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German Thoroughness in Baltimore: Epistemic Virtues and National Stereotypes

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Abstract

Recent years have witnessed a burgeoning interest in "epistemic virtues" as a prism for historical study of the sciences and the humanities. Although most of the literature is still confined to single fields or local cases, the potential of comparing scholars across the academic spectrum from an epistemic virtues point of view has already been recognized. Yet as soon as historians embark on such a project, they face a potential complication. In the late nineteenth and early twentieth centuries, language of virtue was often imbued with nationalist meaning. Scholars habitually appealed to stereotypical images of "French lucidity," "German profoundness," and "American enterprise." Without, of course, endorsing such nationalist rhetoric, this article argues that nationalized virtues are useful material for comparative histories of the sciences and the humanities, given that they served as commonplaces on which scholars from various disciplinary backgrounds could draw. Consequently, commonplaces could do what discipline-specific idioms could not: enabling transdisciplinary conversations about the marks of a good scholar. Phrases like "German thoroughness," the use of which this article examines for the case of Johns Hopkins University in the first three decades of its existence (1876-1906), thus offer historians a unique opportunity for tracing epistemic virtues across disciplinary boundaries.

Introduction

Recent years have witnessed a burgeoning interest in "epistemic virtues" as a prism for historical study of the sciences and the humanities. Inspired by virtue epistemologists such as Linda Zagzebski and Jason Baehr,[1] historians of science and the humanities alike have

[1] Linda Trinkaus Zagzebski, *Virtues of the Mind: An Inquiry into the Nature of Virtue and the Ethical Foundations of Knowledge* (Cambridge: Cambridge University Press 1996); Jason Baehr, *The Inquiring Mind: On Intellectual Virtues and Virtue Epistemology* (Oxford: Oxford University Press, 2011).

begun to explore how virtues like "objectivity" emerged,[2] what meanings they acquired,[3] how scholars tried to cultivate virtue in their students,[4] how commemorative events contributed to that goal,[5] how virtues like "precision" encouraged technological innovation (precision measurement instruments),[6] and why standards of virtue were often contested, even within single disciplines.[7] Although most of the literature is still confined to single fields or local cases, the potential of comparing scholars across the academic spectrum from an epistemic virtues point of view has already been recognized.[8] Even though not all scholars prioritized the same epistemic virtues, and although some of them reflected more openly on standards of virtue than others, the fact that virtuous scholarly conduct mattered in all branches of scholarship, perhaps especially in times when "virtue" was a generally accepted moral category, allows epistemic virtues to serve as a prism for a comparative history of the

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[2] Lorraine Daston and Peter Galison, *Objectivity* (New York: Zone Books, 2007); Daston, "Objectivity and Impartiality: Epistemic Virtues in the Humanities," in *The Making of the Humanities*, vol. 3, ed. Rens Bod, Jaap Maat, and Thijs Weststeijn (Amsterdam: Amsterdam University Press, 2014), 27-42.

[3] *The Emergence of Impartiality*, ed. Kathryn Murphy and Anita Traninger (Leiden: Brill, 2014); Camille Creyghton *et al*., "Virtue Language in Historical Scholarship: The Cases of Georg Waitz, Gabriel Monod and Henri Pirenne," *History of European Ideas* 42 (2016), 924-936; Chaokang Tai, "Left Radicalism and the Milky Way: Connecting the Scientific and Socialist Virtues of Anton Pannekoek," *Historical Studies in the Natural Sciences* 47 (2017), 200-254; Matthew Stanley, "Religious and Scientific Virtues: Maxwell, Eddington, and Persistence," in *Epistemic Virtues in the Sciences and the Humanities*, ed. Jeroen van Dongen and Herman Paul (Cham: Springer, 2017), 49-61.

[4] Kasper Risbjerg Eskildsen, "Private Übungen und verkörpertes Wissen: Zur Unterrichtspraxis der Geschichtswissenschaft im neunzehnten Jahrhundert," in *Akademische Wissenskulturen: Praktiken des Lehrens und Forschens vom Mittelalter bis zur Moderne*, ed. Martin Kintzinger and Sita Steckel (Basel: Schwabe, 2015), 143-161.

[5] Falko Schnicke, "Rituale der Verkörperung: Seminarfeste und Jubiläen der Geschichtswissenschaft des 19. Jahrhunderts," *Zeitschrift für Geschichtswissenschaft* 63 (2015), 337-358; Jo Tollebeek, "Commemorative Practices in the Humanities around 1900," *Advances in Historical Studies* 4 (2015), 216-231.

[6] *The Values of Precision*, ed. M. Norton Wise (Princeton: Princeton University Press, 1985).

[7] Herman Paul, "The Virtues and Vices of Albert Naudé: Toward a History of Scholarly Personae," *History of Humanities* 1 (2016), 327-338; Paul, "Virtue Language in Nineteenth-Century Orientalism: A Case Study in Historical Epistemology," *Modern Intellectual History* 14 (2017), 689-715; Léjon Saarloos, "Virtues of Courage and Virtues of Restraint: Tyndall, Tait, and the Use of the Imagination in Late Victorian Science," in *Epistemic Virtues*, ed. Van Dongen and Paul, 109-128.

[8] Jeroen van Dongen and Herman Paul, "Introduction: Epistemic Virtues in the Sciences and the Humanities," in *Epistemic Virtues*, ed. Van Dongen and Paul, 1-10.

sciences and the humanities such as advocated by Rens Bod, Lorraine Daston, and Glenn W. Most.[9]

Yet as soon as historians embark on such a project, they face a potential complication. When they examine what, say, nineteenth-century German humanities scholars regarded as the defining marks of a good scholar, the source material at their disposal (professorial correspondences, manifestos, inaugural addresses, book reviews, and confidential reports known as *Gutachten*) frequently mentions "impartiality," "loyalty," and "carefulness." Although these are attitudes or dispositions conventionally classified as virtues, the question arises as to what extent these are *epistemic* virtues. While epistemic relevance seems evident in the cases of "impartiality" and "carefulness," "loyalty" (*Treue*) is not a virtue easy recognized as furthering epistemic goals. Even if the adjective "epistemic" is historicized, so as to make it refer to what nineteenth-century scholars saw as beneficial to the pursuit of knowledge and understanding, the political connotations of "loyalty" are hard to miss: the term was loaded with conservative, nationalist meaning.[10]

Things get even more complicated when virtues with obvious epistemic importance, such as "thoroughness" (*Gründlichkeit*), turn out to be colored by nationalist ideology. In the late nineteenth and early twentieth centuries – an age of cultural and scientific nationalism[11] – scholars frequently used language of virtue not only to articulate disciplinary norms and values, but also, at the same time, to reinforce national stereotypes.[12] In evaluating each other's work as well as in surveying their fields, they habitually appealed to clichéd images of "German thoroughness," "French lucidity," "Italian intuition," "English practicability," and "American enterprise," thereby consolidating a repertoire on which the German mathematician Felix Klein, among others, drew in notoriously associating "a strong naïve

[9] Rens Bod, "A Comparative Framework for Studying the Histories of the Humanities and Science," *Isis* 106 (2015), 367-377; Lorraine Daston and Glenn W. Most, "History of Science and History of Philologies," *Isis* 106 (2015), 378-390.

