Conflicting virtues of scholarship : moral economies in late nineteenth-century German Academia

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Introduction

In 1883, a young student called Hugo Münsterberg attended a lecture by the Leipzig philosopher and experimental psychologist Wilhelm Wundt. He was deeply impressed and decided to continue his studies in his laboratory. Only two years later, the 22-year-old Münsterberg finished his doctorate under Wundt's supervision. His subsequent meteoric career would bring him to Harvard in the early 1890s. By the end of the decade he had even been elected president of the American Psychological Association.[1] Wundt had good reason to be very pleased with this ambitious and successful pupil.

In their correspondence, however, Wundt hardly expressed any satisfaction about Münsterberg's accomplishments. Instead, in 1890, their relationship seemed to be on the verge of breaking when the latter wrote his former teacher a letter full of heartfelt complaints.[2] He was particularly hurt by the many accounts he had received of conversations in which Wundt had called him 'ungrateful.' Even though he claimed that he could live with the idea that his former teacher had hardly any praise for his scholarly accomplishments, he said that he would 'lose [his] self-respect, when [Wundt's] accusation of ungratefulness would be warranted'. He drew attention to the many ways in which he continued to express his gratitude: 'I ostentatiously present myself as your student toward all your detractors; your framed picture is the only decoration on the walls of my laboratory; I sent you the first copy of all my books'. The letter did not, however, have its intended effect.

Although Wundt indignantly denied that he had ever accused his former student of ingratitude, his attitude was not conciliatory. He wrote that some of Münsterberg's recent publications had been 'rushed and not sufficiently matured'.[3] He then stated that when 'somebody wants to show his gratitude by his own will', he can only do this by working 'reliably, diligently and meticulously without caring about authorities or career'. By listing these requirements, Wundt implied that Münsterberg's attempts to express his gratitude had fallen flat; his rushed and immature work suggested a lack of reliability, diligence and meticulousness. As Wundt also added that he had shared his unfavourable judgements with mutual acquaintances, it is very unlikely that his words reassured Münsterberg.

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[1] On Münsterberg's life and career, see Keller, Phyllis, *States of belonging: German-American intellectuals and the First World War*, Harvard University Press, Cambridge (MA), 1979. 5–118.
[2] Hugo Münsterberg to Wilhelm Wundt, 10 November 1890, Universitätsachiv Leipzig (hereafter UAL), NA Wundt/III/701-800/764b/415-426. Unless otherwise stated all translations are my own.
[3] Wilhelm Wundt to Hugo Münsterberg, 12 November 1890, UAL, NA Wundt/III/701-800/765/427-438.

Over the following decades this awkward exchange of letters would haunt their relationship. Six years later, Münsterberg mentioned the 'rushed production' of his early career in a long and humble letter to his doctoral advisor.[4] Almost 10 years later, he would still bring up this 'rushed immaturity'.[5] He would also continue to assure Wundt of the sincerity of his gratitude. An 1896 letter was concluded with an apology for all the ways in which he had 'knowingly or unknowingly hurt or wronged' him as well as for all the things for which he had 'not sufficiently expressed his sincere gratitude'.[6] A few months later, he even asked Wundt to acknowledge him as his 'most grateful student'.[7] Almost a decade after that — at the opening of his brand new laboratory at Harvard — he stressed his thankfulness again: 'I just wanted to say […] that today I am profoundly aware of my dependence on and my gratitude for you and that I am […] guided by the desire that this workplace will be imbued with your spirit'.[8]

For the purposes of this study there is no reason to delve deeper into the merit of Münsterberg's early work or Wundt's teaching.[9] What is important to note, however, is the language of virtue they used to talk about both their relationship and their scholarship. It is repeatedly made clear that the relationship between a researcher and his teacher should be grounded in the virtue of gratitude and that good scholarship is the result of virtues, such as reliability, diligence and meticulousness. The way in which these different virtues of scholarship touch on each other is even more striking. Wundt's observations in particular suggest that gratitude cannot be considered in isolation from reliability, diligence and meticulousness. This study takes a closer look at the virtues that shaped scholarship in late 19th and early 20th century Germany with an emphasis on the continuous attempts to maintain a balance between the requirements of potentially conflicting virtues.

Before turning towards Wilhelmine Germany, this introduction first reflects on the way in which virtues are discussed in recent studies on the history of scholarship, in order to draw attention to what is still conspicuously lacking in this body of literature. It points out that insufficient attention has been paid to how virtues relate to and interact with each other. Next, attention is directed to the notion of a 'moral economy' of scholarship, an analytical framework that can be traced back to the work of Robert Kohler and Lorraine Daston, in the 1990s. I argue that it is highly suitable to

[4] Hugo Münsterberg to Wilhelm Wundt, 31 March 1896, UAL, NA Wundt/III/701-800/765f/501-512.
[5] Hugo Münsterberg to Wilhelm Wundt, 5 November 1905, UAL, NA Wundt/III/701-800/768a/607-622.
[6] Hugo Münsterberg to Wilhelm Wundt, 7 April 1896, UAL, NA Wundt/III/701-800/765g/513-528.
[7] Hugo Münsterberg to Wilhelm Wundt, 14 April 1896, UAL, NA Wundt/III/701-800/765h/529-532.
[8] Hugo Münsterberg to Wilhelm Wundt, 5 November 1905, UAL, NA Wundt/III/701-800/768a/607-622.
[9] For more details on Wundt's career, see Bringmann, Wolfgang G. and Ryan D. Tweney (eds.), *Wundt Studies: A Centennial Collection*, C.J. Hogrefe, Inc., Toronto, 1980; Rieber, Robert W. and David K. Robinson (eds.), *Wilhelm Wundt in History: The Making of a Scientific Psychology*, Springer Science + Business Media, New York (NY), 2001. Wundt has also written a very readable autobiography: Wundt, Wilhelm, *Erlebtes und Erkanntes*, Alfred Kröner, Stuttgart, 1920.

shed light on the intricate interplay between virtues — on the frictions between them as well as on the balance that scholars assumed to exist between virtues. I subsequently reflect on the opportunities offered by a cross-disciplinary approach to the history of scholarship. Next, I introduce the professional networks of scholars from three disciplines in late 19th and early 20th century Germany from which my case studies have been selected. These introductions are followed by a discussion of my primary sources and methodology. Here, I discuss the merits of a cultural history approach to the history of scholarship. This is especially relevant because this study draws heavily on the anthropological tradition of thick description of ideals, practices and everyday life. Finally, I outline the structure of this study, which is built around the various ways in which scholars can relate both to each other and to each other's work.

Virtues and scholarship

In a recent study, Steven Shapin observes that 20th century scholars tend to present the history of scholarship as an impersonal process that is propelled by 'rationally organised and regulated institutions'.[10] He regrets that such depictions conceal the fact that 'at least since the seventeenth century, familiar people and their virtues have *always* been pertinent to the making, maintenance, transmission and authority of knowledge'.[11] In recent years, however, an increasing number of researchers have paid attention to questions of virtue and vice in the history of scholarship. The growing interest in these issues can be observed in very different research programmes that deal with scholarly virtues for a variety of reasons.

