, no. 3 (2002): 12–16; Edward W. Said, "The Return to Philology," in idem, *Humanism and Democratic Criticism* (New York, 2004), 57–84.

Geoffrey Galt Harpham, "Roots, Races, and the Return to Philology," Representations 106, no. 1 (2009): 34-62, at 54; cf. Frances Ferguson, "Philology, Literature, Style," English Literary History 80, no. 2 (2013): 323-41. 9 For special issues, Stephen B. Nichols, ed., "New Philology," Speculum (1990); Jan Ziolkowski, ed., "What Is Philology?," Comparative Literature Studies, (1990); Michelle R. Warren, ed., "Philology and the Mirage of Time," Postmedievalist (2014); and Markus Stock, ed., "Rethinking Philology: Twenty-Five Years after The New Philology," Florilegium (2015). As books, Sean Gurd, ed., Philology and Its Histories (Columbus, 2010); Haruko Momma, From Philology to English Studies: Language and Culture in the Nineteenth Century (Cambridge, 2013); Sheldon Pollock, Benjamin A. Elman, and Ku-ming Kevin Chang, eds., World Philology (Cambridge, MA, 2015); Suman Gupta, Philology and Global English Studies: Retracings (Basingstoke, 2015); Harry Lönnroth, ed., Philology Matters! Essays on the Art of Reading Slowly (Leiden, 2017); Dirk Van Miert, The Emancipation of Biblical Philology in the Dutch Republic, 1500–1670 (Oxford, 2018); Gerhard Richter and Ann Smock, eds., Give the Word: Responses to Werner Hamacher's 95 Theses on Philology (Lincoln, 2019); Pál Kelemen and Nicolas Pethes, eds., Philology in the Making: Analog/Digital Cultures of Scholarly Writing and Reading (Bielefeld, 2019). Concerning series, the recent Philological Encounters Monographs, a journal supplement series. Concerning centers and events, Zukunftsphilologie at the Free University of Berlin, Program in World Philology at Columbia, and Renewed Philology at Yale as well as "Philology in the 19th Century: Ideals, Traditions, Methods" (workshop at CRASSH in 2017) and "Philology's Shadow: Theology and the Classics" (panel at the Society for Classical Studies conference in 2017 and 2018), the latter published as Classical Philology and Theology: Entanglement, Disavowal, and the Godlike Scholar, ed. Catherine Conybeare and Simon Goldhill (Cambridge, 2020). On this resurgent interest, see also Nicholas Hardy, review of *Philology: The Forgotten Origins of*

philology.¹⁰

Yet this revived interest has not explained how nineteenth-century philology managed to arrive at its position of dominance across the human sciences. Such renewal, or disavowal, has not appreciated philology as an integrated system of relations forged to create specific kinds of knowledge, one rooted in time and place. Despite wide-ranging inquiries into philology – its origins, guises, and afterlives – strikingly little work has recognized the true heterogeneity of activity and patronage, sites and networks, subjects and objects or, even more, their consolidation into the defining mode of building knowledge in the nineteenth century. Indeed, philology transformed into the leading paradigm for understanding all things human: history, nationality, ethnicity, migration. By historicizing texts and everything through texts, it promised a pathway to the essence of language, culture, and religion. A huge range of diversity - in chronology and geography, materiality and tradition - was systematically reduced to one mode of textualized study that created explanatory narratives of coherence, consistency, and order. Philology thus defined what it meant for learning in post-Enlightenment Europe to be classed as scientific: the right questions to ask, the right way to answer them. As Lorraine Daston and Glenn Most have recently written, "philology not only counted as a science; it was the science, the model of the highest form of knowledge."11 But like other systems of production, philology obscured its making, erased its sources, and rationalized its differences. Still, this system came from somewhere.

The present article examines the construction of philology as the premier science of the

the Modern Humanities, by James Turner, Erudition and the Republic of Letters 2, no. 1 (2017): 97-104.

Sheldon Pollock, "Future Philology? The Fate of a Soft Science in a Hard World," *CI* 35, no. 4, "The Fate of Disciplines" (2009): 931–61; Jerome McGann, "Philology in a New Key," *CI* 39, no. 2 (2013): 327–46; Stephen G. Nichols, "Erich Auerbach's Political Philology," *CI* 45, no. 1 (2018): 29–45; James I. Porter, "Erich Auerbach and the Judaizing of Philology," *CI* 35, no. 1 (2008): 115–47.

Daston and Most, "History of Science and History of Philologies," 384.

long nineteenth century in Europe. It asks how one modality of text-interpretation could morph into an integrated complex of knowledge-production that ostensibly explained the whole human world. Ultimately, this historical inquiry advances a central argument: philology operated as a relational system, one that concealed diversity and disunity, projected unity and stability, and seemed to rise above the material conditions of its own making. The essay therefore scrutinizes (a) the composition of philology as a heterogeneous ensemble, (b) the functioning of philology comparable to other sciences, whether human or natural, and (c) the historical contingency in the consolidation of philology. Indeed, although recent work has increasingly asserted that philology constituted the foundation of the modern humanities, through its scope and mode of analysis such research has paradoxically forgotten or written out much of what made philology foundational in the first place: its claims of universality, its timeliness as a mode of building knowledge, its relationality as an epistemological system, and its circulation of concepts, methods and practitioners. By contrast, this investigation seeks to bring the history of philology up to date by taking it seriously as a science and giving it the kind of treatment that has dominated history of science for the last generation: to reveal how practices, instruments, and cooperation created illusions of timeless knowledge. Moreover, this inspection strives to inserts technics – techniques as well as technologies – into the analysis, by drawing on media studies: to explore the technical standardization and interpretative routinization in everyday scholarly practices by which philology produced its grand metaphysical categories of identity, such as national essence, linguistic classification, or pure origins. Finally, this exploration follows philosophy of science and targets how the knowledge made by philology rested on structures that concealed their disunity: to unearth the power and appeal that philology derived precisely from its ability to suspend difference and rationalize diversity.

In offering this new history of philology, the article proceeds as follows. First, it presents a theoretical framework for conceptualizing philological science as an 'apparatus.' The

explication emphasizes the heterogeneity of the ensemble – material and immaterial, individual and collective, human and nonhuman – and the contingency (not inevitability) of its articulation. Second, it explores constituent components in the philological apparatus, both concrete and abstract. Taking each in turn, the analysis surveys industrial technologies, technical instruments, institutional arrangements, and collaborative ventures as well as epistemological guides, forms of representation, and conceptual figures. Third, it dissects claims of unity in this knowledge-system. The examination juxtaposes pretensions to a unified science with gaps empirical, methodical, and logical. Fourth, it moves from tracing how this science worked to charting why philology became so successful where and when it did. The account considers the urgent problem – namely, the brave new world after Napoleon – that organized relations among heterogeneous elements and forged the philological apparatus. Indeed, what classicist T. Mommsen first discerned, with unease, as 'Big Science' was already there in the nineteenth century: in the form of philology. 12

The philological apparatus

Philology was the queen of science. And her kingdom was very much of this world – filled with palpable infrastructure, written materials, and human technicians (or tinkerers). Yet philology constituted a relational system of knowledge-production, one that comprised not only physical instruments, equipment, and machinery but also intangible concepts, skills, and hermeneutics. In general, such a framework for understanding philology views it through the (ad)vantages afforded by historians of science and media theorists, such as Hans-Jörg Rheinberger on forms of scientific representation and the production of scientific objects, Bruno Latour on active networks of humans and nonhumans, and Friedrich Kittler on inscription (Aufschreibesysteme) at

Theodor Mommsen, "Antwort an Harnack, 3. Juli 1890," repr. in idem, *Reden und Aufsätze* (Berlin, 1905): 208–10, at 209.

the birth of romanticism, i.e. technologies of writing, modes of interpretation, didactic procedures, and state bureaucracy circa 1800.¹³ In particular, this article reformulates, for a different time and place, what Bernard Dionysius Geoghegan has called the "cybernetic apparatus." Geoghegan, writing in this journal, charted the consolidation of informatics, communication technology, and linguistics into cybernetics. By exploiting the semantic dislocation of 'apparatus' in English, which translates both appareil and dispositif in French, he demarcated two levels of phenomena that came to operate together: (1) "instruments and techniques . . . that acted as material aids or guides to research" and (2) "the politics of knowledge [that] enabled these material instruments and techniques to morph into ostensibly immaterial ideals that furnished researchers with procedures for investigations unhindered by historical, political, or disciplinary difference."14 Investigating this conceptual blurring as a strategy of knowledge, he gained analytical purchase on what that cybernetic apparatus was through a focus on what it did, amidst the historical contingencies of twentieth-century France and North America. Consequently, Geoghegan not only disassembled an ensemble of relations notable for its disunity and heterogeneity – in concepts, materials, projects, sites, and agendas - but also identified the strategies and needs which forged that apparatus, gave it strength, and characterized the knowledge produced.