[10] Nikolaus Buschmann, "Die Erfindung der deutsche Treue: Von der semantischen Innovation zur Gefolgschaftsideologie," in *Treue: Politische Loyalität und militärische Gefolgschaft in der Moderne*, ed. Nikolaus Buschmann and Karl Borromäus Murr (Göttingen: Vandenhoeck & Ruprecht, 2008), 75-109.

[11] See, e.g., *The Nationalization of Scientific Knowledge in the Habsburg Empire, 1848-1918*, ed. Mitchell G. Ash and Jan Surman (Basingstoke: Palgrave Macmillan, 2012).

[12] A helpful study of stereotypical attributions of national character is Joep Leerssen, "The Rhetoric of National Character: A Programmatic Survey," *Poetics Today* 21 (2000), 267-292.

space-intuition" with the "Teutonic race" and a "critical, purely logical sense" with "the Latin and Hebrew races."[13]

To what extent are such nationalist images, omnipresent among scholars in the "age of nationalism," an obstacle for a comparative history of epistemic virtues? Drawing on the case of Johns Hopkins University during the first three decades of its existence (1876-1906), this article argues, perhaps counter-intuitively, that nationalist stereotypes deserve close attention from historians of epistemic virtues. For unlike discipline-specific idioms, nationalized virtues like "German thoroughness" were broadly recognized across the academic spectrum. At Johns Hopkins, German thoroughness even served as a shared reference point for scholars as diverse as the chemist Ira Remsen, the physician William Osler, the mathematician James Joseph Sylvester, the historian Herbert Baxter Adams, and the Classical scholar Basil Lanneau Gildersleeve. As a *topos* or commonplace in Ernst Robert Curtius's classic sense of the word, circulating widely within and beyond the academic community, German thoroughness could do what discipline-specific language could not: enabling transdisciplinary conversations about the marks of a good scholar.[14]

This article uses the case of Johns Hopkins as an example to argue that historians of epistemic virtues do not have to shrink away from nationalist stereotypes such as often found in nineteenth and early twentieth-century source material. To the contrary, they might want to explore how stereotypical images contributed to the spread and adoption of language of virtue across disciplinary divides. The purpose of this article, then, is *not* to shed new light on the early history of Johns Hopkins University or to sketch the contours of a discipline-transcending history of epistemic virtues.[15] Instead, the article wants to make a methodological contribution to an emerging body of scholarship on the history of epistemic virtues. Precisely to the extent that nationalized virtues drew on broadly circulating stereotypes, with which scholars across the academic spectrum were familiar, they offer a glimpse on

[13] Felix Klein, *Lectures on Mathematics* (New York: Macmillan and Co., 1894), 46.
[14] Ernst Robert Curtius, *Europäische Literatur und lateinisches Mittelalter* (Bern: A. Francke, 1948). A similar argument, pointing out the importance of proverbs as cultural transmitters, is made by Stevin Shapin, "Proverbial Economies: How an Understanding of Some Linguistic and Social Features of Common Sense Can Throw Light on More Prestigious Bodies of Knowledge, Science for Example," *Social Studies of Science* 31 (2001), 731-769.
[15] For the foundation and early years of Johns Hopkins, see Hugh Hawkins, *Pioneer: A History of the Johns Hopkins University, 1874-1889* (Ithaca, NY: Cornell University Press, 1960).

processes of cultural transmission and appropriation that help explain how and why epistemic virtues could find their way across disciplinary boundaries.

Ideals of Thoroughness

"For fifty years our American professors and students have been in ardent pursuit of German ideals of scholarship," wrote *The American Educational Review* in 1914. "[T]hey have tortured themselves to attain German thoroughness, Gründlichkeit; they have taken all the arts and sciences and done them over in the likeness of a German image."[16] Written just weeks after the outbreak of the war that would dramatically change American attitudes towards Germany,[17] these lines summarize a view that historians of science in recent decades have subjected to considerable criticism. In response to what one scholar aptly called "the rosy-hued world of the historiography of American education,"[18] historians have challenged the myth of "the German example" by pointing out, among other things, how badly American students understood the German higher education system and how selectively they appropriated the academic models they encountered in Göttingen or Berlin.[19] Although late nineteenth-century American university reformers like Charles W. Eliot (Harvard), Daniel C. Gilman (Johns Hopkins), and Andrew D. White (Cornell) had all been formed by years of study in Germany, and although they preferred to fill professorial

[16] "Current Editorial Comment on Education," *The American Educational Review* 36 (1914-1915), 40-42, 40.

[17] Peter Krüger, "Germany and the United States, 1914-1933: The Mutual Perception of Their Political Systems," in *Transatlantic Images and Perceptions: Germany and America since 1776*, ed. David E. Barclay and Elisabeth Glaser-Schmidt (Cambridge: Cambridge University Press, 1997), 171-190; Gerd Dose, "'The Soul of America': Bemerkungen zum angloamerikanischem Deutschlandbild vor und zu Beginn des Ersten Weltkrieges," in *Images of Germany*, ed. Hans-Jürgen Diller *et al.* (Heidelberg: Carl Winter, 1986), 21-56. On changing appreciations of German thoroughness, see Charlotte A. Lerg, "Prestige – Transatlantisch: Die Diplomatie der amerikanischen Universitäten 1890-1920" (Habilitationsschrift Ludwig Maximilian University of Munich, 2017), 451-460.

[18] Carl Diehl, *Americans and German Scholarship 1770-1870* (New Haven, CT: Yale University Press, 1978), 73.