A first group of scholars that should be mentioned here consists of those who are primarily interested in understanding scholarly trustworthiness and reliability. In the 1980s, Shapin was one of the first historians to emphasise the importance of attributions of virtue in settling questions of trust in scientific findings. Only someone who was widely known to be virtuous would be able to convince his peers of the truth and significance of his work. He would have to have a reputation for possessing both the virtues of accuracy and love of truth to convince others of the veracity of his new discoveries or novel insights.[12] Questions of trust not only arose among the early-modern gentlemen of science described by Shapin. Kasper Eskildsen has made similar observations about a very different group of scholars: those of 19th century German historians. He found that historical accounts that exhibited the typical properties of epistemic virtues, such as accuracy,

[10] Shapin, Steven, *The Scientific Life: A Moral History of a Late Modern Vocation*, University of Chicago Press, Chicago (IL), 2008. 3.
[11] Ibid., 4. Shapin's italics.
[12] Shapin, Steven, 'The House of Experiment in Seventeenth-Century England,' *Isis*, 79(3), 1988, 373–404. 397–398.

honesty and impartiality, were generally considered to be trustworthy. The virtues of these texts then testified to the virtues of the historians who explicitly and carefully referred to them.[13]

Conceptions of virtue have also played an important role in cultural approaches to the history of scholarship. Herman Paul, for example, has drawn attention to the relationship between scholarly virtues and middle-class values. He has argued that German historical studies in the 19th century were shaped by the fact that 'loyalty was a cardinal virtue' among their bourgeois practitioners.[14] Others have focused on virtues recognised among scholars rather than on the way in which the values of society at large have shaped conceptions of scholarly virtue. Jessica Wang has recently drawn attention to solitude and austerity as scientific virtues.[15] Gerald Holton has passionately praised the virtuousness and vital role of imagination in science.[16] Jo Tollebeek's study of the working life of the Belgian historian Paul Fredericq is one of the most detailed of the recent cultural histories of scholarship. Despite the fact that his book primarily deals with the everyday conduct of scholarly life, Tollebeek also acknowledges the pivotal role of epistemological, ethical and aesthetic considerations, as well as the shaping influence of ideology and emotions.[17]

A third group of people with an interest in questions of virtue and vice consists of scholars examining the historical development of the relationship between religion and science. Peter Harrison has, for example, investigated how the intellectual vice of curiosity was transformed into a virtue over time. He describes how curiosity had acquired a poor standing in the writings of the church fathers and how this reputation improved in the course of the 17th century.[18] Michael Heyd has looked into medical and theological critiques of religiously inspired enthusiasm during the same period.[19] Even though Sari Kivistö's study of the many vices of learning recognised at early-modern universities is not limited to an analysis of the relationship between religion and scholarship, she is interested in the way in which a common appeal to 'the importance of traditional moral and religious values' contributed to 'conflicting notions of knowledge and scholarly ethics'.[20]

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[13] Eskildsen, Kasper Risbjerg, 'Inventing the archive: Testimony and virtue in modern historiography,' *History of the Human Sciences*, 26(4), 2013, 8–26. 11.
[14] Paul, Herman, 'Germanic Loyalty in Nineteenth-Century Historical Studies: A Multi-Layered Virtue,' *História da Historiografia*, forthcoming.
[15] Wang, Jessica, 'Broken Symmetry': Physics, Aesthetics, and Moral Virtue in Nuclear Age America,' in: Jeroen van Dongen and Herman Paul (eds.), *Epistemic Virtues in the Sciences and the Humanities*, Springer, Cham, 2017, 27–47. 38.
[16] Holton, Gerald, *Einstein, history, and Other Passions: The Rebellion against Science at the End of the Twentieth Century*, Addison-Wesley, Reading (MA), 1996. Chapter 4.
[17] Tollebeek, Jo, *Fredericq & Zonen: Een antropologie van de moderne geschiedwetenschap*, Bert Bakker, Amsterdam, 2008. 24.
[18] Harrison, Peter, 'Curiosity, Forbidden Knowledge, and the Reformation of Natural Philosophy in Early Modern England,' *Isis*, 92(2), 2001, 265–290. 267 and 283.
[19] Heyd, Michael, *"Be Sober and Reasonable": The Critique of Enthusiasm in the Seventeenth and Early Eighteenth Centuries*, Brill, Leiden, 1995.
[20] Kivistö, Sari, *The Vices of Learning: Morality and Knowledge at Early Modern Universities*, Brill, Leiden, 2014. 13.

Virtue and vice are also discussed by historians of scholarship who aim to make cross-disciplinary comparisons.[21] In their introduction to a volume about epistemic virtues in scholarship Jeroen van Dongen and Herman Paul argue that a focus on epistemic virtues is promising, because it potentially contributes to a history of knowledge that goes beyond customary disciplinary horizons.[22] Their approach builds on a broader development in the study of scholarship in which cross-disciplinary comparisons have become increasingly common. Recently the argument in favour of comparative studies of the humanities and the sciences has also been convincingly made by Rens Bod.[23]

Finally, it is worth mentioning that the interest in scholarly virtues and vices has not been limited to historians. At least two philosophical approaches to these issues have been pursued in recent years. On the one hand some philosophers have worked on what is commonly called 'virtue epistemology'. Robert C. Roberts and W. Jay Wood have, for example, argued that 'in one way or another all virtues have a cognitive aspect'.[24] Linda Zagzebski's analyses start from the assumption that intellectual virtues are forms of moral virtue.[25] The other group of philosophically inclined authors who discuss scholarly virtues are primarily concerned with scientific research ethics. Some of them approach the theme historically, by showing how scientific research ethics emerged from a tradition of ethical reflection on the central virtues. Albert Jonsen's and Robert Baker's studies on the history of medical ethics in the United States are key examples of this approach.[26] Others argue more constructively in favour of a virtue ethical approach to scientific research ethics. Inspired by Alasdair MacIntyre, whose *After Virtue* shaped a wide range of subsequent debates, they often present virtue ethics as a remedy to the perceived limitations of protocolised types of ethics, such as those institutionalised in codes of conduct and ethical review boards.[27]

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[21] Paul, Herman, 'The Scholarly Self: Ideals of Intellectual Virtue in Nineteenth-Century Leiden, in: Bod, Rens, Jaap Maat and Thijs Weststeijn (eds.), *The Making of the Humanities, vol. II: From Early Modern to Modern Disciplines*, Amsterdam University Press, Amsterdam, 2012, 397–411. 397.

[22] Dongen, Jeroen van and Herman Paul, 'Introduction: Epistemic Virtues in the Sciences and the Humanities,' in: Dongen, Jeroen van and Herman Paul (eds.), *Epistemic Virtues in the Sciences and the Humanities*, Springer, Cham, 2017, 1–10. 5.

[23] Bod, Rens, 'A Comparative Framework for Studying the Histories of the Humanities and Science,' *Isis*, 106(2), 2015, 367–377.

[24] Roberts, Robert C. and W. Jay Wood, *Intellectual Virtues: An Essay in Regulative Epistemology*, Clarendon Press, Oxford, 2007. 59.

[25] Zagzebski, Linda Trinkaus, *Virtues of the mind: An inquiry into the nature of virtue and the ethical foundations of knowledge*, Cambridge University Press, Cambridge, 1996. xiv.

[26] Jonsen, Albert R., *The Birth of Bioethics*, Oxford University Press, Oxford, 1998; Baker, Robert, Before Bioethics: *A History of American Medical Ethics from the Colonial Period to the Bioethics Revolution*, Oxford University Press, Oxford, 2013.

[27] For example, see Pennock, Robert T. and Michael O'Rourke, 'Developing a Scientific Virtue-Based Approach to Science Ethics Training, *Science and Engineering Ethics*, 23(1), 2017, 243–262.

Conflicting virtues and moral economies

The wide range of studies on scholarly virtues allows us to draw up an extensive inventory of virtues that have been associated with good scholarship, at different times and places. Such a list not only underlines the wide variety in studies about this topic, but also draws attention to a significant common feature — all these studies highlight one virtue at a time. Sometimes, this is the obvious result of the author's deliberate decision to focus on just one virtue, such as Harrison's analysis of curiosity or Paul's study of loyalty.[28] The extensive discussion on objectivity by Lorraine Daston and Peter Galison and the volume on impartiality edited by Kathryn Murphy and Anita Traninger fit this mould, as well.[29] Some authors, on the other hand, discuss multiple virtues and vices. They usually only address them one by one, however, without examining whether someone's assessment of or compliance with one virtue touches on his or her judgement of other virtues.

This widespread emphasis on separate virtues fails to shed light on the way in which these individual virtues relate to each other. These relationships can be intricate; there is no reason to assume that there is some kind of natural harmony among all virtues. The example in the opening paragraphs already illustrates that this relationship is more complex. Münsterberg could only defend the sincerity of his gratitude by separating this virtue from the equally important virtues of reliability, diligence and meticulousness. Wundt, on the other hand, called Münsterberg's gratitude into question because he believed that it depended on these other virtues. This is not the only conceivable complex relationship between virtues. Virtues can also be experienced as being in conflict with each other. It is easy, for instance, to imagine a clash between the commitments to loyalty and to scholarly solitude, or a conflict between untamed imagination and careful dedication to thoroughness and accuracy. What is more, disagreement about the relationship between various virtues of scholarship might also be a reflection of the often-complex relationships between individual scholars. This is tellingly exemplified by Münsterberg's cumbersome relationship with his *Doktorvater*.