As this essay argues, the historical study of text and language morphed into a 'philological apparatus' in nineteenth-century Europe. ¹⁵ On the level of *appareil*, it was

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Hans-Jörg Rheinberger, Toward a History of Epistemic Things: Synthesizing Proteins in the Test Tube (Stanford, 1997); Bruno Latour, We Have Never Been Modern, trans. Catherine Porter (Cambridge, MA, 1993); Friedrich A. Kittler, Discourse Networks, 1800/1900, trans. Michael Metteer with Chriss Cullens (Stanford, 1990).

Bernard Dionysius Geoghegan, "From Information Theory to French Theory: Jakobson, Lévi-Strauss, and the Cybernetic Apparatus," *CI* 38, no. 1 (2011): 96–126, at 98.

Cf. Paul Michael Kurtz, Kaiser, Christ, and Canaan: The Religion of Israel in Protestant Germany, 1871–1918
(Tübingen, 2018), 124–25.

composed of various tools and instruments like manuscripts, grammars, lexica, critical editions, catalogues as well as casts, molds, typefaces, and presses. On the level of *dispositif*, it comprised a diverse assemblage of state sponsorship, institutional reforms, moral statements, and collaborative undertakings. This assembly of strategies and operations, bodies and networks, projects and sites transformed into the science of philology. Following a broader approach in history of science, the analysis here reveals how research communities erased the social and technical labor that secured and maintained the unity of their disciplines. In a sense, philologists mistook an effect ('the unity of science') for the cause (rigorous work of instruments, networks, and institutions oriented towards producing scientific, linguistic, and national unity and identity). Despite – or because of – such diversity, philology seemed to rise above the material circumstances of its making.

In what follows, the inquiry inventories critical elements in this knowledge-system, before contrasting disunity in that assemblage with its claims of unity (even universality) and then considering the contingency of its formation in concrete time and place. In enumerating those elements, the essay builds on previous work – some descriptive, some analytical – by historians of humanistic learning as well as by practitioners of textual disciplines. Perhaps the most productive trend among the most insightful has targeted scholarly practice. Sheldon Pollock, for instance, has surveyed the composition of German *Wissenschaft* in the period and catalogued some crucial components in that bricolage:

The characteristics of this "science" merit historical analysis no less than the constructions of romanticism. An inventory of the epistemological instruments of *Indologie* would include, besides Bopp's comparative linguistics, other nineteenth-century intellectual technologies developed for the human sciences, such as the text-criticism of Wolf and Lachmann, the

philology of Böckh, and the historiography of Ranke. 16

Similarly, Daston and Most have joined together histories of science – natural and human – to uncover commonalities between philology and astronomy in the nineteenth century, which exhibited not only similar problems but also problems framed in similar ways and addressed with similar methods. By examining less *what* is studied than *how* it is studied, they discerned a shared emphasis on "advanced specialist training in the recently founded research seminars...; publication of original research in specialized journals; expertise over erudition; and self-consciously critical methods alert to every possible source of error." In like manner, this article probes such specialized yet increasingly standardized practice, i.e., what philologists did. However, it argues for the importance of investigating still larger institutional structures, cooperative projects, and strategic alliances, which both shaped and were shaped by such practices and practitioners. It advocates, furthermore, for scrutiny of both material and immaterial components in philological science.

Material modules

Philology was physical, predicated on trained hands, walled spaces, mechanical presses, and, of course, tangible texts – carved in stone, etched on tablets, written on papyrus. Schools and universities, museums and ministries, academies and societies, libraries and publishers formed a complex network that collected, organized, processed, stored, and exchanged unprecedented amounts of data. Such a scientific system depended on humans (and machines) to perform all kinds of technical labor, enhanced with the latest technologies. Four material elements, in

Sheldon Pollock, "Deep Orientalism? Notes on Sanskrit and Power beyond the Raj," in *Orientalism and the Postcolonial Predicament: Perspectives on South Asia*, ed. Carol A. Breckenridge and Peter van der Veer (Philadelphia, 1993), 76–133, at 84, italics original.

Daston and Most, "History of Science and History of Philologies," 381.

particular, proved essential: technological innovations, technical instruments, institutional arrangements, and collaborative endeavors. Together, these modules made the nineteenth century the era of Big Science and the epoch of Big Data.

First, new technology affected the study of texts. Mechanization and industrialization impacted everything from the equipment for printing and binding to the production of ink and paper to the reproduction of images. They boosted quality and quantity alike. In 1836, H.C.M. Rettig published a lithographic facsimile of a bilingual manuscript and praised new developments in paper, ink, and press, which ensured a reliable, diplomatic edition. So high did optimism run that he opined, "Real errors are not possible at all...." Furthermore, improvements to typeface not only facilitated efficient typesetting but also reduced errors in transcribing texts from manuscripts to print, especially for non-Latin scripts with complex diacritics and ligatures. One writer celebrated the comfortable size, the clarity of strokes, and the durability of 'the German' typeface for Sanskrit, created by A.W. Schlegel. [Figure 01]] Although Schlegel had designed it for a printers at his own University of Bonn, the Prussian authorities, having supported the endeavor, not only demanded the necessary materials to produce another printing apparatus for the Royal Academy of the Sciences in Berlin but also arranged for the Sanskrit type to go to Paris, on request by the Société Asiatique. As the industry of scholars met that of mass production, philological knowledge was manufactured at rates both

See Georg Jäger, ed., Geschichte des deutschen Buchhandels im 19. und 20. Jahrhundert, Vol. 1, Das Kaiserreich, 1870–1918, 3 Parts (Frankfurt, 2001–10); esp. Peter Neumann, "Herstellungstechnik und Buchgestaltung," in Vol. 1, Part 1, 170–96.

¹⁹ H.C.M. Rettig, "Ueber einen tausendjährigen noch nie verglichenen griechischen Evangeliencodex mit lateinischer Interlinearversion," *Theologische Studien und Kritiken* 9, no. 2 (1836): 465–69, at 467.

Willibald Kirfel, "Die Anfänge des Sanskrit-Druckes in Europa," Zentralblatt für Bibliothekswesen 32, nos. 8–9 (1915): 274–80, at 276–78. Schlegel developed the typeface with one Theresia Hoyer: an arrangement that spotlights the gender dimension, where women's work often included translating, typesetting, and hidden labor in the home.

faster and cheaper. In his 1872 president's address to the Assembly of German Philologians and Schoolmen, G. Curtius stressed how rare and expensive books had been just 30 years prior, compared to the inexpensive editions and convenient handbooks that now lay at the ready for all. "Just as one travels today faster than ever before," he proclaimed, "so also one can also work faster. [...] What the would-be philologist saves on time he can thus make use of otherwise."21 The repercussions of technological advances for humanistic learning demand further analysis: whether the railroads that circulated scholars more quickly and more frequently to major meetings like the International Congress of Orientalists, from 1873; the steamships that piloted increasing numbers of travelers abroad, who brought foreign texts and monuments back home; or the lithographs and photographs that brought distant worlds to life, be they chronological or geographical. [[Figure 02]] New communication technologies, like the telegraph, also secured and accelerated scholarly exchange. Snail mail was lamented already by 1920, when one philologist complained to another, "I have been slow to respond to you because we had a postelegrafonici strike. It would be a heroic courage to write when one thinks that what he writes will perhaps end up in the sewer. We have returned to the Middle Ages, when one relied on the goodwill of travelers to carry missives in faraway lands."22 Philological science was built both for and by the modern world.