[19] See esp. James Turner and Paul Bernard, "The 'German Model' and the Graduate School: The University of Michigan and the Origin Myth of the American University," *History of Higher Education Annual* 13 (1993), 69-98.

positions with scholars trained in the land of poets and thinkers, "Germany" was often more a symbol of cultural authority than a real model for imitation.[20]

Nonetheless, mythic as the German universities and their professorial inhabitants may have been, precisely as such they exercised considerable power in the late nineteenth-century United States. As cultural historians have come to recognize, American images of Germany, even if not accurate or true, were nonetheless effective in mobilizing emotions and invoking authority.[21] In the academic realm, such claims to authority were made in several contexts. The one that has received most scholarly attention so far is that of university reform. It was the so-called "German model" that lent authority to graduate schools, seminars, and laboratories of the sort in which G. Stanley Hall, the future first president of Clark University, envisioned professors to pass on "the sacred torch of pure science to their chosen disciples."[22] Given that seminars and laboratories allowed for research-oriented forms of education, the German model in the second place referred to educational practices aimed at the training of future scholars. At Johns Hopkins, the historian Herbert Baxter Adams was one among others who established a German-style

[20] Daniel Fallon, "German Influences on American Education," in *The German-American Encounter: Conflict and Cooperation between Two Cultures, 1800-2000*, ed. Frank Trommler and Elliott Shore (New York: Berghahn, 2001), 77-87. See also Kathryn M. Olesko, "German Models, American Ways: The 'New Movement' among American Physics Teachers, 1905-1909," in *German Influences on Education in the United States to 1917*, ed. Henry Geitz, Jürgen Heideking, and Jurgen Herbst (Cambridge: Cambridge University Press, 1995), 129-153 and Owen Hannaway, "The German Model of Chemical Education in America: Ira Remsen at Johns Hopkins University (1876-1913)," *Ambix* 23 (1976), 145-164; Jurgen Herbst, *The German Historical School in American Scholarship: A Study in the Transfer of Culture* (Ithaca, NY: Cornell University Press, 1965).

[21] Frank Trommler, "Negotiating German 'Kultur' and 'Wissenschaft' in American Intellectual Life, 1870-1918," in *New Perspectives on German-American Educational History*, ed. Jürgen Overhoff and Anne Overbeck (Bad Heilbrunn: Julius Klinkhardt, 2017), 83-103; Emily J. Levine, "Baltimore Teaches, Göttingen Learns: Cooperation, Competition, and the Research University," *The American Historical Review* 121 (2016), 780-823; Waldemar Zacharasiewicz, *Images of Germany in American Literature* (Iowa City, IA: University of Iowa Press, 2007), 1-15.

[22] [G. Stanley Hall], "Editorial," *The Pedagogical Seminary* 1 (1891), iii-viii, iii (with correction of a misprint). Similarly: Henry A. Rowland, "The Physical Laboratory in Modern Education," *Science* 7 (1886), 573-575.

seminar, which he proudly described as a laboratory "where books are treated like mineralogical specimens, passed about from hand to hand, examined, and tested."[23]

Most important for our purposes, however, is that the adjective "German" was also used in relation to virtues believed to be conducive to scholarly inquiry. Although the quality of thoroughness could be, and sometimes was, attributed to texts or theories, "German thoroughness" and "German perseverance" primarily referred to personal character traits ("deep and enduring acquired excellences of a person").[24] Thus, when medical students in the United States were encouraged to imitate the thoroughness of their German colleagues or when Thomas Edison was lauded as "more than German in his thoroughness," this referred to character traits translating into working habits.[25] The virtues labelled as German were not Kuhnian theory virtues, but personal dispositions invoked in response to the question, "What constitutes a good professor? What kind of men are the universities looking for?"[26]

If we zoom in on Johns Hopkins, a university described by *The American Educational Review* as "peculiarly devoted to the best that is in German education,"[27] and examine how its faculty during the first three decades of its existence (1876-1906) articulated their views on research and teaching, we find ample references to such supposedly German character traits. President Daniel C. Gilman's inaugural address of 1876 offers a case in point:

> The thoroughness of the German mind, its desire for perfection in every detail, and its philosophical aptitudes are well illustrated by the controversies now in vogue in the land of universities. In following, as we are prone to do in educational matters,

[23] Herbert B. Adams, *Methods of Historical Study* (Baltimore, MD: Johns Hopkins University, 1884), 103.
[24] Zagzebski, *Virtues of the Mind*, 137.
[25] Godfrey R. Pisek, "Post-Graduate Study in the United States," *Vermont Medical Monthly* 13 (1907), 187-188, 188; "Thomas Alva Edison," *The Engineering Magazine* 50 (1915), 199.
[26] [Ira Remsen], "Inaugural Address," in *Johns Hopkins University Celebration of the Twenty-Fifth Anniversary of the Founding of the University and Inauguration of Ira Remsen, LL. D. as President of the University* (Baltimore, MD: Johns Hopkins Press, 1902), 72-95, 87.
[27] "Current Editorial Comment," 40.

> the example of Germany, we must beware lest we accept what is their cast off; lest we introduce faults as well as virtues, defects with excellence.[28]

Thoroughness was a key virtue for other Johns Hopkins faculty members, too. The physician William Osler, one of the founding professors of Johns Hopkins Hospital, told an audience in Minneapolis in 1892 that "the *Quality of Thoroughness*" was "an element of such importance that I had thought of making it the only subject of my remarks."[29] Explicitly labelled as a "Teutonic" virtue, thoroughness for Osler was "the pearl of great price, worth all the worry and trouble of the search."[30] Likewise, the mathematician James Joseph Sylvester explained the academic community in Baltimore in 1877 that "thoroughness of exposition" was the main reason for "our Teutonic brethren" leading the world of science.[31] In a similar vein, the chemist Ira Remsen attributed the inferiority of American science compared to Germany to a lack "in thoroughness in the matter of study." While still a professor at Williams College, Remsen had argued for "the moral necessity of the development of habits of thoroughness" in order to bring American science on equal footing with its German counterpart.[32] This was a message Remsen kept repeating for over a quarter of a century: "Whatever other qualities scholarship may have, they count for little without thoroughness. If I were asked what American scholarship owes to Germany I should unhesitatingly answer that it is more than anything else this quality of thoroughness."[33]

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[28] "Inaugural Address by Daniel C. Gilman, President of the Johns Hopkins University," in *Addresses at the Inauguration of Daniel C. Gilman, as President of the Johns Hopkins University, Baltimore, February 22, 1876* (Baltimore, MD: John Murphy & Co., 1876), 15-64, 28-29.

[29] William Osler, *Teacher and Student: An Address Delivered on the Occasion of the Opening of the New Building of the College of Medicine and Surgery of the University of Minnesota, Minneapolis, October 4th, 1892* (Baltimore, MD: John Murphy & Co., 1892), 17.

[30] William Osler, "Some Aspects of American Medical Bibliography: Address at the Meeting of the Association of Medical Librarians, Saratoga, June 10, 1902," *Bulletin of the Association of Medical Librarians* 1 (1902), 19-32, 32; William Osler, *The Student Life: A Farewell Address to Canadian and American Medical Students* (Oxford: Horace Hart, [1905]), 9.

[31] *Address Delivered by J. J. Sylvester . . . at Johns Hopkins University, on Commemoration Day, February 22, 1877* (Baltimore, MD: Cushings & Bailey, [1877]), 11.