Historians of science have recognised the complications arising from the variety in the ways in which virtues can relate to each other. Few, however, have tried to develop conceptual tools to address this. In recognition of the complexity of a plurality of virtues, Herman Paul proposes to look at scholarly personae as templates of scholarship that can be characterized as 'constellations

[28] See footnotes 12 and 16.
[29] Daston, Lorraine and Peter Galison, *Objectivity*, Zone Books, New York (NY), 2007; Murphy, Kathryn and Anita Traninger (eds.), *The Emergence of Impartiality*, Brill, Leiden, 2014.

of commitments to specific goods'.[30] This notion of virtues as part of a constellation allows for an evaluation of the significance of individual virtues in the light of others. Moreover, this conception also suggests that the relative importance of individual virtues is not set in stone and can therefore change, over time.[31] However, this precisely reveals a limitation of the persona approach as well. As Paul himself admits, 'the prism of scholarly personae encourages historians to acknowledge *synchronic variety'* in how scholars define standards of virtue.[32] Yet, to what extent was this variety made possible by shared horizons of expectation or what one might call shared rules of the game? If one ignores for a moment the sometimes heated debates over a scholar's 'first' or 'most important' virtue and looks at ordinary scholarly practices, such as collaborating with colleagues on a text edition, reviewing a dissertation turned into a monograph, or running a scholarly journal, to what extent were these practices regulated by standards of virtue? And how can we understand how virtues interact at this practical level, quite apart from how virtues were attributed to scholarly personae?

The questions this study seeks to answer, therefore, are: How did scholarly virtues relate to each other on the 'practical' level of day-to-day scholarly work? To what extent did these virtues correspond to unwritten rules or tacit assumptions on how to engage in scholarly work? To what extent and in what ways did these virtues come into conflict with the expectations raised by these rules and assumptions? How did scholars react to the possibility that virtues and the expectations they raised might come into conflict? This study aims to shed light on the complex relationships between various virtues in scholars' everyday working lives by portraying them as part of what modern-day authors, such as Robert Kohler and Lorraine Daston, described as a *moral economy of scholarship*.[33]

The popularity of this term can be traced back to E.P. Thompson's 1971 article 'The moral economy of the English crowd in the eighteenth century'.[34] According to Thompson, a moral economy is basically a 'consistent traditional view of social norms and obligations, of the proper economic functions of several parties within the community'.[35] In the ideological debates of the

[30] Paul, Herman, 'What is a Scholarly Persona? Ten Theses on Virtues, Skills, and Desires,' *History and Theory*, 53, 2014, 348–371. 364.
[31] These issues are also discussed in: Engberts, Christiaan and Herman Paul (eds.), *Scholarly Personae in the History of Orientalism, 1870–1930*, Brill, Leiden, 2019.
[32] Paul, Herman, 'Introduction: Scholarly Personae in the History of Orientalism, 1870–1930,' in: Engberts and Paul, *Scholarly Personae*, 1–16. 14. Paul's emphasis.
[33] See especially: Daston, Lorraine, 'The Moral Economy of Science,' *Osiris*, 10, 1995, 2–24 and Kohler, Robert E., *Lords of the Fly: Drosophila Genetics and the Experimental Life*, University of Chicago Press, Chicago (IL), 1994.
[34] Götz, Norbert, "Moral economy': its conceptual history and analytical prospects,' *Journal of Global Ethics*, 11(2), 2015, 147–162. 152.
[35] Thompson, Edward P., 'The moral economy of the English crowd in the eighteenth century,' *Past & Present*, 50(1), 1971, 76–136. 79.

Cold War era, the term was widely used by political and social scientists and historians who were attracted to its emphasis on 'pre- or non-market arrangements' and its assumed applicability to peasant and non-Western societies.[36] Not until from the late 1980s, the term also started to appear in studies about the history of science.

Although he did not use the term, Steven Shapin's studies on the culture of experimentalism in early modern England are among the earliest works on the moral economy of scholarship.[37] He describes how 'access to experimental venues' was shaped by a 'tacit system of recognitions, rights and expectations that operated in the wider society of gentlemen.[38] As mentioned above, the virtues most commonly associated with true gentlemen — especially a disposition to tell the truth and natural civility — were seen as warrants of trustworthiness.[39] The virtue of civility might have been even more important than expectations of truthfulness. Shapin goes as far as claiming that sociability, pliancy and politeness were the virtues that were the 'condition for the production of reliable knowledge'.[40] Thus, the moral economy of the early modern English experimentalist, above all, is pictured as rooted in long-standing gentlemanly values.

In the 1990s, Robert Kohler and Lorraine Daston reflected more explicitly on the moral economy of scholarship. Kohler's study of early 20th century fruit fly geneticists provides a detailed analysis of the virtues that shaped the collaborative efforts of this well-defined group of researchers.[41] This group was not only defined by its shared interests but also by temporal and spatial features. Kohler describes the assessments of virtue shared by a limited number of scholars at a limited number of interconnected laboratories developing specific forms of collaboration and a shared identity during a relatively short period of time. By thus limiting his scope, he is able to give an elaborate description of what he refers to as 'a moral ethos of cooperation and communality'.[42] Kohler's detailed and contextualising approach to moral economies is promising. His work, nonetheless, does not provide a sufficiently developed starting point for an investigation into the relationships between various virtues, as he did not look into in the relationship between potentially conflicting values, nor did he make an effort to define the term *moral economy*.

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[36] Götz, Norbert, "Moral economy'," 155. Probably the most famous application of the term to a community that was both peasant and non-Western is: Scott, James C., *The Moral Economy of the Peasant: Rebellion and Subsistence in Southeast Asia*, Yale University Press, New Haven (CT), 1976.
[37] Shapin, Steven, 'The House of Experiment'; Shapin, Steven, "'A Scholar and a Gentleman'": The Problematic Identity of the Scientific Practitioner in Early Modern England, *History of Science*, 29, 1991, 279–327.
[38] Shapin, Steven, 'The House of Experiment,' 389.
[39] Ibid., 397–398.
[40] Shapin, Steven, "'A Scholar and a Gentleman'," 297.
[41] Kohler, *Lords of the Fly*.
[42] Ibid., 92–93.

In this respect, Lorraine Daston's work is more promising because it actually provides a definition. In a pioneering article, she emphasises that, in studies of the history of scholarship, the word 'economy' does not refer to the 'money, markets, labor, production, and distribution of material resources, but rather to an organized system that displays certain regularities'.[43] She then goes on to define a moral economy as 'a web of affect-saturated values that stand and function in well-defined relationship to one another'.[44] She adds that this web is a 'balanced system of emotional forces, with equilibrium points and constraints'.[45] Following Daston, the term 'moral economy', as used in this study, does not refer to norms and regulation of the marketplace, but rather to the balance between various assessments of scholarly virtue.

This study, thus, explores the way in which the ever-changing relationship between various virtues produces a balanced system of equilibrium points and constraints. It is intended to present a valuable contribution to the existing literature on scholarly virtues and vices, as it goes beyond the common single-minded focus on individual virtues, by acknowledging and outlining the complex relationships between a variety of virtues. This dynamic understanding of the relationship between virtues was inspired by Paul's conception of constellations of commitments, though this study focuses more on shared moral horizons than on distinct scholarly personae. The study demonstrates that these constellations of commitments to various virtues amount to a moral economy of scholarship. This moral economy can be conceived as balanced, because it revolves around the assessments of the relationships between a limited number of virtues. However, a balanced system does not necessarily amount to an entirely static environment. Virtue assessments are subject to change, over time, and — more importantly in this study — different judgements can be made by scholars who work in different disciplines as well as by those who perform different roles, such as editor, reviewer, government adviser or amiable colleague.

A cross-disciplinary history of scholarship

This study takes a comparative approach to the history of scholarship. As mentioned above, one attractive aspect of an emphasis on virtue is the fact that it might contribute to a history of scholarship that transcends disciplinary boundaries.[46] This does not in any way imply that assessments of scholarly virtue are similar across disciplines. On the contrary, over the course of this study I took into account the influence of a variety of ideals, traditions, political influences and

[43] Daston, 'The Moral Economy of Science,' 4.
[44] Ibid.
[45] Ibid.
[46] See footnote 21.

economic incentives on various disciplines. I would even argue that the most characteristic qualities of virtue assessments in these disciplines only become visible in the light of such differences.