Second, specialized tools helped process textual data. On one hand, some of these technical implements traced back to antiquity. While grammars had served non-native speakers of Latin, alphabetic dictionaries came into fashion in the Hellenistic period, and bilingual lexical lists for Akkadian and Sumerian reached back even further, into the third millennium

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Georg Curtius, "Eröffnungsrede des Präsidenten," in Verhandlungen der achtundzwanzigsten Versammlung deutscher Philologen und Schulmänner in Leipzig (Leipzig, 1873), 1–9, at 6.

Franz Cumont to Alfred Loisy, May 13, 1920, in "Mon cher Mithra..." La correspondance entre Franz Cumont et Alfred Loisy, 2 vols., ed. Annelies Lannoy, Corinne Bonnet, and Danny Praet (Paris, 2019), 1:253.

BCE.²³ Although such aids had existed for centuries, nay millennia, they became tools of a technical trade in the long nineteenth century, as a burgeoning bourgeois culture vastly expanded the number of producers and consumers of textual knowledge. P. Buttmann's grammar of ancient Greek went through 22 editions – the version for schools seeing 17 – while G. Curtius's elementary Greek grammar underwent 26, E. Koch's, 17, and K.W. Krüger's, 11.

²⁴ The basic syntax by M. Seyffert also had 31 printings.²⁵ As for encyclopedia and compendia, long after Harpocration's *Lexicon of the Ten Orators* they multiplied on unprecedented scale. The first edition of A. Pauly's *Real-Encyclopädie der classischen Alterthumswissenschaft* came in six volumes (1839–1852), before the first received a second edition, in two parts (1864,1866); in 1890, G. Wissowa launched an extensive reedition, dubbed the Pauly-Wissowa, which began in 1894 and finished a century later, in 1980, totaling 84 volumes.²⁶ On the other hand, instruments of more recent vintage advanced philological study. Pedagogical tools like the chrestomathy with glossary, the cursory readings pioneered by J.M. Gesner, and literary anthologies were on the rise circa 1800. Expert implements like the critical edition – with its 'apparatus' of notes and variants – and the text edition of individual manuscripts became cobbles in the highway to the

²³ Cf. Eleanor Dickey, "Teaching Latin to Greek speakers in antiquity," in *Learning Latin and Greek from Antiquity to the Present*, ed. Elizabeth P. Archibald, William Brockliss, and Jonathan Gnoza (Cambridge, 2015), 30–51; Stefano Valente, "Alphabetical Dictionaries: From Antiquity to the Byzantine Period," in *Encyclopedia of Ancient Greek Language and Linguistics*, vol. 1, ed. Georgios K. Giannakis (Leiden, 2013), 100–03; Niek Veldhuis, *History of the Cuneiform Lexical Tradition* (Münster, 2014).

Philipp Buttmann, Griechische Grammatik (Berlin, 1792–1869); idem, Griechische Schul-Grammatik (Berlin, 1812–1875); Georg Curtius, Griechische Schulgrammatik (Prague, 1852–1907); Ernst Koch, Griechische Schulgrammatik (Leipzig, 1869–1904); Karl Wilhelm Krueger, Griechische Sprachlehre für Anfänger, later Kleinere griechische Sprachlehre (Berlin, 1847–1884).

Moritz Seyffert, *Hauptregeln der griechischen Syntax* (Berlin, 1861–1910).

An abridged version, *Der Kleine Pauly*, came in five volumes, between 1964 and 1975; *Der Neue Pauly* appeared in 22, between 1996 and 2011 (both by Metzler) – with an English edition, *Brill's New Pauly*, in progress.

past. Moreover, the expansion of specialized journals raised the speed, lifted the profile, and expanded the reach of new disciplinary and sub-disciplinary knowledge. Genres like the textbook, handbook, and introduction helped map the expansive, specialist routes of all the philological ants. So great were the yields in classical scholarship that an organ came into being, in 1875, simply to track production: Jahresbericht über die Fortschritte der klassischen Altertumswissenschaft.

Third, institutions created, accredited, and disciplined practitioners. Here, the Prussian system proved massively influential across Europe. As figures like F.A. Wolf promoted specialization, institutionalization, and professionalization for classical learning, educational reforms, especially state exams, placed greater demands on the training of schoolteachers at university.²⁷ The innovation of the *Seminar* in Göttingen, at the end of the eighteenth century, had fashioned an infrastructure for specialist learning.²⁸ Initially designed for classical philology, this mechanism was replicated in other fields throughout the nineteenth century, including physics and mathematics. The usual story describes the construction of *Wissenschaft* and *Bildung* as ideals built into the founding of the University of Berlin, in 1810. However overlooked, the Rhein University in Bonn functioned as a veritable factory of knowers and know-how that helped define the theories and methods of philology in classics and beyond. The Philological Seminar had as its stated purpose:

to train students further – who are fittingly prepared for the science of antiquity and have chosen this for themselves as their true profession – through lessons as

See R. Steven Turner, "Historicism, Kritik, and the Prussian Professoriate, 1790 to 1840," in Philologie und Hermeneutik im 19. Jahrhundert II, ed. Mayotte Bollack, Heinz Wismann, and Theodor Lindken (Göttingen, 1983), 450–89; cf. idem, "The Growth of Professional Research in Prussia, 1818 to 1848 – Causes and Context," Historical Studies in the Physical Sciences 3 (1971): 137–82; cf. also the fine appendices in William Clark, Academic Charisma and the Origins of the Research University (Chicago, 2006).

Michael Legaspi, *The Death of Scripture and the Rise of Biblical Studies* (Oxford, 2010).

frequent as possible, which provide introduction into the inner workings of the science and of its manner of approach, as well as through literary support of every kind and thus that through them these studies can be preserved, reproduced, and expanded in the future.²⁹

Launched by K.F. Heinrich and A.F. Naeke and later helmed by F.G. Welcker, F. Ritschl, O. Jahn, and H. Usener, this juggernaut counted among her voyagers U. von Wilamowitz-Moellendorff, F. Nietzsche, H. Diels, and A. Geiger. Offering further ballast were the seminar's well-stocked library and the *Akademisches Kunstmuseum*. The prestigious journal *Rheinisches Museum für Philologie* also validated and disseminated now 'scientific' modalities of text-interpretation, with luminaries like A. Boeckh, B.G. Niebuhr, and J. Bernays serving on its board. Such institutional arrangements, supported by the state, occupied an essential place in the philological complex.

Fourth, strategic collaboration characterized this science. M.J. de Goeje, for instance, assembled an international group of leading orientalists to produce the first complete edition of al Tabari's world history, comprising 15 volumes.³⁰ Beyond such individual organization, royal academies and academic societies invested untold resources – material and personal, mechanical and financial, architectural and infrastructural – into large-scale collaborative ventures, whose years running and outputs published could run into the dozens. The Royal Prussian Academy of the Sciences in Berlin launched a multitude of undertakings that produced a staggering number of volumes, including *Corpus Inscriptionum Graecarum* (6 vols., 1825–59; index, 1877), *Corpus Aristotelicum* (4 vols., 1827–36; index 1870), *Commentaria in*

²⁹ Ministry of Education, Health, and Religious Affairs, "Reglement für das philologische Seminarium bei der Königlich Preußischen Rhein-Universität zu Bonn," *Jahrbuch der preußischen Rhein-Universität* 1, no. 3 (1819): 257–61, at 257.

Michael Jan de Goeje, ed., *Annales quos scripsit Abu Djafar Mohammed ibn Djarir at-Tabari*, 15 vols. (Leiden, 1879–1901).

Aristotelem Graeca (23 vols., 1882–1909), Supplementum Aristotelicum (3 vols., 1885–1903), Corpus Inscriptionum Latinarum (ca. 33 vols. already between 1853 and 1918), Prosopographia Imperii Romani saec. I.II.III (1st ed., 3 vols., 1897–1898), Griechische Münzwerk (4 vols., just between 1898 and 1918), and, with the "Church Fathers Commission," both Griechischen Christlichen Schriftsteller der ersten drei Jahrhunderte (first series 1891–1945) and Texte und Untersuchungen zur Geschichte der altchristlichen Literatur (41 vols., between 1883 and 1918 alone). Likewise, the Royal Bavarian Academy of the Sciences founded a "Commission for Research on Patrimonial Antiquities" (Kommission zur Untersuchung vaterländischer Altertümer), in 1807, and initiated the monumental Thesaurus Linguae Latinae, in 1894. Furthermore, these institutions could cooperate for their grand endeavors. The academies in Berlin, Leipzig, and Copenhagen came together for the Corpus Medicorum Graecorum and Corpus Medicorum Latinorum. However, rather than divide and conquer, scientific organizations also formulated rival projects, as when Berlin inaugurated the Griechische Christliche Schriftsteller der ersten Jahrhunderte to answer Vienna's Corpus Scriptorum Ecclesiasticorum Latinorum. Whether training practitioners, editing texts, or developing presses, collaboration – even competition – projected continuity, commensurability, and common purpose across disciplines, institutions, and states.