[32] I. Remsen, "Thoroughness," *Williams Review* 3 (1872), 33-34. Jessika Drmacich (Williams College Library) kindly provided me with a copy of this article.

[33] Ira Remsen, "German Influence in American Academic Development," in *Official Souvenir and Programme: 20th Triennial Saengerfest of the Nord-Oestlicher Saengerbund of America*

German-style thoroughness elicited not only admiration, though. It also was perceived as potentially "tedious," given that it stimulated scrupulously detailed analysis more than straightforward conclusions.[34] Several Johns Hopkins professors therefore warned that the virtue would degenerate into a vice if practiced excessively or too exclusively. It could slow down the pace of writing, as Osler confessed to a cousin: "Want of thoroughness drag[s] me back at every step."[35] And as Osler cautioned elsewhere: "It is possible to become so absorbed in the problem of the 'enclitic δε,' or the structure of the flagella of the Trichomonas, or of the toes of the prehistoric horse, that the student loses the sense of proportion in his work . . ."[36] Even Remsen, perhaps the staunchest advocate of German thoroughness in Baltimore, admitted that scholars spending years on piperic acid or Tacitus' use of the preposition *ad* had fallen prey to excessive thoroughness.[37]

These perceived risks led some Johns Hopkins faculty to adopt more critical stances towards German thoroughness, to the point of using "German" as a warning sign against unhealthy overdoses. Classical scholar Basil Lanneau Gildersleeve, for instance, was fond of highlighting the formative influences he had received from German classical scholarship in what he called "the epoch of my Teutomania, the time when I read German, wrote German, listened to German, and even talked German."[38] Yet this historicizing prose conveyed that better insight had dawned upon him. As early as 1878 he warned American academics not to adopt "every new device in teaching that is sanctioned by German authority."[39] Specifically, he cautioned against the German habit of confusing thoroughness with complexity or abstruseness:

(Baltimore, MD: Saengerfest Association of Baltimore, [1903]), 91-93, 91. Gayle Martison (Wisconsin Historical Society) kindly sent me a copy of this piece.

[34] Friedrich Abee as quoted in *The Carnegie Foundation for the Advancement of Teaching: Fifth Annual Report of the President and of the Treasurer* (New York: Carnegie Foundation, 1910), 38.

[35] William Osler to Jennette Osler, c. January 1873, as quoted in Michael Bliss, *William Osler: A Life in Medicine* (Oxford: Oxford University Press, 1999), 72.

[36] Osler, *The Student Life*, 9.

[37] Ira Remsen, "The Science vs. the Art of Chemistry," *The Popular Science Monthly* 10 (1876), 691-696, 693.

[38] Basil L. Gildersleeve, "Formative Influences," *The Forum* (1891), 607-617, 615. Other autobiographical pieces depicting his German sojourns in sepia light include "Oscillations and Nutations of Philological Studies," *The Johns Hopkins University Circulars* 20 (1901), 45-50 and "A Novice of 1850," *The Johns Hopkins Alumni Magazine* 1 (1912), 3-9.

[39] B. L. Gildersleeve, "Classics and Colleges," *The Princeton Review* (1878), 67-95, 95.

> [T]he German brain, with its immense vaporizing power, makes out of the simplest dew drop a mist that swamps the universe, and the Dread Earnestness of Fun is a spectre that haunts all their historical works. They have made a Preacher of Righteousness out of Aristophanes, a manner of John the Baptist out of the joyous old Baldhead, and have evolved the deepest political maxims out of his most trivial jests.[40]

In patriotic vein, Gildersleeve emphasized that "University and college should be American, meet the needs of our civilization, and bear the stamp of our national character."[41] Varying on the classic trope of the American melting pot, he presented America as "a cosmopolitan blend of the best in all the varied nationalities, the thoroughness and grasp of the German, the sound sense of the English, the delicate literary touch of the French."[42] So for Gildersleeve, German thoroughness had its place, provided it was corrected by English and French counter-influences – much in the same way that Osler sought to combine German thoroughness with "Anglican" adaptiveness and "Gallic" lucidity, thereby contributing to a "distinctively eclectic" American form of medicine.[43] While not all faculty members were uncritical of German thoroughness, many of the first Johns Hopkins professors explicitly referred to this nationalized virtue in explaining how their views on research and teaching related to those advocated in terms of German thoroughness.

This in turn explains why German thoroughness was seldom invoked alone, without reference to other, overlapping or contrastive virtues and vices. German thoroughness was perceived as related to "German perseverance", just as lack of thoroughness, for Remsen,

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[40] Gildersleeve in an undated lecture on Aristophanes, as quoted in Robert L. Fowler, "The Gildersleeve Archive," in *Basil Lanneau Gildersleeve: An American Classicist*, ed. Ward W. Briggs, Jr., and Herbert W. Benario (Baltimore, MD: Johns Hopkins University Press, 1986), 62-105, 79.

[41] B. L. Gildersleeve, "University Work in America and Classical Philology," *The Princeton Review* (1879), 511-536, 512.

[42] "Presidential Address, by Professor Basil L. Gildersleeve, of Johns Hopkins University," *Transactions and Proceedings of the American Philological Association* 40 (1909), xxxviii-xxxix, xxxix.

[43] Osler, "Some Aspects of American Medical Bibliography," 32.

suggested "lack of patience."[44] At other occasions, with different battle lines, Remsen could present honesty instead of thoroughness as "the fundamental characteristic of the scientific method."[45] Likewise, in 1885, Gilman saw no harm in praising curiosity – "the love of seeking, questioning, hunting, finding" – as the scholar's most defining quality.[46] Also, among Osler's favorite virtues, equanimity eventually came to stand out.[47] So, what was at stake for the Baltimore professors was not a single virtue, but a cluster of virtues. Though prominent and much-discussed, German thoroughness never held a monopoly position in the moral and symbolic economies of science favored at Johns Hopkins.

Educational aspirations

Interestingly, the advantages and disadvantages of German thoroughness as summarized so far were not typically discussed in textbooks, monographs, or research articles, but in what Leah Ceccarelli calls "motivational texts": occasional papers, festive addresses, and commemorative speeches aimed at advancing a particular conception of science.[48] When Johns Hopkins faculty reflected on German thoroughness, they usually did so on occasions that allowed them to address students or junior colleagues in edifying style, summoning them in solemn words to serve the cause of science to the best of their abilities. Negatively, this means that the speakers themselves were not necessary as thorough in their research as they expected their students to be. In comparison to his fellow chemists Arthur Michael (Tufts) and Moses Gomberg (Michigan), for instance, Remsen was more of an educator than a ground-breaking researcher.[49] Nor were they always as indebted to German examples as

[44] Richard T. Ely, *An Introduction to Political Economy* (New York: Chautauqua Press, 1889), 112; Ira Remsen, "American Students in Europe," *The Williams Vidette* (1873), 135-137, 137. A copy of Remsen's article was kindly sent to me by Jessika Drmacich (Williams College Library).