Until the late 20th century, such cross-disciplinary approaches to the history of scholarship were uncommon. In 1984, Richard Whitley observed that contemporary science studies had produced 'empirical studies of the emergence of new fields, of scientific controversies, and of the construction of scientific knowledge in particular circumstances as social phenomena'. He added, however, that these studies had not generated 'much comparative understanding of how different disciplines become established and develop in different ways in different circumstances'.[47] The lack of attempts to make a comparative analysis of fields of scholarship is especially striking when considering the extent to which the humanities have been integrated into the history of science. Rens Bod observed that the humanities are underrepresented in at least two ways.[48] On the one hand, they are largely neglected in wide-ranging histories of science, such as George Sarton's *Introduction to the History of Science* and Hans-Joachim Störig's *Kleine Weltgeschichte der Wissenschaft*. On the other hand, almost all histories of the humanities lack a comparative perspective, because they only deal with individual disciplines.

This does not mean that comprehensive or comparative approaches to the history of scholarship have never been pursued. Sarton, for example, explicitly stated his interest in philological, historiographical, juridical and sociological scholarship.[49] However, most humanities disciplines only received limited attention in his study.[50] The call for an integrated history of the sciences continued to be voiced after Sarton published his *Introduction*. Ziman, for instance, argued that '[...] to maintain […] an impassable divide between Science and the Humanities is to perpetrate a gross misunderstanding' and stated that, in many ways, the study of the latter 'is perfectly akin to the scientific study of electrons, molecules, cells, organisms or social systems'.[51] But, even though the acknowledgment of such similarities calls for comprehensive and comparative treatments of the sciences and the humanities, such studies remained rare, throughout the 20th century.

In the 21st century, the call for a cross-disciplinary — or even post-disciplinary — history of scholarship became louder. Lorraine Daston and Glenn Most make a passionate plea for 'broadening the subject matter of the history of science to include at least some of the history of

[47] Whitley, Richard, *The Intellectual and Social Organization of the Sciences*, Clarendon Press, Oxford, 1984. 5.
[48] Bod, Rens, *A New History of the Humanities: The Search for Principles and Patterns from Antiquity to the Present*, Oxford University Press, Oxford, 2013. 3–4.
[49] Sarton, George, *Introduction to the History of Science*, Volume 1, Robert E. Krieger, Williams and Wilkins, Baltimore (MD), 1931. 7–8.
[50] Bod, Rens, *A New History of the Humanities*, 3.
[51] Ziman, John M., *Public Knowledge: An Essay Concerning the Social Dimensions of Science*, Cambridge University Press, Cambridge, 1968. 20.

some of the humanities'.[52] They argue that especially philologists' efforts to 'minimize errors through systematic methods' allow for insightful comparison with the sciences.[53] In a similar vein, Bod states that a comparative framework will enable us to write a *longue durée* history of scholarship that will do justice to the many transfers of method that have taken place between disciplines.[54] He illustrates this by examining how grammar formalisms have shaped computer science and how philological stemmatic rules have been adopted by hereditary biologists. Finally, as mentioned above, Jeroen van Dongen and Herman Paul argue that one of the great promises of the cultural turn in the history of scholarship is its potential contribution to a history of knowledge that transcends traditional disciplinary boundaries.[55]

These advocates of a cross-disciplinary approach to the history of knowledge all emphasise its usefulness for the study of different features of scholarship. Bod argues that a comparison at the level of what he calls formalisms and rule systems is the most promising approach, because, only at this level, true equivalencies between disciplines might be found rather than mere analogies.[56] Daston and Most argue that 'a genuinely comparative framework that would examine the history of diverse intellectual traditions on an equal footing' should primarily look at practices.[57] Van Dongen and Paul, finally, emphasise the promise of looking at epistemic virtues, because they are 'often shared, transferred, traded, and borrowed across disciplinary boundaries'.[58]

These three different emphases are, however, not mutually exclusive. Daston and Most, for instance, explore 'key practices like error analysis'.[59] These practices also have formalistic and moral dimensions. They point out that there are formalistic similarities between astronomy and philology in the way in which errors are classified in both disciplines.[60] The moral dimension of these practices becomes apparent in their acknowledgement of the 'unwavering attentiveness and painstaking care' that was expected of both astronomers and philologists.[61] This recognition of the importance of care and attentiveness can be understood as an acknowledgement of the significance of epistemic virtues. Moreover, their acknowledgement of the interplay between virtue and

[52] Daston, Lorraine and Glenn W. Most, 'History of Science and History of Philologies,' *Isis*, 106(2), 2015, 378–390. 383.
[53] Ibid., 380.
[54] Bod, Rens, 'A Comparative Framework,' 367–377.
[55] See page 5 and Van Dongen and Paul, 'Introduction,' 5.
[56] Bod, Rens, 'A Comparative Framework,' 369.
[57] Daston, Lorraine and Glenn W. Most, 'History of Science and History of Philologies,' 389–390.
[58] Dongen, Jeroen van and Herman Paul, 'Introduction,' 5.
[59] Ibid., 381.
[60] Ibid., 380–381.
[61] Ibid. ,379.

practices is consistent with this study's attempts to look at scholarly virtues through the prism of practices that encourage judgement and sometimes — as a result — conflict, as well.

Three disciplines

To enable a cross-disciplinary approach, this study takes a closer look at scholars working in the disciplines of orientalism, experimental psychology and bacteriology. Today, these fields are considered part of the humanities, the social sciences and the sciences, respectively.[62] Modern-day classifications are not, however, always consistent with the way in which these disciplines were seen in the past. Even if 19th century orientalism, to some extent, could be characterised as the philology of ancient oriental languages, the study of Semitic languages stayed closely linked to Old Testament studies, which were taught at theological faculties.[63] At the same time, the term 'social sciences' was not used, as yet. Experimental psychology was still firmly rooted in the post-Kantian epistemological debates that shaped 19th century German philosophy.[64] One of experimental psychologists' major claims on philosophical innovation was the introduction of methods borrowed from physiology, a sub-field of medicine.[65] Bacteriology, finally, was a medical sub-discipline mostly focused on unresolved questions about the ultimate causes of disease.[66] Its development, however, owed a great deal, not only to the earlier efforts by experimental pathologists but also to the insights of 19th century botanists, such as Ernst Hallier and Ferdinand Cohn.[67]

The three disciplines discussed in this study were selected not only because they allow for an interesting cross-disciplinary overview of shared scholarly virtues. By the end of the 19th century, each discipline also showed various features that gave rise to debate about good scholarship. This

[62] A recent forum section in *History of Humanities* further explores the ever-shifting distinction between the sciences and the humanities; see Krämer, Fabian, 'Shifting Demarcations: An Introduction,' *History of Humanities*, 3(1), 2018, 5–14 and Bod, Rens, 'Has There Even Been a Divide? A *Longue Durée* Perspective, *History of Humanities*, 3(1), 2018, 15–25.
[63] Marchand, Suzanne L., *German Orientalism in the Age of Empire: Religion, Race, and Scholarship*, Cambridge University Press, Cambridge, 2009. 86. Mangold, Sabine, *Eine "weltbürgerliche" Wissenschaft — Die deutsche Orientalistik im 19. Jahrhundert*, Franz Steiner, Stuttgart, 2004. 59–64.
[64] Boring, Edwin G., *A History of Experimental Psychology*, second edition, Prentice-Hall, Englewood Cliffs (NJ), 1950. 246–250; Robinson, Daniel N., *An Intellectual History of Psychology*, revised edition, Macmillan, New York (NY), 1981. 325–326.
[65] Boring, Edwin G., *A History of Experimental Psychology*, 420–426.
[66] Hardy, Anne I. and Mikael Hård, 'Common Cause: Public Health and Bacteriology in Germany, 1870–1895,' *East Central Europe*, 40(3), 2013, 319–340. 320.
[67] Berger, Silvia, *Bakterien in Krieg und Frieden: Eine Geschichte der medizinische Bakteriologie in Deutschland 1890–1933*, Wallstein, Göttingen, 2009. 33–35.

ample room for disagreement encouraged scholars to reflect on their assessments of scholarly virtue, in different ways.