With an increased mastery of the past, philology promoted a sense of progress that helped legitimate the enterprise – both the result of and, in turn, impetus for technological innovation, instrumental augmentation, professional inculcation, and strategic collaboration. By 1911, confidence ran so high that classicist J.P. Postgate claimed, in the *Encyclopaedia Britannica*, "As times goes on, textual criticism will have less and less to do. In the old texts its work will have been performed so far as it is performable. What is left will be an obstinate remainder of difficulties, for which there is no solution or only too many. In the newer texts, on the other hand, as experience has already shown, it will have from the outset but a very

contracted field."³¹ Rosy days. In 1908, the Göttingen Septuaginta-Unternehmen launched a critical edition of the entire ancient Greek translation of the Hebrew Bible. The task was estimated to take 30 years. ³² After over a century, the institute closed, in 2015 – its goal unreached. There is still much left to do.

Immaterial models

Philology was material and immaterial alike. Epistemological guides, forms of representation, and conceptual figures not only (re)organized data, signaled academic study, and suggested neutral knowledge but also suspended difference, created universal explanatory devices, and fostered a sense of scientific unity. Circulating across diverse textual studies, they seemed to validate claims of coherence, transferability, and common purpose. Several were epitomal: the tree-model, editions textual and critical, and the concept of 'the text.' In fact, philology itself could even be abstracted. Nearly one and a half millennia after the ancient allegory *The Marriage of Philology and Mercury*, by Martianus Capella, one professor thus proclaimed, "Philology takes revenge on those who treat her with disdain."

In scrutinizing such ideals, this article offers a further complement to Turner's work on the history of humanistic learning in the West. On one level, he explains how philology underwrote an increased prominence of documents, documentation, and authentication, especially for studying the past. However, as added by this essay, philological science examined

John Percival Postgate, "Textual Criticism," in *Encyclopædia Britannica*, 11th ed., vol. 26 (Cambridge, 1911), 708–15, at 715.

Rudolf Smend, "Der geistige Vater des Septuaginta-Unternehmens," in *Studien zur Septuaginta – Robert Hanhart zu Ehren*, ed. Detlef Fraenkel, Udo Quast, and John Wevers (Göttingen, 1990), 337.

Julius Wellhausen, Muhammed in Medina. Das ist Vakidi's Kitab alMaghazi in verkürzter deutscher Wiedergabe (Berlin, 1882), 31.

that amassed material from the aspect of form as well. Practitioners embraced not only genealogical, temporal, or evolutionary explorations but also typological, formal, or taxonomic analysis. Beyond strands of linguistics or literary criticism, even scholars who pored over texts for history united structure and genetics, pinning taxonomy (from less to more complexity) to change in time and place (from earlier to later, from here to there) and thereby using morphology as a ladder into the past.³⁴ A clear instance came with higher criticism, which separated 'sources' in the Old Testament and rearranged them for a new story of ancient Israel, one that countered the biblical narrative.³⁵ On another level, the collection, accumulation, and preservation of written sources, as underlined by Turner, accentuates physical presence. Yet philology was also driven, even possessed, by absence. The amassing of more material engendered a greater sense of what once was and, with it, a keener sense of loss: in the irrecoverable, inaccessible past, in the incompleteness of knowledge. As Constanze Güthenke has written of classical scholarship, "for a field whose objects are so obviously and for the most part partial and fragmented, it is striking how much this field has built its world on an image of wholeness, and on the dream – or fantasy – of being able to put fragments together to see, once more, a complete outline."36 This prospect of loss - lost manuscripts, lost records, lost languages, lost peoples – pushed philologists from the extant back to the inferred: from positive testimony to negative deduction. Textual criticism, for example, comprised recensio, examinatio,

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The problem pervaded and persists: see Jonathan Z. Smith, *Relating Religion: Essays in the Study of Religion* (Chicago, 2004), 61–100.

For contemporary descriptions, see Abraham Kuenen, "Critische bijdragen tot de geschiedenis van den Israëlietischen godsdienst. 5. De priesterlijke bestanddeelen van Pentateuch en Josua," *Theologisch Tijdschrift* 4 (1870): 391–426, 487–526, translated into English and German; Julius Wellhausen, "Pentateuch and Joshua," in *Encyclopædia Britannica*, 9th ed., vol. 18 (Edinburgh, 1885), 505–14.

Constanze Güthenke, Feeling and Classical Philology: Knowing Antiquity in German Scholarship, 1770–1920 (Cambridge, 2020), 2.

and *emendatio*: the third procedure (sometimes called *divinatio*) entailed logical conjecture based on, yet moving behind, the witnesses preserved for editorial corrections, be it to overcome extinction or corruption.³⁷ Hermeneutics, too, involved 'divination,' which involved a fallible, and corrigible, process of hypothesis to press beyond the limitations of empirical evidence, into the contingent world that conditioned a work.³⁸ In this way, the philological apparatus supported textual studies historical as well as morphological across congealing (or fragmenting) disciplines.

Of the crucial immaterial models, epistemological guides, first, acted as universal explanatory devices. The tree-model of development diagrammed relationships in a complexity of data to arrive at (or near) a lost original, typing morphology to chronology. While this means of organizing information provided a template for plants and animals, it proved especially powerful in philology, supplying what Carlo Ginzburg has identified as a key "cognitive metaphor." With stemma as his guide, K. Lachmann performed the same critical operation

Hermann Hupfeld listed conjecture (*Vermuthung/Divination*) and analogy among the tools of historical criticism: idem, *Ueber Begriff und Methode der sogenannten biblischen Einleitung* (Marburg, 1844), 15.

Key figures include Johann Gottfried Herder, Friedrich Schleiermacher, Wilhelm Dilthey, and Hans-Georg Gadamer; towards the *fin de siècle*, divination suggested a psychological self-projection of the interpreter on the interpreted. See Michael N. Forster, *After Herder: Philosophy of Language in the German Tradition* (New York, 2010), esp. 137–46, 331–36, 377–79; Frederick C. Beiser, *The Fate of Reason: German Philosophy from Kant to Fichte* (Cambridge, MA, 1987), 141–45.

Carlo Ginzburg, "Family Resemblances and Family Trees: Two Cognitive Metaphors," Critical Inquiry 30, no. 3 (2004): 537–557. See also Stefani Engelstein, Sibling Action: The Genealogical Structure of Modernity (New York: Columbia University Press 2017); Jaap Mansfeld, "Doxographical Studies, Quellenforschung, Tabular Presentation and Other Varieties of Comparativism," in Fragmentsammlungen philosophischer Texte der Antike (Göttingen, 1998), 16–40; Georg Uschmann, "Zur Geschichte der Stammbaum-Darstellungen," in Gesammelte Vorträge über modern Probleme der Abstammungslehre, ed. Manfred Gersch, 2 vols. (Jena, 1967), 2:9–30. Other epistemological guides proved productive in philology: stratigraphy, for instance, supplied a model of 'layers' or 'strata' deployed not only for geology and archaeology but also for source and redaction criticism; 'remains' or 'vestiges' played a similar role

to map variants and thereby reconstruct the texts of Latin Lucretius, Greek New Testament, and Middle High German Nibelungenlied, whereby he even claimed to establish precise characteristics of a lost archetype (302 pages, 26 lines each, for Lucretius). 40 As they transferred from one kind of knowledge to another, such models also rose to consciousness. W. Streitberg likened the study of texts and that of languages: "Even the fundamental progress in the development of the method is the same. Without the reconstruction of the proto-language (Ursprache), one advances so little as in textual criticism without the reconstruction of the archetype." The tree-model therefore ordered a disunity of material – both within and across data sets – into the same kind of relationship: manuscripts, languages, scripts, and religions. [[Figure 03]] Furthermore, these models could be superimposed on one another and essentialized, as with construction of 'the Indo-European' or 'the Semitic': their languages, literatures, ethnicities, religions. For philological inquiry, the branches were significant insofar as they led to trunks and roots.