[45] Ira Remsen, "Scientific Investigation and Progress," *Science* 19 (1904), 1-11, 9.

[46] "Address by Daniel C. Gilman, President of the Johns Hopkins University," in *Addresses at the Inauguration of Bryn Mawr College, by President Rhoads and President D. C. Gilman, of the Johns Hopkins University* (Philadelphia: Sherman & Co., 1886), 21-32, 31.

[47] William Osler, *Aequanimitas: With Other Addresses to Medical Students, Nurses and Practitioners of Medicine* (London: H. K. Lewis, 1904).

[48] Leah Ceccarelli, *Shaping Science with Rhetoric: The Cases of Dobzhansky, Schrödinger, and Wilson* (Chicago: University of Chicago Press, 2001), 4.

[49] John W. Servos, "History of Chemistry," *Osiris* 1 (1985), 132-146, 137; D. S. Tarbell, Ann T. Tarbell, and R. M. Joyce, "The Students of Ira Remsen and Roger Adams," *Isis* 71 (1980), 620-626, 620. See also Dean Stanley Tarbell and Ann Tracy Tarbell, "The Johns Hopkins

they claimed to be. Gildersleeve and Osler, most notably, drew considerably more on British sources than their Germanophile language suggested.[50] Positively, however, the genre reminds us that advocacy and criticism of German thoroughness was often fueled by educational aspirations. If we take seriously the genre of motivational texts,[51] we have to recognize that reflections on German thoroughness were agenda-driven. They aimed at more in-depth research, more research-oriented education, and a more prominent role for the United States in the world of science.

This helps explain why students of the first Johns Hopkins professors associated their teachers' thoroughness primarily with their educational ethos. Gildersleeve was posthumously characterized as an admirer of "the thoroughness and the extent of German scholarship."[52] Supposedly, he liked to tell his students: "[E]very mistake that can be avoided by patient labor is a sin."[53] Likewise, Remsen's associate, Harmon Northrop Morse, was said not to "spare himself or his pupils in his effort to obtain the greatest possible perfection in methods and in results."[54] The Semitic scholar Paul Haupt, who like Remsen despised "lack of conscientiousness and thoroughness," was remembered for exposing his students to "constant drill in all the minutiae of philology."[55] More concretely, the School of Engineering at Johns Hopkins preferred small-scale class instruction because "tact, initiative,

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University, Ira Remsen and Organic Chemistry, 1876-1913," in Tarbell and Tarbell, *Essays on the History of Organic Chemistry in the United States, 1875-1955* (Nashville, TN: Folio, 1986), 25-39.

[50] Fowler, "The Gildersleeve Archive," 90-91; Charles Coury, "Sir William Osler and French Medicine," *Medical History* 11 (1967), 1-14; Claus A. Pierach, "Was Osler *Verdeutsched*?" *Archives of Internal Medicine* 156 (1996), 1502-1504. On the British origins of the clinical clerkships that Osler introduced at Johns Hopkins, see Bliss, *William Osler*, 179-180 and Thomas N. Bonner, "German Influences on American Clinical Medicine, 1870-1914," in *German Influences*, ed. Geitz, Heideking, and Herbst, 275-287, 276.

[51] Following Carolyn R. Miller, "Genre as Social Action," *Quarterly Journal of Speech* 70 (1984), 151-167.

[52] Gonzalez Lodge, "Basil Lanneau Gildersleeve: October 23, 1831 – January 9, 1924," *The Classical Weekly* 17 (1924), 113-114, 113.

[53] John A. Scott, "Professor Basil Lanneau Gildersleeve," *Classical Philology* 19 (1924), 66.

[54] "Dr. Howell's Address," *The Johns Hopkins Alumni Magazine* 9 (1921), 325-330, 326.

[55] Paul Haupt, *Die sumerischen Familiengesetze in Keilschrift, Transcription und Übersetzung, nebst ausführlichem Commentar und zahlreichen Excursen: Eine assyriologische Studie* (Leipzig: J. C. Hinrichs, 1879), 10; W. F. Albright, "Professor Haupt as Scholar and Teacher," in *Oriental Studies Published in Commemoration of the Fortieth Anniversary (1883-1923) of Paul Haupt as Director of the Oriental Seminary of the Johns Hopkins University Baltimore, MD* (Baltimore, MD: Johns Hopkins Press; Leipzig: J. C. Hinrichs, 1926), xxi-xxxii, xxxi.

thoroughness, etc., can be developed best in the undergraduate by intimate contact with high grade instructors."[56] Likewise, at Johns Hopkins Hospital, Osler was known for devoting ample time to examining patients in order to train his students "in methods of thoroughness."[57] Following this model, one of Osler's students declared:

> All great clinicians study their patients with the most detailed thoroughness, missing not the smallest departure from normal function, appreciating always what is the normal. No successful investigator can have any other method than infinite thoroughness in his work. Thoroughness in every detail cannot begin too early in one's career.[58]

This educational message was supported by different means. A rather atypical one was Osler's collection of aphorisms, *Counsels and Ideals*.[59] More widespread was the emblematic use of portraits and other memorabilia. Adams, "a product of Teutonic thoroughness," knew how to exploit this symbolic capital when he decorated his seminar room with a portrait of his Heidelberg teacher Johann Kaspar Bluntschli – known in the United States as an icon of "German comprehensiveness and German thoroughness" – whose personal papers and library Adams had also managed to attract.[60] Most important, however, was a near endless stream of anecdotes about the thoroughness of Johns Hopkins faculty. Morse, for instance, was said to cultivate his garden as thoroughly as he conducted his experiments, whereas

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[56] A. G. Christie, "A National Policy on Engineering Education," *The Johns Hopkins Alumni Magazine* 10 (1922), 101-109, 106.

[57] Thomas Barnes Futcher, "Sir William Osler, Bart., M.D., F.R.S., F.R.C.P., Regius Professor of Medicine, University of Oxford," *The Johns Hopkins Alumni Magazine* 9 (1920), 2-28, 14.

[58] [Henry A. Christian], "Report of the Physician-in-Chief," in *Twenty-Fifth Annual Report on the Peter Bent Brigham Hospital for the Year 1938* (1939), 96-123, 112. See also Henry A. Christian, "Osler: Recollections of an Undergraduate Medical Student at Johns Hopkins," *Archives of Internal Medicine* 84 (1949) 77-83; Kenneth M. Ludmerer, *Let Me Heal: The Opportunity to Preserve Excellence in American Medicine* (Oxford: Oxford University Press, 2015), 74-80.

[59] *Counsels and Ideals from the Writings of William Osler*, ed. C. N. B. Camac (Oxford: Henry Frowde, 1905).