Orientalists who studied ancient languages realised that they often were building on unstable intellectual foundations that allowed for sharp differences of opinion. One critic describes them as 'often ruthless in denouncing each other's translations and editing decisions' and adds that '[...] rivalry and rancour have been powerful driving forces in the story of Orientalism'.[68] In addition, it was hard to find common ground between the proponents of a secularised approach to orientalist scholarship and the theologically inspired students of Semitic languages.[69] By the end of the 19th century, a new debate about research priorities emerged. Traditional orientalists, who largely limited themselves to the study of ancient languages and texts, were challenged by a new generation of scholars who showed an increasing interest in modern languages and contemporary culture. The *Seminar für Orientalisch Sprachen* (institute for oriental languages) was established in Berlin in 1887 to teach contemporary Asian languages.[70] In the early 20th century, two journals devoted to the modern Orient were founded, named *Der Islam* and *Die Welt des Islams*.[71] Because these new fields of research and teaching were inextricably linked to simultaneous developments in European colonialism, they challenged the disinterested self-image of the philologically inclined orientalists.[72]

The room for disagreement in experimental psychology and bacteriology was mostly the result of the fact that both were relatively new fields of research. One issue that caused friction among psychologists was related to the question of which mental processes could be investigated using experimental means.[73] Another pressing question dealt with the appropriate institutional environment for experimental psychology. Some psychologists argued that their work should remain within the walls of the philosophy department. This point of view was criticised, however, by both their colleagues at various faculties of philosophy and by psychologists working at other departments. The philosophers resented the fact that they had to compete with the psychologists for a limited number of university appointments. The psychologists considered themselves to be working in a completely new field of research and therefore argued that they deserved their own institutional structures.[74]

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[68] Irwin, Robert, *For Lust of Knowing: The Orientalists and their Enemies*, Penguin, London, 2007. 7.
[69] Marchand, *German Orientalism in the Age of Empire*, xxxiii.
[70] For more on the Institute for Oriental Languages, see Chapter 4, 131–134.
[71] Marchand, *German Orientalism in the Age of Empire*, 349.
[72] Paret, Rudi, *Arabistik und Islamkunde an deutschen Universitäten: Deutsche Orientalisten seit Theodor Nöldeke*, Franz Steiner, Wiesbaden, 1966. 18.
[73] An example is provided by the heated discussion about the measurement of higher mental processes: Ogden, Robert M., 'Oswald Külpe and the Würzburg School,' *The American Journal of Psychology*, 64(1), 1951, 4–19. 10–12.
[74] Ash, Mitchell G., 'Academic Politics in the History of Science: Experimental Psychology in Germany, 1879–1941,' *Central European History*, 13(3), 1980, 255–286. 278–282.

Bacteriologists faced a very different challenge. The safety and efficacy of their innovative new cures often met with scepticism from the general public as well as from medical practitioners. Because the sceptics' suspicions proved to be justified in at least one widely covered case, newly developed cures continued to face critical scrutiny well into the 20th century.[75] The distrust about bacteriological findings was further reinforced by the fact that large amounts of money could be made through the sale of new drugs. Against this background, well-researched claims about effective new cures could be represented in the media as mere self-serving advertising.[76]

The protagonists

In order to provide detailed descriptions of scholarly life, I looked at the everyday working life of individual scholars rather than at disciplines as a whole. However, because disagreement about the assessment of virtue requires more than one person, this study is not limited to individuals. It looks not merely at the words and actions of individual scholars, but also at the networks in which they participated. The different chapters put emphasis on different network relationships of the protagonists. Some of these networks were collegial communities of academics working at the same faculty or laboratory. However, collegial networks could also take shape around collaborations between researchers who did not share a physical work environment. Influential professional networks emerged around leading journals and scholarly societies. Prussian government officials also cultivated their own networks of academic advisors. Finally, most scholars maintained an extensive personal network through private correspondence. Studying the protagonists' membership of more than one type of network provided a close look at the role of assessments of virtue in a variety of environments.

This study's examination of conceptions of virtue in orientalism is largely based on the networks of Theodor Nöldeke. Nöldeke was an active member of the *Deutsche Morgenländische Gesellschaft* (*DMG*), the national association of German orientalists. He was also an active contributor to the *Literarische Centralblatt*, one of the best-read review journals of late 19th century Germany. In addition, he was a member of the international consortium assembled by his Leiden colleague Michael Jan de Goeje for his 30-year project of editing the *Annals* of al-Ṭabarī. Last but not least, Nöldeke maintained close personal relationships with colleagues from different generations, such

[75] Gradmann, Christoph, 'Robert Koch und das Tuberkulin — Anatomie eines Fehlschlags,' *Deutsche Medizinische Wochenschrift*, 124(42), 1999, 1253–1256.
[76] For example, see Mildenberger, Florian, 'Auf verlorenem Posten — der einsame Kampf des Heinrich Dreuw gegen Syphilis und Salvarsan,' *Würzburger medizinhistorische Mitteilungen*, 30, 2011, 163–203. 171.

as the senior Leipzig orientalist Heinrich Leberecht Fleischer, the Hungarian Arabist Ignaz Goldziher and the versatile young Semitist Carl Heinrich Becker.

I based my examination of assessments of scholarly virtue in experimental psychology on the networks of Wilhelm Wundt, introduced above as Hugo Münsterberg's critical *Doktorvater*. Like Nöldeke, Wundt was a frequent contributor to the *Literarische Centralblatt*. In addition, he also edited his own journal, the *Philosophische Studien*. Although he cultivated a personal relationship with his older colleague Gustav Theodor Fechner, a major part of his network can be retraced to the laboratory for experimental psychology, which he established in Leipzig in 1879. This laboratory was the first of its kind, and a significant number of leading psychologists in late 19th and early 20th century Germany spent some formative months or years at this laboratory. Some of the better-known alumni from the Leipzig laboratory with whom Wundt had stayed in touch after they left, were the psychiatrist Emil Kraepelin, the psychologist Oswald Külpe and the paedagogical scholar Ernst Meumann.

The investigation into the moral economy of bacteriology, finally, was largely based on researchers associated with the early years of the *Institut für Infectionskrankheiten* (institute for infectious diseases) in Berlin, in the 1890s. For this study, I looked at its first director Robert Koch as well as at its staff members Emil Behring and Paul Ehrlich. This collaborative network was disbanded in the 1890s, when Behring and Ehrlich left the institute to pursue independent careers. Notwithstanding that the relationship between Behring and his peers became increasingly tense, he would stay in contact with both Koch and Ehrlich. All three men also maintained a close relationship with Friedrich Althoff at the Prussian Ministry of Education, who had a strong interest in advancing medical research. Finally, the need to test newly developed drugs forced these bacteriologists to develop a working relationship with clinicians who could perform such tests.

As the above introduction of protagonists demonstrates, my study's primary focus was on networks of scholars within a national context. A first reason for this choice is the comparative character of the study. It would have been difficult to account for the particularities of various disciplines while assessing the differences between national scholarly cultures. A second reason is that, at least from the late 18th century onwards, the national state provided the framework within which the careers of most scholars took shape.[77] Even the features of scholarly life that were not explicitly guided by state policies often developed in a national context. Scholars were more likely to be involved in national associations, such as the *DMG,* than in international organisations. The editors of most

[77] Jessen, Ralph and Jakob Vogel, 'Die Naturwissenschaften und die Nation: Perspektiven einer Wechselbeziehung in der europäische Geschichte,' in: Jessen, Ralph and Jakob Vogel (eds.), *Wissenschaft und Nation in der europäische Geschichte*, Campus, Frankfurt, 2002, 7–40. 22.

scholarly journals preferred to publish contributions by their compatriots in the national language. And, even though some scholars attracted a high number of foreign pupils, most students chose to study and pursue an academic career in their country of birth.[78]

I should note that this emphasis on the national context of scholarship does not imply the absence or insignificance of international academic networks. The development of psychology as an academic discipline in the United States, for instance, was decisively shaped by former students of Wundt. In the late 20th century, half of America's psychologists could still claim to be descendants of Wundt's teachings.[79] Another example of the international character of scholarship is provided by Behring's cultivation of strong ties with researchers at the Parisian *Institut Pasteur*.[80] Compared to the other disciplines discussed in this study, 19th century orientalism had a very strong international orientation.[81] The description of the collaboration on De Goeje's al-Ṭabarī edition by an international consortium of scholars, mentioned in Chapter 1, further illustrates this quality.