Second, certain forms of representation signified scientific knowledge. Increasingly standardized, these formats homogenized the textual artifacts reproduced – varied in content, genre, language, period, and materiality. Text editions, for example, typically began with an introduction, covering such topics as provenance, preservation, language, structure, and historical context, and then printed the written content in the original language, sometimes with transcription into the Roman alphabet, as often done for cuneiform. The notes and, when present, translation could appear after each line or in a separate section. Thus, for the

in the study of cultures.

See Sebastiano Timpanaro, *The Genesis of Lachmann's Method*, ed. and trans. Glenn Most (Chicago, 2005).

Wilhelm Streitberg, Zur germanischen Sprachgeschichte (Strasbourg, 1892), 5. However, Streitberg affirmed a gap between the reconstructed form and the original material; cf. Theodor Nöldeke, Die semitischen Sprachen. Eine Skizze, 2nd ed. (Leipzig, 1899), esp. 3–6, which first appeared as "Semitic languages" in the 9th edition of Encyclopaedia Britannica.

inscription by Bar-Rakib on behalf of his father, Panamuwa – a memorial on a statue carved in Aramaic during the eighth century BCE and discovered in modern-day Turkey - a reproduction of the (transcribed) text in its entirety preceded line-by-line discussion, with epigraphic, grammatical, and linguistic commentary. [[Figure 04]] Although the object was of a different kind, the same layout organized, for instance, the edition of the Turin Judicial Papyrus: an Egyptian legal text in hieratic from the twelfth century BCE. [[Figure 05]] Moreover, a different form of representation equalized writings with more complex transmission histories: namely, critical editions. This configuration of data printed a text above a so-called 'critical apparatus,' with variants and commentary. (The text itself could be 'diplomatic,' reproducing one manuscript, or 'eclectic,' combining numerous manuscripts.) Accordingly, the edition by J.T. Voemel of Demosthenes' On the Crown offered the Greek text with (Latin) translation along with copious notes in the apparatus, which presented alternate readings, provided linguistic observations, and engaged with other interpretations. Yet the edition of al Tabari was arranged in the same way, albeit without translation. [[Figure 06]]. The scripts notwithstanding, a single form represented both sets of textual data, no matter their dissimilarity: whether fourth century BCE vs. tenth century CE in chronology, Athens vs. Baghdad in geography, Greek vs. Arabic in language, or rhetoric versus historiography in genre. Notably, philology tended to focus not only on written texts, disregarding decoration and illumination in medieval manuscripts, but also on certain portions of those written texts, insofar as scribal marginalia and colophons often fell outside the scope of inquiry. The forms of representation themselves were therefore universal, obscuring heterogeneity in the process. The fixation on conjectured originals could eclipse an interest in actual manifestations.

Third, conceptual figures organized, suspended, and rationalized difference. As scholars of media have shown through analysis of 'the film,' 'the book,' and 'the signal,' material

items can morph into immaterial ideals that seemingly coordinate knowledge. 42 In philology, 'the text' functioned in this way. For written works with complex authorial, editorial, and transmission histories, the many physical texts still extant transformed, conceptually, into one single lost original. A multiplicity of medieval manuscripts for works like Homer, Herodotus, and the Pentateuch transmuted into the ideal of single ancient archetypes: to be recovered and reconstructed, edited and published, disseminated and interpreted. As F. Buhl declared for the Hebrew Bible, "In this respect, the relatively new, but already very widespread, assumption that all extant manuscripts point back an archetype is decisively correct."43 This image of an absent original, versus the many present incarnations, then coordinated research for recovery (the hyparchetype, the archetype, or the *Urtext* itself), which could draw into the analysis a miscellany of manuscripts and media, excerpts and translations. Working toward the earliest text of a biblical book, J. Wellhausen prescribed, "first the Hebrew text of the LXX, that of the Peshitta[,] of the Targum[,] and of the Vulgate and the Masoretic [text] must be established each individually" - a tangle of paths that would lead back to the trailhead in an archetypal Eden.44 Such pursuits also reflected the obsession with pure, static sources over dynamic processes of transmission, adaptation, and interpretation. The same interest animated the study of language, where a multiplicity of linguistic data – divided by time, place, and medium –

Geoghegan, "From Information Theory to French Theory," 99. In fact, the materials both produced and used by philology could shape the object of inquiry, creating a feedback loop. John Van Seters has demonstrated how modern practices in book production framed reconstructions of ancient composition history with respect to editors: idem, *The Edited Bible: The Curious History of the "Editor" in Biblical Criticism* (Winona Lake, 2006).

Frants Buhl, *Kanon und Text des Alten Testaments* (Leipzig, 1891), 259. Notably, debate surrounded whether an archetype was, strictly speaking, recoverable or whether scholars could, at best, reconstruct not the original archetype but an approximation of it. A good outline of the enterprise remains Paul Maas, *Textual Criticism*, trans. Barbara Flower (Oxford, 1958).

Julius Wellhausen, Der Text der Bücher Samuelis untersucht (Göttingen, 1871), xiii.

pointed to the earliest proto-language. In consequence, the history of growth and change became one to overcome in pursuit of bedrock moments of origination.

Janus would see in nineteenth-century philology both a distinguished ancient past and a progressive present. Given the old pull of Rome and Athens, with their status and prestige, it was given a pedigree in the ancient world. With his History of Classical Philology in Antiquity, A. Gräfenhan traced such pursuits as grammar, lexicography, exegesis, and criticism back to antiquity itself. 45 However, it was also conceived as a modern science. In his own history of philology, W. Kroll sketched a genealogy from ancient past to modern present and tracked the metamorphosis of philology, beginning with the Greeks, into the "historical science of antiquity," hailed as "a great feat of the German spirit." ⁴⁶ In doing so, he expressed a more capacious notion of philology – strong in the German tradition and outlined by figures like Wolf and Boeckh – where textual study could blur into an expansive study of the past, culture, or even humanity. For Kroll, this shift represented the culmination of "the great spiritual movements of the 18th century, Enlightenment, Neo-Humanism, and Romanticism." The latest theories and methods had fashioned new guides, forms, and figures to know the past by knowing the history of texts and languages. If some practices of philology were ancient, the philological apparatus was modern.

A science unified and universal

The belief in scientific unity underwrote exchange across philological apparatus. This transfer occurred between data sets, types of inquiry, and disciplines, despite their variation. Be it in

⁴⁵ August Gräfenhan, Geschichte der klassischen Philologie im Alterthum, 4 vols. (Bonn, 1843–50).

⁴⁶ Wilhelm Kroll, Geschichte der klassischen Philologie (Leipzig, 1908), 109; cf. Conrad Bursian, Geschichte der classischen Philologie in Deutschland von den Anfängen bis zur Gegenwart, 2 vols. (Munich, 1883).

land or language, culture or chronology, tradition or material, empirical gaps seemed largely immaterial: texts were texts, to be studied with a limited set of questions and methods. If the philological endeavor laid claims to interpretative authority over everything from Agamemnon to Zoroaster, philology left unspecified still implied specifically *classical* philology, which posed the problems, sanctioned the procedures, established the trends, and defined the scholarly persona. Being historical meant being philological, and classics largely defined philology. In 1869, T. Benfey observed how the study of Greek and Roman antiquity had acquired such prestige that other areas of learning – Indic, Arabic, Hebraic – had taken it as their model in hopes of developing "a philology" for themselves.⁴⁷ After all, the *Deutsche Morgenländische Gesellschaft* emanated from the Society of German Philologists and Schoolmen, while Jewish scholars of the so-called *Wissenschaft des Judentums* hoped to build the scientific study of Judaism on modern philological foundations.

Philology, for many, seemed to be a unified science. As Ian Hacking has discerned, three distinguishable unities—metaphysical sentiment, practical precept, and modes of reasoning—tend to underwrite claims of scientific unity: metaphysically, in the thesis of one reality or interconnectedness; practically, in the quest for connections between phenomena; and methodologically, in the deployment of one standard of reason across time, space, and circumstance. All three claims helped forge and sustain the philological apparatus. First, on metaphysics, Wilamowitz, who sat "on the Berliner throne of philologists," advanced an

Theodor Benfey, Geschichte der Sprachwissenschaft und orientalischen Philologie in Deutschland seit dem Anfang des 19. Jahrhunderts mit einem Rückblick auf die früheren Zeiten (Munich, 1869), 4, cf. 6.