[60] Louis Martin Sears, *Trends in Historical Interpretation: An Address Delivered Before the Phi Beta Kappa Society at Purdue University . . . December 3, 1928* (n.p., n.d.), 4; Charles Kendall Adams, *The Relations of Political Science to National Prosperity: An Address Delivered at the Opening of the School of Political Science of the University of Michigan, October 3, 1881* (Ann Arbor, MI: University of Michigan, 1881), 10.

William Stewart Halsted, Johns Hopkins's first professor of surgery, was said to be as thorough as he was slow ("His surgery was poetry").[61] Also, all chemists in Baltimore knew the story of the young Remsen being poked fun at by his colleagues at Williams College for looking like a German scholar, given that he had dared to publish a research article in the *American Journal of Science*.[62] Trivial as such anecdotes may seem, they served as iconic illustrations of how German-style thoroughness was believed to look like.[63]

A German Persona

If this suggests that German thoroughness was a commonplace among Johns Hopkins faculty and students, then the follow-up question is to what extent this nationalized virtue actually served as a reference point for scholars in different disciplinary quarters. Did it bridge disciplinary divides, thereby connecting scholars across the academic spectrum? Arguably, the *topos* was known to all Johns Hopkins faculty primarily because it was firmly implanted in the American cultural imagination.[64] As "a national German trait," thoroughness was said to characterize "all lines of Teutonic endeavor; science, art, literature, drama, navigation, war, architecture, and music."[65] Precisely to the extent that German thoroughness was

[61] "Dr. Howell's Address," 329; Bertram M. Bernheim, *The Story of the Johns Hopkins: Four Great Doctors and the Medical School They Created* (New York: Whittlesey House, 1948), 21. See also Samuel James Crowe, *Halsted of Johns Hopkins: The Man and His Men* (Springfield, IL: Charles C. Thomas, 1957), 57.

[62] Ira Remsen, "The Development of Chemical Research in America," *The Journal of the American Chemical Society* 37 (1915), 1-7, 5. Similar anecdotes can be found in E. T. Allen, "Impressions of Ira Remsen," *The Johns Hopkins Alumni Magazine* 16 (1928), 215-226, 219; William Albert Noyes and James Flack Norris, "Ira Remsen, 1846-1927," *National Academy of Sciences of the United States of America: Biographical Memoirs* 14 (1932), 207-240, 213; Frederick H. Getman, *The Life of Ira Remsen* (Easton, PA: Journal of Chemical Education, 1940), 42.

[63] On scholarly anecdotes as *exempla*, see Gadi Algazi, "Food for Thought: Hieronymus Wolf Grapples with the Scholarly Habitus," in *Egodocuments and History: Autobiographical Writing in Its Social Context since the Middle Ages*, ed. Rudolf Dekker (Hilversum: Verloren, 2002), 21-43; Steven Shapin, "The Philosopher and the Chicken: On the Dietetics of Disembodied Knowledge," in *Science Incarnate: Historical Embodiments of Natural Knowledge*, ed. Christopher Lawrence and Steven Shapin (Chicago: University of Chicago Press, 1998), 21-50.

[64] Horst Kruse, *Schlüsselmotive der amerikanischen Literatur* (Düsseldorf: August Bagel, 1979), 43-94.

[65] "A Lesson from German Thoroughness," *The Etude* 27 (1909), 729.

"proverbial" or "customary," it lent itself for communication beyond disciplinary confines: everyone could recognize it.[66]

This was especially true in Baltimore, where about a quarter of the population was of German descent.[67] In this context, the symbolic capital of German thoroughness was such that even non-German schools advertised themselves as "widely known for [their] thoroughness."[68] Also, it seems hardly coincidental that Remsen offered his most eloquent praise for German thoroughness on the occasion of a German-American music festival in Baltimore.[69] Emphasizing German thoroughness was a means to strengthen the bonds between Johns Hopkins and the local German community, on whose financial support the university partly depended.[70]

In evoking the trope of German thoroughness, Johns Hopkins faculty thus employed a recognizable cultural resource. They all drew on the stereotypical image of a German scholar: a man deeply absorbed in his studies, possessed by a "passion to push on to the frontier of human knowledge,"[71] and privileging depth over width, accuracy over scope, and truth over elegancy.[72] German thoroughness thus metonymically called to mind a *Gelehrtentypus* or scholarly persona,[73] much in the same way that, for the British historian William Warde Fowler, a portrait of a German philologist sufficed to evoke the image of an entire cohort of aspiring German scholars, spending all their time and energy to learning

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[66] F. F., review of *A Text-Book of Human Physiology* by L. Landois, *The American Journal of the Medical Sciences* 99 (1890), 171-172, 172; Henry T. Finck, "Music," *The Nation* 102 (1916), 203-204, 203.

[67] Dieter Cunz, *The Maryland Germans: A History* (Princeton: Princeton University Press, 1948), 340.

[68] *The News-Letter (Johns Hopkins University)* 18, no. 6 (1913), 7. See also *Das neue Baltimore: Mit besonderer Berücksichtigung der Deutsch-Amerikaner im Geschäftsleben, 1905* ([Baltimore, MD: C. W. Schneidereith & Söhne, 1905]), 68, 176.

[69] Remsen, "German Influence," 91.

[70] Addressing the local German community during the 1905 Schiller festivities, Remsen explicitly acknowledged its financial support: Albert Pfister, *Nach Amerika im Dienste Friedrich Schillers* (Stuttgart: J. G. Cotta, 1906), 44.

[71] [G. Stanley Clark], "Educational Reforms," *The Pedagogical Seminary* 1 (1891), 1-12, 8.

[72] Richard T. Ely, *Studies in the Evolution of Industrial Society* (New York: Macmillan, 1906), 459.