Of course, assessments of scholarly virtues were not made in only one location; this study could have focused on any European country to contribute to our understanding of them. The emphasis on Germany is attractive, however, for a couple of reasons. In the first place, all of the main 19th century developments in the organisation of scholarship can also be found in German academia. These developments included, but were not limited to, the founding of professional societies, a strong growth in the number of scholarly journals, the ever more frequent collaboration between industry and university, a continuous increase in the number of students and teachers, and the growing importance of new academic spaces, such as seminars and laboratories.[82]

In addition, German universities, research institutes and scholars were held in high regard, around the world. German Arabists, for example, were the single largest group of scholars participating in De Goeje's al-Ṭabarī consortium. The international appreciation of Wundt's work is illustrated by the large number of international students who flocked to Leipzig. The influence of Koch's work

[78] Examples of university teachers who attracted a large number of foreign students include the Paris orientalist Antoine Isaac Sylvestre de Sacy and Wilhelm Wundt. Sylvestre de Sacy influenced a generation of German arabists, among whom we find Heinrich Leberecht Fleischer. Wundt taught a large number of students from the United States. See Marchand, Suzanne L., *German Orientalism in the Age of Empire*, 121 and Boring, Edwin G., *A History of Experimental Psychology*, Chapters 18 and 21.
[79] Hillix, William A. and James W. Broyles, 'The Family Tree of American Psychologists,' in: Bringmann, Wolfgang G. and Ryan D. Tweney (eds.), *Wundt Studies: A Centennial Collection*, Hogrefe, Toronto, 1980, 422–434. 433.
[80] Linton, Derek s., *Emil von Behring: Infectious Disease, Immunology, Serum Therapy*, American Philosophical Society, Philadelphia, 2005. 190.
[81] The case for the international clout of German orientalism is most explicitly made in: Mangold, Sabine, *Eine "weltbürgerliche" Wissenschaft*, 296–298. The book's title translates as 'A Cosmopolitan Discipline.'
[82] For example, see Charle, Christophe, 'Patterns,' in: Rüegg, Walter (ed.), *A History of the University in Europe*, Volume III, Universities in the Nineteenth and Early Twentieth Centuries (1800–1945), Cambridge University Press, Cambridge, 2004, 33–80.

is illustrated by the fact that he is often mentioned in the same breath as foreign luminaries, such as Joseph Lister and Louis Pasteur.[83]

Finally, the well-maintained and accessible archives and university libraries in Germany made it highly attractive to work on the history of German scholarship. The archives of the Prussian Ministry of Education deserve a special mention here. The fact that, for a long time, this influential ministry was managed by a single official — the aforementioned Friedrich Althoff — whose papers have been well-preserved, was highly instrumental in studying the relationship between state and academia. As the following section shows, the accessibility of the well-maintained collections at a number of universities, libraries and archives was equally indispensable for this study.

Primary sources

The case studies in this book are largely based on the examination of a large number of primary sources. Correspondence proved to be indispensable for a better understanding of the often privately shared assessments of virtue. In the case of Nöldeke, some of his correspondence has already been published.[84] Most of his letters, however, are preserved in various archives. At Leiden University Libraries, I consulted his correspondence with Michael Jan de Goeje and Christiaan Snouck Hurgronje, who was a student of both De Goeje and Nöldeke. Most of Nöldeke's correspondence with De Goeje is being preserved in neatly tagged folders.[85] A significant number of Nöldeke's letters, however, is stored in the folders that contain De Goeje's communications about his al-Ṭabarī edition.[86] Fleischer's letters to Nöldeke have been retrieved from his papers at the university library in Tübingen.[87] I also examined the papers of Ignaz Goldziher, which contain letters from Nöldeke as well as from other colleagues, such as Becker and De Goeje.[88] In addition, I consulted the *DMG* archives in Halle, which allowed for a closer look at both the society's inner workings and Nöldeke's role in it.[89] And, last but not least, I analysed all of Nöldeke's more than 100 book reviews in the *Literarische Centralblatt* between 1871 and 1880.

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[83] Gradmann, Christoph, *Krankheit im Labor: Robert Koch und die medizinische Bakteriologie*, Wallstein, Göttingen, 2005. 15.
[84] Koningsveld, Pieter S. van (ed.), *Orientalism and Islam: the letters of C. Snouck Hurgronje to Th. Nöldeke from the Tübingen University Library*, Documentatiebureau Islam-Christendom, Leiden, 1985; Maier, Bernhard (ed.), *Gründerzeit der Orientalistik: Theodor Nöldekes Leben und Werk im Spiegel seiner Briefe*, Ergon, Würzburg, 2013.
[85] The correspondence with De Goeje can be found at: Leiden University Library (hereafter LUL): BPL: 2389. Nöldeke's letters to Snouck Hurgronje can be found at: LUL: Or. 8952 A: 754–772.
[86] LUL: Or. 5585e and LUL: Or. 5585f.
[87] Universitätsbibliothek Tübingen (hereafter UBT): Md 782 A 68.
[88] Magyar Tudományos Akadémia Könyvtár Információs Központ (Library and Information Centre of the Hungarian Academy of Sciences, hereafter MTAK), https://konyvtar.mta.hu/.
[89] Universitätsarchiv Halle-Wittenberg (hereafter UAHW) Rep. 90:70 and 90:67.

The only part of Wundt's correspondence that has been published consists of his letters to and from Kraepelin.[90] However, scans of a large part of his correspondence kept at the university archives in Leipzig have been made available online.[91] I transcribed additional material that has not been made available in this way, at the archive itself.[92] This material contains letters exchanged between Wundt, his publisher and his former students. I also carefully read Wundt's more than 100 book reviews in the *Literarische Centralblatt* in the 1870s. The chapter that discusses these reviews is preceded by one that, among other things, takes a closer look at the editorial practices at the *Centralblatt*. This section is largely based on the correspondence of the *Centralblatt*'s long-time editor Friedrich Zarncke, which I consulted at the university library in Leipzig.[93] These papers contain Zarncke's correspondence with a large number of reviewers as well as with his publisher Eduard Avenarius.

The bacteriological case studies are based on extensive archival research, as well. A large number of letters to and from Koch have been preserved at his old research institute, today known as the *Robert Koch-Institut*.[94] This material was complemented with letters of Koch, Behring and Ehrlich, kept in the Ludwig Darmstaedter collection at the *Staatsbibliothek* in Berlin.[95] The *Staatsbibliothek* also stores the correspondence of Behring's collaborator Erich Wernicke.[96] These provide a valuable addition to the other material, because Behring developed a personal relationship with Wernicke that was closer than with any of his other colleagues. An even larger number of Behring-related material has been scanned and made available online by the University of Marburg.[97] This source has been especially important for consulting the correspondence between Behring and the paediatrician Otto Heubner, who tested his diphtheria blood serum in the 1890s.