Ian Hacking, "The Disunities of Science," in *The Disunity of Science: Boundaries, Contexts, and Power*, ed. Peter Galison and David J. Strump (Stanford, 1996), 37–74. In fact, Turner began his quest into the history of philology from his "growing curiosity about whether humanistic scholarship in the West is ultimately many or one" (Turner, *Philology*, ix).

argument for scientific unity where philology played a leading role.⁴⁹ This kingly classicist asserted, "Since life, for whose understanding we strive, is a unity, our science is a unity. The separation of the disciplines philology, archaeology, ancient history, epigraphy, numismatics, recently also papyrology has its justification only in the limitations of human ability and may also not suffocate the consciousness of the whole in the specialist."50 Friedrich Haase, too, identified the center of this science in "the spirit of antiquity." ⁵¹ Second, in terms of practical unity, philologists sought to establish connections among diverse historical phenomena. Kroll edited a volume on progress in the science of antiquity, which encompassed 17 disparate fields including medicine and metric, public law and private life.⁵² (Wolf inventoried 26 components, ranging from Greek and Latin grammar through mythology, chronology, and geography to numismatics and architecture, while Haase complicatedly counted 24.53) Different principles could help relate one area of inquiry to another, by explaining the permutations of cultural artifacts through the structure of a single national spirit or by reducing the laws of one body of knowledge to those of another, master science, e.g. anthropology to linguistics or texts to biology. Third, as for methodology, textual scholars shifted from one set of data to another with little inhibition as they deployed technical procedures far and wide. Wolf modeled his Prolegomena ad Homerum on Einleitung ins Alte Testament by J.G Eichhorn, who had honed his own

Hans-Georg Gadamer, "Vom Wandel in den Geisteswissenschaften," repr. in idem, Gesammelte Werke, vol. 10, Hermeneutik im Rückblick (Tübingen, 1995), 179–84, at 182.

⁵⁰ Ulrich von Wilamowitz-Moellendorff, Geschichte der Philologie (Leipzig, 1921), 1.

⁵¹ Friedrich Haase, "Philologie," in Allgemeine Encyklopädie der Wissenschaften und Künste, Vol. 3.23, Philipp—Philosophiana (Leipzig, 1847), 374–422, at 390.

⁵² Wilhelm Kroll, ed., Die Altertumswissenschaft im letzten Vierteljahrhundert (Leipzig, 1905).

Wolf had provided a convenient list of these fields at the end of his "Darstellung der Althertums-Wissenschaft," first published in *Museum der Alterthumswissenschaft* 1 (1807): 1–145, at 143–45; cf. J.F.J. Arnoldt, *Fr. Aug. Wolf in seinem Verhältnisse zum Schulwesen und zur Paedagogik*, Vol. 1, *Biographischer Teil* (Braunschweig, 1861), 82; Haase, "Philologie," esp. 392–94.

practices with classicist C.G. Heyne and semitist J.D. Michaelis.⁵⁴ The renowned Wellhausen used the same operations to dissect the disparate texts of ancient Judaism, early Christianity, and formative Islam.⁵⁵ Likewise, in his Hebrew textbook J. Olshausen not only hailed the form of Arabic manifest in the formative period of Islam as the supreme comparative material to demonstrate "degeneration" in language but also paralleled this development with "Old Indian" and modern Indo-European languages.⁵⁶ Assumptions of unity thus emerged in theory, practice, and logic.

Like other sciences, philology enveloped more diversity than its easy exchange of guides, forms, and figures might otherwise suggest. In fact, the instability of the apparatus was apparent even then. F.W. Kelsey, as president of the American Philological Society, criticized Kroll for failing to substantiate the inner relationship of parts to whole in classical philology. "Such a hitor-miss ordering of material is unfortunately characteristic of much philological work at the present time," he wrote. "With the rapid increase in the range and number of facts the subdividing of fields of study has gone on until many specialists have entirely lost their perspective and are no longer able to see the forest for the tree." However, rather than exploring the same wood, philologists could seem to be exploring different forests altogether—which may not have joined at all.

Despite both sentiment and practice, philology was far from unified. Transfers across the apparatus could prove instable, inconsistent, or inaccurate. In his scrutiny of discontinuity

Anthony Grafton, "Introduction," in F.A. Wolf, *Prolegomena to Homer*, 1795, ed. and trans. Anthony Grafton, Glenn Most, and James Zetzel (Princeton, 1985), 3–35; cf. idem, "Prolegomena to Friedrich August Wolf," *Journal of the Warburg and Courtauld Institutes* 44 (1981): 101–29.

Kurtz, Kaiser, Christ, and Canaan, 136–38.

Justus Olshausen, Lehrbuch der hebräischen Sprache (Braunschweig, 1861), 2–3.

Francis W. Kelley, "Is There a Science of Classical Philology?," *Classical Philology* 3, no. 4 (1908): 369–85, at 381–82.

and adaptability in physics, Peter Galison has availed himself of anthropological research to examine what he calls "trading zones" in scientific communities: sites of interaction—part spatial, part symbolic—where local coordination of belief and action takes place.⁵⁸ Not only can donors and recipients in scientific subcultures differ on the significance they assign to the objects exchanged, but they can also disagree on the meaning of the process of exchange itself. In such exchange, heterogeneous communities can therefore coordinate locally and thereby seemingly overcome vast global difference. Trading zones arose betwixt and between the fields of philology. As one example, the taxonomy of grammatical categories was imported from Latin and Greek grammar into that of Hebrew and Arabic (e.g., with the case system), as was the problematic understanding of verbal systems, where the traditional notion of tense hindered the comprehension of aspect.⁵⁹ Edward Ullendorff, accordingly, observes, "And here is a remarkable facet of Semitic scholarship: methodological progress, notions of linguistic discipline, almost invariably came from without [in the nineteenth century], usually from the Indo-European side."60 Even within Semitics, exchange between Arabic and Hebrew studies caused problems of its own. 61 Besides linguistic analysis, the great expanse of textual scholarship provided many zones for trade. As Moshe Goshen-Gottstein discerns, text critics adopted the concept of an *Urtext* and theorized their work in terms of archetypes yet proceeded, in direct contradiction, as though they were operating with recensions. This disparity between theory and practice in textual criticism further spread into historical criticism, with its analysis of

Peter Galison, Image and Logic: A Material Culture of Microphysics (Chicago, 1997), 781–844.

See John Lyons, Semantics, 2 vols. (Cambridge, 1977), 2:703–18; Robert I. Binnick, Time and the Verb: A Guide to Tense and Aspect (Oxford, 1991), 434–39; Rebecca Hasselbach, Case in Semitic: Role, Relations, and Reconstructions (Oxford, 2013), 1 n. 1.

⁶⁰ Edward Ullendorff, "Comparative Semitics," in *Linguistica semitica: presente e futuro* (1961), 13–32, at 16.

⁶¹ Cf. Walter Groß, "Is There Really a Compound Nominal Clause in Biblical Hebrew?" in *The Verbless Clause in Biblical Hebrew: Linguistic Approaches*, ed. Cynthia Miller (Winona Lake, 1999) 19–49, esp. 23 n. 12.

authors, dates, and literary history.⁶²

However, philology drew strength from its ability to defer difference, embrace heterogeneity, obscure disunity, and license coordination. Immaterial models seemed to validate the claims of scientific unity. The step was small from a unified science to a universal one, at least for human phenomena. In his analysis of a different knowledge-system, Geof Bowker describes the strategies deployed to advance pretensions to universality: "Complementary to this rhetorical use is the use of the language of cybernetics for the discontinuous transmission of ideas: conceptual tools could be vanked out of one context . . . and plugged into another . . ., with the translation into the language of cybernetics doing the work of glossing the discontinuity."63 The counterpart to such circulation and adaptation was consolidation. Geoghegan therefore emphasizes how immaterial ideals "enabled the strategic alliance of researchers and institutions across disciplinary, political, and national borders—the instrumentalization of research communities—by reference to the quasitranscendental powers of cybernetic instruments."64 With some necessary substitutions, these descriptions of cybernetics apply equally well to the philological apparatus. Philology appeared to be universal in its application (on text, any and all), in its remit (the human past), and in its spread (across the 'modern, civilized West,' with roots traced back to classical antiquity). In fact, the

Moshe H. Goshen-Gottstein, "Hebrew Bible Manuscripts: Their History and Their Place in the HUBP Edition," *Biblica* 48, no. 2 (1967): 243–90; idem, "The Textual Criticism of the Old Testament: Rise, Decline, Rebirth," *Journal of Biblical Literature* 102, no. 3 (1983): 365–99; idem, "The Book of Samuel – Hebrew and Greek: Hindsight of a Century," *Textus* 14 (1988): 147–61.