[73] Lorraine Daston and Otto H. Sibum, "Introduction: Scientific Personae and Their Histories," *Science in Context* 16 (2003), 1-8; Herman Paul, "The Virtues of a Good Historian in Early Imperial Germany: Georg Waitz's Contested Example," *Modern Intellectual History* (advanced access at https://doi.org/10.1017/S1479244317000142).

foreign languages, collecting bits and pieces of knowledge, scrutinizing new hypotheses ("If a valuable hint is dropped outside Germany, an army of industrious Teutons instantly appropriates and developes it") and writing difficult treatises in unreadable German.[74]

The contours of this German persona were not the same for all Johns Hopkins faculty. Whereas Remsen saw a laboratory scientist at work, Adams envisioned a historian bent over manuscripts or archival records. Also, while many primarily perceived the German scholar as a researcher, the physician William Henry Welch draw attention to the scholar as a teacher by emphasizing the "thoroughness of laboratory training" offered by German professors.[75] Those and other differences notwithstanding, there was broad agreement on what Gildersleeve called the German "professorial type."[76] In the eyes of Johns Hopkins faculty, it was a man of specialized study, strongly committed to fundamental research ("In Germany, the true scientific spirit is so deeply imbedded in the educated mind, that a subject which has a practical side is apt to be looked upon in a disrespected manner"),[77] and considerably more talented in supervising the promising students whom they admitted to their laboratory or seminar than in offering public lectures ("Long lists of books read off in a droning voice without a ray of appreciation to light up the doleful catalogue").[78]

This implies that German thoroughness as envisioned at Johns Hopkins was a highly gendered virtue, loaded with masculine overtones. Especially through its adjective, German thoroughness expressed an ideal that went beyond the thoroughness that female students at Johns Hopkins's nursing school were expected to display. While theirs was a diligence paired to accuracy that would turn American women into caring mothers and responsible citizens,[79] German-style thoroughness had more muscular connotations. It invoked the

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[74] W. Warde Fowler, "German Thoroughness (Prof. R. Wünsch)," in Fowler, *Essays in Brief for War-Time* (Oxford: B. H. Blackwell, 1916), 72-77, 74.

[75] William H. Welch, "The Endowment of Research," *Science* 24 (1906), 6-12, 6; Welch, "Introductory Address," *Transactions of the Association of American Physicians* 16 (1901), xvi-xxii, xvi; Simon Flexner and James Thomas Flexner, *William Henry Welch and the Heroic Age of American Medicine* (New York: Viking Press, 1941), 91.

[76] Basil L. Gildersleeve, "Professorial Types," *The Hopkinsian* 1 (1893), 11-18.

[77] Remsen, "Science vs. Art," 692-693.

[78] B. L. Gildersleeve, "Classical Studies in America," *The Atlantic Monthly* 78 (1896), 728-737, 730.

[79] Isabel Hampton Robb, "The Quality of Thoroughness in Nurses' Work: An Address to the Graduating Class at the Johns Hopkins Hospital Training School for Nurses, May 28, 1903," *Bulletin of the Johns Hopkins Hospital* 14 (1903), 225-229. Patricia D'Antonio elaborates on

heroic image of a scholar pushing the frontiers of science by applying rigorous "methods of investigation . . . to the enlargement of the field of knowledge."[80] This obviously drew on frontier imagery such as popularized by Frederick Jackson Turner in the 1890s,[81] but also on military codes of conduct such as embodied by General Ulysses S. Grant, whose thoroughness and perseverance were almost proverbial, especially in late nineteenth-century moral advice literature.[82] Also, when Remsen depicted thoroughness as a necessary feature of "a full-grown scientific man," indispensable for anyone wishing to become "a power" in his field, he did not try to hide the masculine connotations of what this same genre called "manly thoroughness."[83] German thoroughness, in short, was deeply steeped in cultures of scientific masculinity.[84]

Masculine strength, finally, was important for achieving yet another ideal: advancing America's position in the world of science. When Remsen, Gildersleeve, and other Johns Hopkins faculty tried to turn their students into hero-scientists, they did so in the hope of breeding a generation of American scientists who would be able "to hold up [their] heads as equals of the Europeans in learning."[85] Local folklore about "Göttingen at Baltimore,"[86] with its implicit suggestion that seminar, laboratory, and hospital ward teaching were all imported from Germany, thus invoked an image of international scientific competition in

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the gendered subtext of this talk in *American Nursing: A History of Knowledge, Authority, and the Meaning of Work* (Baltimore, MD: Johns Hopkins University Press, 2010), 39.

[80] [Remsen], "Inaugural Address," 88.

[81] Frederick Jackson Turner, "The Significance of the Frontier in American History," in *Proceedings of the State Historical Society of Wisconsin at Its Forty-First Annual Meeting, held December 14, 1893* (Madison, WI: Democrat Printing Company, 1894), 79-112.

[82] E.g., Charles Loring Brace, *Short Sermons to News Boys: With a History of the Formation of the News Boys' Lodging-House* (New York: Charles Scribner & Co., 1866), 130. On the mythic reputation of General Grant, see Joan Waugh, *U. S. Grant: American Hero, American Myth* (Chapel Hill, NC: University of North Carolina Press, 2009).

[83] Remsen, "Thoroughness," 33; Edward A. Horton, *Noble Lives and Noble Deeds: Forty Lessons, by Various Writers, Illustrating Christian Character* (Boston: Unitarian Sunday-School Society, 1893), 33.

[84] On which see Erika Lorraine Milam and Robert A. Nye, "An Introduction to Scientific Masculinities," *Osiris* 30 (2015), 1-14; Falko Schnicke, *Die männliche Disziplin: Zur Vergeschlechtlichung der deutschen Geschichtswissenschaft 1780-1900* (Göttingen: Wallstein, 2015); Heather Ellis, *Masculinity and Science in Britain, 1831-1918* (London: Palgrave Macmillan, 2017).

[85] Remsen, "Thoroughness," 34.

[86] Richard Hofstadter and Walter P. Metzger, *The Development of Academic Freedom in the United States* (New York: Columbia University Press, 1955), 377.

which Americans faced the challenge of beating their German colleagues. As Johns Hopkins's first physics professor, Henry A. Rowland, asked rhetorically: "Shall our country be contented to stand by, while other countries lead in the race?"[87]

Beyond Baltimore

In the case of Johns Hopkins, then, the merging of epistemic virtues and national stereotypes into commonplaces like German thoroughness turns out to offer unique opportunities for comparing scholars otherwise separated by methods and subject matter. As the foregoing has shown, the *topos* of German thoroughness invoked the highly stylized image of a German scholar that took on different shapes in different contexts, but remained sufficiently recognizable to be able to travel across disciplinary divides. This, finally, raises the issue as to how unique the case of Johns Hopkins was. How common was it to associate epistemic virtues with national stereotypes?