Because of the Prussian government's far-reaching interest in medical research, a large amount of information about the careers of Koch, Behring and Ehrlich can be found among the Althoff papers at the *Geheimes Staatsarchiv Preußischer Kulturbesitz* (Prussian Secret State Archives). A large number of folders contains either correspondence between these men or documents in which their

[90] Steinberg, Holger (ed.), *Der Briefwechsel zwischen Wilhelm Wundt und Emil Kraepelin: Zeugnis einer jahrzehntelangen Freundschaft*, Hans Huber, Bern, 2002.
[91] https://home.uni-leipzig.de/wundtbriefe/viewer.htm.
[92] Universitätsarchiv Leipzig (hereafter UAL): Nachlass Wilhelm Wundt: Signatur: NA Wundt.
[93] Universitätsbibliothek Leipzig (hereafter UBL): Nachlass 249.
[94] An overview of Koch's papers in Berlin can be found in: Münch, Ragnhild, *Robert Koch und sein Nachlaß in Berlin*, De Gruyter, Berlin, 2003.
[95] For Koch, see Sammlung Darmstaedter in der Staatsbibliothek zu Berlin (hereafter Slg. Darmstaedter), 3b 1882. For Behring, see Slg. Darmstaedter, 3a 1890 (5). For Ehrlich, see Slg. Darmstaedter 3a 1875 (4).
[96] Staatsbibliothek zu Berlin (hereafter StaBi), Nachlass 156.
[97] https://www.uni-marburg.de/fb20/evbb/behring-digital.

research institutes are discussed.[98] Althoff was not, however, exclusively interested in medical research. His papers also include reports about the Seminar for Oriental Languages in Berlin and evaluations of the work of university appointees in various other disciplines.[99] His papers contain a large number of informal reports about the day-to-day operation of faculties and research institutes, complemented with private discussions about these findings between Althoff and his most trusted advisors. These materials provide both a glimpse of scholars' everyday life in 19th century Germany and a closer look at the entanglement of virtue assessments and appointment policies.

The reliance on such a wide range of archival material raises the question if any generalisable conclusions can be drawn from such a variety of sources. If I would have limited myself to listing scattered references to scholarly virtue, I would most likely have ended up with nothing more than a disjointed inventory of value judgements, anecdotes and more or less widespread ways of assessing the challenges of an academic career. Such findings might not have supported any generalisable conclusion about the assessment of virtue among 19th century scholars. The only conclusion that could have been drawn from such a list would have been that there are many significant differences between all the individuals, disciplines and institutions included in this study. Its aim, however, was more ambitious and actually benefited from this wide variety of sources.

As mentioned above, I was primarily interested in assessments of the way in which different virtues relate to each other. However, bringing the relationships between a variety of virtues to light was no easy feat; when people have no objections to each other's conduct, they rarely make explicit references to virtue or vice. Disagreements about such issues only become visible in scenarios of actual or potential conflict.[100] And conflict may arise whenever scholars find themselves in a position of having to pass judgement on each other's work or character. This study, therefore, focuses on situations in which judgement is encouraged or even required; for example, in the

[98] For these pieces of correspondence, see Geheimes Staatsarchiv Preußischer Kulturbesitz (hereafter GStA PK): VI. HA, Nl Althoff, F. T., No. 668, Behring-Bellermann; VI. HA, Nl Althoff, F. T., No. 709, Ehrenberg-Ehrlich; VI. HA, Nl Althoff, F. T., No. 801, Koban-Kögel. For documents about these men's research institutes, see GStA PK: VI. HA, Nl Althoff, F. T., No. 325, v. Behring. Heilseruminstitut. Briefe v. Behrings; VI. HA, Nl Althoff, F. T., No. 326, v. Behring. Heilseruminstitut. Allgemeine Briefe; VI. HA, Nl Althoff, F. T., No. 313, Das Kochsche Tuberkulin; VI. HA, Nl Althoff, F. T., No. 343, Kochsches Institut für Infektionskrankheiten; VI. HA, Nl Althoff, F. T., No. 346, Diphterie-Kontrollstation Berlin. Institut für Serumforschung Steglitz. Institut für experimentelle Therapie Frankfurt/Main.

[99] See GStA PK: VI. HA, Nl Althoff, F. T., No. 156, Orientalisches Seminar, Lehrer, Lehraufträge; VI. HA, Nl Althoff, F. T., No. 159, Orientalisches Seminar: Diversa; VI. HA, Nl Althoff, F. T., No. 112, Mediziner (Beurteilungen); VI. HA, Nl Althoff, F. T., No. 118, Philosophen (Beurteilungen); VI. HA, Nl Althoff, F. T., No. 124, Semitisten (Beurteilungen).

[100] Herman Paul has also suggested that it might be 'worthwhile to study clashes and conflicts between epistemic virtues', in: Paul, Herman, 'Performing history: how historical scholarship is shaped by epistemic virtues,' *History and Theory*, 50(1), 2011, 1–19. 13.

editorial decision-making process and the practice of writing letters of recommendation for vacant professorial chairs. Private correspondence offers yet another opportunity for criticising the work of a colleague — as well as for sharing some juicy scholarly gossip.[101] It is therefore important to look at a wide variety of sources in order to identify the many tensions that shed light on different assessments of virtue. Exactly this divergence of assessments allows me to identify moral economies that can be described as balanced systems shaped by the continuous interplay between potentially conflicting virtues.

Cultures of scholarship

I used a cultural history approach in my assessment of the delicate balance of scholarly virtues. Although the term 'culture' is often used by historians and social scientists, its meaning is not self-evident. William Sewell points out that we can distinguish at least 'two fundamentally different meanings' of the term.[102] Culture can be understood as 'a theoretically defined category […] that must be abstracted out from the complex realities of human existence'. In this meaning, the word culture belongs to 'a particular academic discipline or subdiscipline' and invites an emphasis on culture as an analytical concept instead of a focus on a variety of cultures. The second meaning refers to culture as 'a concrete and bounded world of beliefs and practices'. The latter assumes the existence of different cultures characterised by their own specific set of beliefs and practices. This study follows the example of sociologists and historians of scholarship who have worked within frameworks that fit this second meaning, with some qualifications.

The first qualification relates to Sewell's description of cultures as 'concrete and bounded worlds'. The cultures examined in this study are primarily shaped by networks of scholars working in specific disciplines. This, however, does not imply that their world is so bounded that they are isolated from their colleagues working in other disciplines and the world outside the university. Still, large parts of this study focus on the disciplinary networks that facilitated the development of shared conceptions of scholarly virtues. Some chapters, however, pay attention to the way in which most scholars were involved with a wide variety of people and institutions.

The second qualification concerns Sewell's use of the word 'belief'. Even though this word can refer to all kinds of ideas and convictions, I interpret it as primarily referring to shared conceptions

[101] On the function of gossip among scholars, see Engberts, Christiaan, 'Gossiping about the Buddha of Göttingen: Heinrich Ewald as an unscholarly persona,' *History of Humanities*, 1(2), 2016, 371–385.
[102] Sewell, William H., Jr., 'The Concept(s) of Culture,' in: Bonnell, Victoria E. and Lynn Hunt (eds.), *Beyond the Cultural Turn: New Directions in the Study of Society and Culture*, University of California Press, Berkeley (CA), 1999, 35–61. 39.

of virtue. In the context of this study, Sewell's description of cultures as 'concrete and bounded worlds of beliefs and practices' is therefore the starting point of a cultural history of scholarship that examines disciplinary networks of scholars characterised by attempts to assess widely recognised virtues.

Sociologists of knowledge were the first to study the history of scholarship along these lines. In the late 1970s and early 1980s, they discovered the laboratory as a distinctive environment in which researchers developed common conceptions of virtue. Bruno Latour and Steven Woolgar's famous study of the Salk Institute for Biological Studies and Karin Knorr Cetina's analysis of the workings of a large research centre in Berkeley were early and influential examples of this approach.[103] Historians of science soon followed suit. Steven Shapin's and Simon Schaffer's work on Robert Boyle's air-pump experiments is probably the most famous example.[104] Other early studies of the culture of experimental science include Peter Galison's *How Experiments End* and a wide-ranging volume edited by David Gooding, Trevor Pinch and Simon Schaffer.[105] During the subsequent decades, many more studies appeared that claimed to build on the cultural approach to understanding scholarship pioneered by scholars, such as Latour, Woolgar, Shapin and Schaffer.[106]

Initially, historians of science limited their efforts to understand cultures of scholarship to the study of the experimental sciences. In recent years, however, more and more studies have been published that offer a cultural account of the history of the humanities. Historians, in particular, have self-consciously responded to the challenges and opportunities offered by the application of the questions and methods of the cultural history of the experimental sciences to their own discipline. Paul, for example, refers to Knorr Cetina's concept of 'epistemic cultures' when making his case for the study of the virtues and practices of the historians of the past.[107] Kasper Eskildsen and Phillip Müller draw attention to the way in which the archives and the seminar at the professor's home shaped the historical discipline in the 19th century.[108] Jo Tollebeek's attempt to write an

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[103] Latour, Bruno and Steven Woolgar, *Laboratory Life: The Construction of Scientific Facts*, Sage, Beverly Hills (CA), 1979 and Knorr Cetina, Karin, *The Manufacture of Knowledge: An Essay on the Constructivist and Contextual Nature of Science*, Pergamon, Oxford, 1981.