Geoffrey C. Bowker, "How to be Universal: Some Cybernetic Strategies, 1943–70," *Social Studies of Science* 23, no. 1 (1993): 107–27, at 116. This kind of universality differed from that suggested by Karl Hirzel when noting classical philology, in the early modern period, had appeared to be "the universal science (*Universalwissenschaft*), which encompassed all the rest, the highest level of all social, scholarly, artistic, and scientific cultivation (*Bildung*)": idem, *Grundzüge zu einer Geschichte der classischen Philologie*, 2nd ed. (Tübingen, 1873), 42.

Geoghegan, "From Information Theory to French Theory," 98.

polyvalence of the term itself in the nineteenth century – which could signify a method, a discipline, or a whole science – gave 'philology' a powerful slippage that imbued it with productive ambiguity.⁶⁵

Contingency and urgency

Philology became more than the sum of its parts in the long nineteenth century, assembling into a heterogeneous ensemble of technologies and instruments, sites and networks, projects and collaborations. A proliferation of trained experts performed their technical labors across a variety of textual and linguistic data with tools in the laboratory of libraries, workrooms, and museums. Innovations in specialized and standardized procedures drastically changed the way written artifacts were processed and interpreted. New structures of public funding coordinated large-scale cooperative ventures. Revolutions like the railroad and the steamship helped collect unprecedented amounts of data from across the globe and bring together international, even intercontinental communities. Inventions in the production of paper, printers, and typeface made production faster, cheaper, and more reliable. With interaction and exchange among specialists in diverse fields of knowledge came the circulation of epistemological guides, forms of scientific representation, and conceptual figures. Philology projected itself as a unified science, although this apparent unity only came by obscuring real diversity and disunity.

Beyond the question of how, that of why still remains: namely, the reason the apparatus came together where and when it did. After all, the history of philology cannot be separated from the social, political, epistemological, and moral arguments or the contingencies of concrete time and place that gave it life, relevance, and authority. This inquiry has focused on

A similar blurring seems to have occurred with descriptive ethnolinguistic labels, whereby Assyrian, Egyptian, Celtic, and Norse, *inter alia*, morphed into quasi-essentialized fields, glossing language, literature, chronology, geography, culture, and ethnicity.

the German-speaking lands for two purposes. On one hand, the identification of things philological with things German was contemporaneous. In 1872, just after the unification of Germany, the Assembly of German Philologists and Schoolmen was opened in the name of the Royal Sachsen State Government and with promise: "A German Empire comprises the majority of German tribes[;] there is henceforth, with all the legitimate peculiarity [Eigenart] of the same, a German tongue, a German fatherland, a German school, a German science, also a German science of philology in a sense like never before." This sense was felt beyond the Reich, beyond the Continent even. American J.M. Hart, who himself had studied in Germany, reminded students of English at Cornell, "Philology, it should be remembered, is a peculiarly German science." Such sentiment still echoes a century onward, as when Theodore Kwasman quipped the German tongue was "the most important Semitic language."

On the other hand, the German lands provide analytical purchase on the conditions that enabled a nascent actor-network to transform into an ordered ensemble of relations. The philological apparatus was ultimately articulated around an urgent need: the creation of meaningful pasts in the wake of Napoleon. Indeed, the pursuit of patrimony did much to underwrite the exploits of German philology.⁶⁹ For instance, the monumental *Monumenta Germaniae Historica*, launched in 1826, (has) pursued utter comprehension in collecting sources

[[]Robert Otto] Gilbert, "Begrüssung durch den Geh. Kirchen- und Schulrath," in Verhandlungen der achtundzwanzigsten Versammlung deutscher Philologen und Schulmänner in Leipzig, 9.

James Morgan Hart, "Aims and Methods of the Courses in Rhetoric and in English Philology," *The Cornell Magazine* 4, no. 8 (1892): 275–83, at 280.

Dietz Bering, "Jews and the German Language: The Concept of *Kulturnation* and Anti-Semitic Propaganda," in *Identity and Intolerance: Nationalism, Racism, and Xenophobia in Germany and the United States*, ed. Norbert Finzsch and Dietmar Schirmer (Cambridge, 1998), 251–91, at 252.

⁶⁹ See esp. Tuska Benes, In Babel's Shadow: Language, Philology, and the Nation in Nineteenth-Century Germany (Detroit, 2008).

for 'German' history between ca. 500 and 1500 CE, while the Brothers Grimm not only gathered folktales but also composed a grammar, dictionary, and history of the German language to bolster the sense of a nation. So, too, with work on history, grammar, and literature, A. Holtzmann tied together the ancient Germania of Tacitus, medieval Germanic tribes, and modern bourgeois Germans, united the Gothic, Nordic, Saxon, Anglo-Saxon and High German languages, and even bound the Teutons to the Aryans, arguing for a continuous Indo-Greco-Germanic epic tradition. These textual and linguistic undertakings conformed to the age of building national coherence and narrating a shared past through visual display, whether the Königliches Museum/Altes Museum (1823) and Wagenersche und Nationalgalerie, now Alte Nationalgalerie, (1861) in Berlin, Germanisches Nationalmuseum (1852) in Nuremberg, or Neue Pinakothek (1854) and Glyptothek (1830) in Munich. Of course, even philological races unrelated to Germanic genealogy could bring the nation laurels, too. Textual achievements won honor through a great knowledge of ancient Hellenes (the Germans of antiquity) or the biblical texts (viewed as quintessentially Protestant).

No matter how important, though, Germany was only one chapter in this story. Others show the same problem of the past and same solution in philology. As David Greetham notes, "... during the nineteenth century and on into the twentieth, perhaps the greatest contributions to textual scholarship were to be found in the collecting, sorting, describing, and transcribing of a documentary history that would reflect a national patrimony." Medieval epics in particular exerted both power and appeal for creating such coherence, whether *Beowulf* in

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Cf. Adolf Holtzmann (Sr.), Germanische Alterthümer, mit Text, Übersetzung und Erklärung von Tacitus Germania, ed. Alfred Holder (Leipzig, 1873); idem, Altdeutsche Grammatik, umfassend die gothische, altnordische, altsächsische, angelsächsische und althochdeutsche Sprache, vol. 1.1 (Leipzig: 1870); idem, Untersuchungen über das Nibelungenlied (Stuttgart, 1854).

David Greetham, "A history of textual scholarship," in *Cambridge Companion to Textual Scholarship*, ed. Neil Fraistat and Julia Flanders (Cambridge, 2013), 16–41, at 33.

Britain or *El Cid* in Spain. Although the distinct political history of the Low Countries forced the focus onto a later period, there, too, the selection, edition, and circulation of *Gijsbrecht van Aemstel* helped form a national narrative.⁷² Even more, language itself – not just literary heritage – supplied a pathway to patrimony. In the words of Joan DeJean, "The philological science, as it was defined by its founders in the late eighteenth and early nineteenth centuries, was an intellectual totality, a world unto itself, the study of language redefined to give philologists access to the essence of nations."⁷³ Furthermore, the tie between textual study and national order went beyond objects and objectives, to the methods themselves. The history of editing *Roland* in France reveals not only the composition of national origins but also the political aspects of technical practices. Joseph Bédier aimed for a 'French' Roland by a French scholar with 'French' methods, adopting a *codex optimus* (instead of 'German' stemmatics) to do so.⁷⁴ Even here, however, the question was how – not whether – to analyze texts historically.

The study of text and language had a history long before the nineteenth century – one entwined, in Europe, with Christian humanism. As a point of historiography, however, the critical moment lies not in origination (when x or y first appeared) but the ensemble or problematic of activation and definition: less antecedent theories, methods, or concepts than their articulation into a strategic assemblage. The contingencies and exigencies of this time and place allowed philology to coalesce into an integrated knowledge-system. Indeed, the history of philology as a unifying science corresponded to the political history of unifying

See Marita Mathijsen, "The Editing of National Shibboleth Texts: An Historical Account," *Text* 17 (2005): 223–35.