First of all, nationalized character traits were not only discussed at Johns Hopkins. Nor were they always rendered as virtues. In the 1910s, Germanized vices played a key role in the French "new Sorbonne" debate – a clash between right- and left-wing intellectuals about French higher education reform.[88] When reform-minded Sorbonne professors like Charles Seignobos introduced German-style seminar teaching in order to promote Republican virtues of rationalism, egalitarianism, and scientific objectivity, conservative critics such as Henri Massis and Alfred de Tarde replied by condemning the "sterile thoroughness" characteristic of "the cult of German science" that they perceived as "Germanifying" French higher education.[89] Varying on this trope, the French physicist and mathematician Pierre Duhem argued during World War I that German virtues such as

[87] H. A. Rowland, "A Plea for Pure Science," *Proceedings of the American Association for the Advancement of Science* 32 (1883), 105-126, 109.
[88] Sarah Shurts, *Resentment and the Right: French Intellectual Identity Reimagined, 1898-2000* (Newark, DE: University of Delaware Press, 2017), 93-135.
[89] Agathon [pseudonym of Henri Massis and Alfred de Tarde], *L'Esprit de la nouvelle Sorbonne: la crise de la culture classique, la crise du français* (Paris: Mercure de France, 1911), 13, 253; Pierre Lasserre, *La doctrine officielle de l'université: critique du haut enseignement de l'état: défense et théorie des humanités classiques* (Paris: Mercure de France, 1912), 478.

meticulousness, industry, and thoroughness were dangerous, to the point of vicious, if not balanced by a characteristically French *esprit de finesse*.[90]

Apart from this, French and German scholars were not alone in being associated with national character traits. Well before the United States began to replace Germany as a scientific *Leitkultur*, the German physiologist Emil du Bois-Reymond loudly complained about "Americanization" – a rhetorically effective term that Gildersleeve interpreted as a "cry of alarm" about American academics who prioritized "the immediate and practical" over "the remote and theoretical."[91] Especially when, in the interwar period, Johns Hopkins came to serve as a model of the American research university that foundations like Rockefeller began to transplant to other countries, "American" became a morally charged adjective. In contexts where "American" served as symbolic shorthand for a set of vices, including especially an "uninterrupted, exclusive, and relentless striving after gain, riches, and influence,"[92] teaching French or British doctors "American methods" naturally evoked defensive responses that idealized the virtues of local medical practice.[93]

Nor were motivational texts and "cries of alarm" the only genres in which nationalized virtues figured prominently. In the decades around 1900, book reviewers, necrology writers, and biographers across Europe and North America made frequent use of nationalized virtues, mainly to describe the specific qualities of individual scholars. Du Bois-Reymond, for instance, was portrayed as a mixture of "Celtic fervour with Teutonic thoroughness" – or alternatively as a "happy blend of German thoroughness with French keenness" – while Thomas Edison was described as "French in his brilliance, more than German in his thoroughness, [and] . . . totally American in the application of his genius to

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[90] Pierre Duhem, *La science allemande* (Paris: A. Hermann & fils, 1915), 29-32, 36-37, 140-141.

[91] Gildersleeve, "Classics and Colleges," 74, 76, under reference to Emil du Bois-Reymond, "Civilization and Science," *The Popular Science Monthly* 13 (1878), 257-275, 385-396, 529-539.

[92] Paul Dehn, *Weltwirtschaftliche Neubildungen* (Berlin: Allgemeiner Verein für deutsche Literatur, 1904), as quoted in Otto Basler, "Amerikanismus: Geschichte des Schlagwortes," *Deutsche Rundschau* 224 (1930), 142-146, 144.

[93] Lion Murard and Patrick Zylberman, "Seeds for French Health Care: Did the Rockefeller Foundation Plant the Seeds between the Two World Wars?" *Studies in History and Philosophy of Biological and Biomedical Sciences* 31 (2000), 463-475, 466; Christopher Lawrence, *Rockefeller Money, the Laboratory, and Medicine in Edinburgh 1919-1930* (Rochester, NY: Rochester University Press, 2005), 30-31, 54-55.

practical ends."[94] Similar language found its way into survey texts like John Theodore Merz's history of nineteenth-century science, which presented "measurement, calculation, and classification" as distinctively French qualities, "completeness and thoroughness of research" as German virtues, and "strong individualism" as a typically English character trait.[95]

German thoroughness, in short, was only one of many nationalized virtues that nineteenth and early twentieth-century scholars habitually invoked. They were used in attempts at answering Remsen's question, "What constitutes a good professor?", but also, more broadly, in portraying colleagues, mapping fields of study, and assessing the scholarly achievements of other countries.

Conclusion

Doubtless, German thoroughness was as clichéd an image as nineteenth-century stereotypes maintaining that "the English all have spleen, the Germans all eat sauerkraut, [and] the Spanish all smell of garlic and dance the bolero."[96] Yet precisely as a stereotypical image, German thoroughness was an attractive device for scholars articulating their visions of research and teaching in an age of scientific nationalism. Precisely as a commonplace known to colleagues in other disciplines, to prospective students, and to benefactors from within and outside the German community in Baltimore, German thoroughness enabled scholars to communicate their views to broader audiences. Precisely as a *topos*, in short, the nationalized virtue established links of communication that protein cells or Lachmannian stemmatics could never provide.[97]

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[94] John G. McKendrick, "Human Electricity," *The Fortnightly Review* 51 (1892), 634-641, 636; A. D. W[aller], "Emil du Bois-Reymond, 1818-1896," *Proceedings of the Royal Society of London* 75 (1905), 124-127, 125; "Thomas Alva Edison," 199.

[95] John Theodore Merz, *A History of European Thought in the Nineteenth Century*, vol. 1 (Edinburgh: William Blackwood and Sons, 1896), 298, 213, 286. See also Pierre Duhem's juxtaposition of the French and English "minds" in *La théorie physique: son objet et sa structure* (Paris: Chevalier & Rivière, 1906), 99-149.

[96] Paul Lindau, "Deutsche Gründlichkeit und französische Windbeutelei: Offener Brief an den Literarhistoriker Herrn Dr. Julian Schmidt Wohlgeboren," in Lindau, *Literarische Rücksichtslosigkeiten: Feuilletonistische und polemische Aufsätze* (Leipzig: Johann Ambrosius Barth, 1871), 145-157, 148.

[97] See, however, Lorraine Daston, "Type Specimens and Scientific Memory," *Critical Inquiry* 31 (2004), 153-182.

For historians of the sciences and the humanities interested in tracing epistemic virtue across disciplinary boundaries, these findings have three wider implications. First, they suggest that similarities between scholars in different disciplines are not always a matter of transfer between fields, but can also emerge out of shared repertoires. Secondly, these repertoires not only include scholarly theories, models, methods, and discipline-transcending identification figures such as Isaac Newton, but also broadly shared cultural images, phrases, and commonplaces, varying from the absent-minded professor with its centuries-long history in the Western imagination to nationalized virtues of the kind discussed in this article.[98] Finally, although historians are professionally responsible for correcting stereotypical images of the past, they should not forget that stereotypes also made their impact felt in history. If scholars in the past drew on clichéd images of national character to share their understandings of epistemic virtue with others, then historians of the sciences and the humanities should be attentive to the discursive power that such commonplaces could exert.[99]

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[98] Gadi Algazi, "Gelehrte Zerstreutheit und gelernte Vergesslichkeit: Bemerkungen zu ihrer Rolle in der Herausbildung des Gelehrtenhabitus," in *Der Fehltritt: Vergehen und Versehen in der Vormoderne*, ed. Peter von Moos (Cologne: Böhlau, 2001), 235-250.

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