⁷³ Joan DeJean, Fictions of Sappho, 1546–1937 (Chicago, 1989), 204.

Michelle R. Warren, "The politics of textual scholarship," in *Cambridge Companion to Textual Scholarship*, 119–33. For the diversity of editorial traditions in Germany beyond the dichotomy of Lachmannism and Bédierism: cf. Karl Stackmann, "Neue Philologie?," in *Modernes Mittelalter. Neuer Bilder einer populären Epoche*, ed. Joachim Heinzle (Frankfurt, 1994), 398–427.

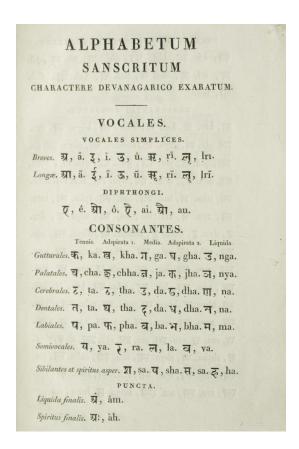
Cf. Georges Canguilhem, La formation du concept de réflexe aux XVIIe et XVIIIe siècles (Paris, 1955).

disparate entities into modern nation-states. The map of Europe rent asunder after the Napoleonic Wars, new cartographers arose to draw a different set of boundaries – physical, conceptual, affective – for meaning, purpose, and belonging. As alternatives to the designs of church and crown, classical antiquity as well as medieval epochs supplied them with lines for distinct, if no less contested, versions of the past and visions of the future for politics, society, and culture. Even the turn away from classical antiquity at the *fin de siècle* continued this same quest, expanding the search for other suitable materials.

Rather than restate the more familiar accounts (or critiques) of philology's embeddedness in political programs, which employed textual study to construct specific ancient or medieval pasts with implications for the modern present, the article at hand has argued that this particular context created the enabling conditions - and the urgent need - for the philological apparatus to emerge: as a strategic system of relations to generate certain kinds of knowledge. The parameters of this ensemble - a routinization of textual study, a standardization of practice – were able to encompass diverse data, autonomous projects, and even disparate agendas. Yet beneath this apparent unity lay real disunity. In the end, the quest for scriptural authority implied in earlier undertakings like B. Kennicott's collation of medieval Hebrew manuscripts in the eighteenth century was, in the nineteenth, transposed onto a search for national heritage. As the biblical story of a chosen people passed onto the history of a(n Indo-)European one, as the hallowed words of ancient prophets turned into the earliest record of ethnic ancestors, and as the arc of divine providence changed into teleological accounts of migration, progress, and determination, the holy writ receded behind a canon of cultural patrimony. The spirit of philology was embodied in nineteenth-century science - its instruments, its technics, its problems. Before the humanities try to conjure up or exorcise that spirit, good historical work should first apprehend its nature.

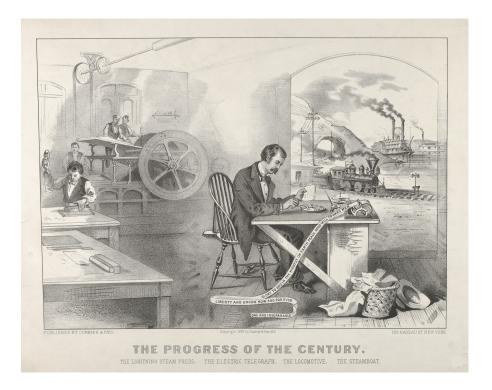
Figures

[[Figure 01]]

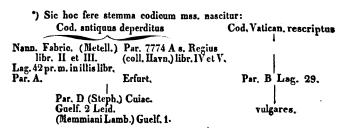


 $Type face \ sample; August \ Wilhelm \ Schlegel, \textit{Specimen nova typographia indica}...\ (Paris,\ 1821).$

[[**Figure 02**]]



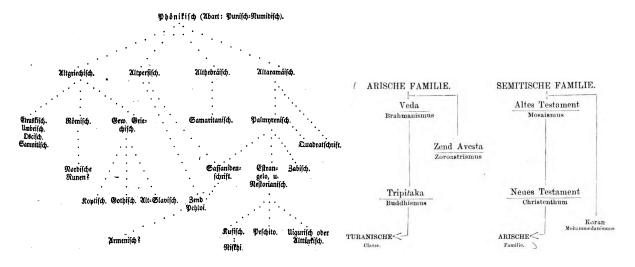
"The Progress of the Century," Currier & Ives, Lithograph, 1876; Metropolitan Museum of Art, 63.550.377, Public Domain.



Manuscripts of "Orations against Verres" by Cicero; Carl Gottlob Zumpt, *M. Tullii Ciceronis Verrinarum*... (Berlin, 1831), xxxviii.



Japhetic Languages; Joseph Bosworth, *The Origin of the English, German, and Scandinavian Languages and Nations...* (London, 1836), 8.



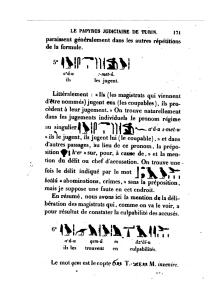
Semitic scripts, Wilhelm Gesenius, "Paläographie," *Allgemeine Encyklopädie der Wissenschaften und Künste...* vol. 3/9, *Pacholenus–Palermo-Seide* (Leipzig, 1837), 295.

Religions of humanity; F. Max Müller, Einleitung in die vergleichende Religionswissenschaft... (Strasbourg, 1874), 96.

[[Figure 04]]



Eduard Sachau, "Die Inschrift des Königs Panammû von Šam/al," in *Ausgrabungen in Sendschirli I*, ed. Orient-Comité zu Berlin (Berlin 1893).



Théodule Devéria, "Le Papyrus judiciaire de Turin, publié et traduit pour la première fois," in *Journal asiatique* 6/8 (1866).

[[Figure 05]]

62 DEMOSTHENIS ORAȚIO DE CORONA

πεποίημα ταύτα, ' άπόντων' 'Αθηναίων καὶ λυκουμένου, ' ώς ' είπες εὐ φρονείτε, ἀ θηβαίω' καὶ θετεπιοί, τούτους μὰν έχδρους 'υπολήσεθα,' ἐμοὶ δέ κατεύσεις, ' οὐ' τούτος τους ' ὁῆμαία γράψως, ταύτα δὲ βουλόμενος δεκπένου. Τουγαρούν το ποίπων ἀπτ' ἐκείνου. Ελάδων' Δε τὸ παιδ' ἐκειδίν κορορούν

ferentibus. quare, si sapitis, o Thelani et Thessali, eos hostes existimabitis et mihi fidem halsebitis." non quod hace verha posuerit, sed haceocret ostendere vull. His rebus illos decipiens lta corriguit, at halil posteauto factorum prospicerent aut animadverterent, sed eum omnia in suann re-

Johann Theodor Voemel, ed., *Demosthenis* Orationes contra Aeschinem de corona et de falsa legatione cum argumentis graece et latine (Leipzig, 1862) قيل رجلا من الترك من عشمائم يقال له فيران عن ويسغان ف قلماً فعل ذلك سياوخش العرف عنه من كان معه من جند اليم أن البيم كيقارس فلماً حسار سياوخش ال فراسيات يواء ، واكومه ورجم ابنة له يقال لها وسفاويد وق ام تخيسيرقده وكم لم يؤرل له مُكرمًا حتى شهير له من ادب سياوخش وعقله وكماله وتروسيّته وتجدته ما اشفق على مُلكه منه فأمسده ذلك عنده وزاده فساداً عليه سَمِّى ابنين له واخ يقال له كيدر، ابن فشنجان الماهد يافساد ام سياوخش عنه، حسداً منه،

a) BM semper (itemque IA) والمحقق , Spr. 30 من المحقق , semel (sic) ; rectam lectionem Firdusti (المحقق) (saepe) indicat. كان المحقق) (saepe) indicat. كان المحقق) لا المحقوق)

Jakob Barth and Theodor Nöldeke, Annales quos scripsit Abu Djafar Mohammed Ibn Djarir at-Tabari, 1/2 (Leiden, 1881–82.)