[104] Shapin, Steven and Simon Schaffer, *Leviathan and the Air-Pump: Hobbes, Boyle, and the Experimental Life*, Princeton University Press, Princeton (NJ), 1985.

[105] Galison, Peter, *How Experiments End*, University of Chicago Press, Chicago (IL), 1987 and Gooding, David, Trevor Pinch and Simon Schaffer (eds.), *The Uses of Experiment: Studies in the Natural Sciences*, Cambridge University Press, Cambridge, 1989.

[106] Examples of influential studies by social scientists include: Pickering, Andrew (ed.), *Science as practice and culture*, Chicago University Press, Chicago (IL), 1992 and Knorr Cetina, Karin, *Epistemic Cultures: How the Sciences Make Knowledge*, Harvard University Press, Cambridge (MA), 1999. Other examples of influential historical studies include: Kohler, *Lords of the Fly* and Daston and Galison, *Objectivity*.

[107] Paul, Herman, 'Performing history,' 11.

[108] Eskildsen, Kasper Risbjerg, 'Inventing the archive,' 19; Müller, Philipp, 'Geschichte machen. Überlegungen zu lokal-spezifischen Praktiken in der Geschichtswissenschaft und ihrer epistemischen Bedeutung im 19. Jahrhundert. Ein Literaturbericht,' *Historische Anthropologie*, 12(3), 2004, 415–433. 421–427.

Alltagsgeschichte based on the papers of the Belgian historian Paul Fredericq is one of the most ambitious attempts to understand the culture of 19th century historical scholarship.[109] So, even if a strong interest in a cultural history of the humanities is a relatively recent development, it is a steadily growing field.

The studies listed above describe different disciplines in different eras in different countries. Rather than summarising their myriad of findings, the following pages take a closer look at two concepts that are often used by cultural historians. These concepts are not only widely employed in cultural histories of scholarship, they are also at the analytical heart of this study. First, I reflect on the anthropological approach to the history of science that draws its inspiration from Latour, Woolgar and Knorr Cetina, followed by a closer look at the role of practices in such anthropology-inspired accounts of scholarship.

Anthropology and thick description

Most early works on the culture of scholarship by social scientists explicitly relied on the anthropological method of participant observation. In his introduction to Latour and Woolgar's *Laboratory Life,* Jonas Salk, the founder of the investigated laboratory, describes their approach as 'a kind of anthropological probe to study a scientific culture'.[110] In a similar vein, Knorr Cetina stated that she aimed to expose herself to 'the savage meaning of the scientists' laboratory action' through 'direct observation and participation'.[111] Of course, the anthropological method of participant observation is not a viable option for investigating the past. However, one scholar's reflections on the appropriate aims of anthropological research have been particularly instrumental in forging a connection between historiography and anthropology.

In a highly influential 1973 essay, Clifford Geertz argued that anthropology is essentially 'a venture in […] thick description'.[112] Culture, in Geertz's phrasing 'is not a power, something to which social events, behaviors, institutions, or processes can be causally attributed: it is a context, something within which they can be intelligibly – that is, thickly – described'.[113] The 'grand realities' of culture are understood not through abstract analyses, but through 'exceedingly extended acquaintances with extremely small matters'.[114] Geertz's call for thick description is one for attention needing to

[109] Tollebeek, *Fredericq & Zonen*.
[110] Salk, Jonas, 'Introduction,' in: Latour, Bruno and Steven Woolgar, *Laboratory Life*, 11–13. 11.
[111] Knorr Cetina, Karin, *The Manufacture of Knowledge*, 23.
[112] Geertz, Clifford, *The Interpretation of Cultures: Selected Essays*, Basic Books, New York (NY), 1973. 6.
[113] Ibid., 14.
[114] Ibid., 21.

be paid to a wide variety of everyday details in order to obtain enough contextual knowledge to make seemingly unintelligible values and practices intelligible. The appeal to collect and scrutinise large amounts of detailed information to acquire a better understanding of the past offered historians of scholarship a viable anthropology-based methodological starting point. What is more, the attention to detail and context must have felt very familiar to those historians who sympathised with the philological ethos that has long influenced historical scholarship.[115]

Historians have embraced Geertz's framework with more enthusiasm than his anthropologist peers.[116] Paul, for example, argues that his proposal to investigate epistemic virtues 'encourages thick description and careful contextualization, so as to take into account the peculiarities of practices and epistemic cultures'.[117] Galison and Warwick's reference to an ethnographer's account of a Balinese cockfight is an obvious nod to Geertz's work.[118] Nicholas Jardine and Emma Spary likewise emphasise the importance of Geertz's work to the history of scholarship.[119] Others do not mention Geertz or thick description, but nonetheless and unequivocally place themselves in the anthropological tradition. Shapin and Schaffer state that they approach the 'culture of experiment as […] a stranger approaches an alien society'.[120] In his book about Fredericq — with the telling subtitle *An anthropology of modern historiography* — Tollebeek explicitly mentions the work by Latour and Woolgar as well as Shapin and Schaffer's *Leviathan and the Air-Pump* as inspirational examples.[121] The thick descriptions in Kohler's study of the moral economy of fruit fly genetics, finally, are also indebted to Geertz's example.

One criticism that is often aimed at this type of study concerns its tendency to focus narrowly on synchronic accounts of the past at the expense of diachronic narrative. One author argues that Geertz's conception of culture as 'interlaced and mutually sustaining systems of meaning' encourages analyses 'in which time is *suspended* or *abolished* analytically, so that things that actually occur in the flow of time are treated as part of a uniform moment'.[122] The anthropology-inspired work by historians of scholarship, generally, turns out to display a synchronic character, as well.

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[115] For example, see Paul, Herman, 'Weber, Wöhler, and Waitz: Virtue Language in Late Nineteenth-Century Physics, Chemistry, and History,' in: Dongen, Jeroen van and Herman Paul (eds.), *Epistemic Virtues in the Sciences and the Humanities*, Springer, Cham, 2017, 91–107. 94–95.
[116] Sewell Jr., William H., 'Geertz, Cultural Systems, and History: From Synchrony to Transformation,' in: Ortner, Sherry B. (ed.), *The Fate of "Culture": Geertz and Beyond*, University of California Press, Berkeley, 1999, 35–55. 36.
[117] Paul, Herman, 'Performing history,' 15.
[118] Galison, Peter and Andrew Warwick, 'Introduction: Cultures of Theory,' *Studies in History and Philosophy of Modern Physics*, 29(3), 287–294. 290.
[119] Jardine, Nicholas and Emma Spary, 'The natures of cultural history,' in: Nicholas Jardine, James A. Secord and Emma C. Spary (eds.), *Cultures of Natural History*, Cambridge University Press, Cambridge, 1996, 3–13. 7.
[120] Shapin, Steven and Simon Schaffer, *Leviathan and the Air-Pump*, 6.
[121] Tollebeek, Jo, *Fredericq & Zonen*, 25–27.
[122] Sewell Jr., William H., 'Geertz, Cultural Systems,' 40.

This study largely fits that same mould. The overview of assessments of scholarly virtue provides the building blocks for a largely synchronic cross-disciplinary comparison. This perspective is warranted by the fact that the virtues and associated practices analysed in this study continued to shape scholarly culture throughout the examined period. A more diachronic perspective would be an interesting subject for follow-up research. However, the epilogue already shares some tentative reflections on questions of stability and change, over time.

Finally, I would like to emphasise once more that the common references to Geertz and thick description do not amount to a carefully defined and broadly shared historical anthropological approach. This study is nevertheless strongly influenced by one feature shared by all the authors mentioned above, namely that of an emphasis on a contextualising approach to historical research in order to draw attention to the everyday activities of scholarship. This approach is most clearly exemplified in Tollebeek's careful investigation of Fredericq's working life, which is based on the latter's record of his daily routines in his diary. This study also pays ample attention to the everyday contexts that shaped the shared — and sometimes contested — conceptions of virtue that moulded scholars' working lives.

Practices of scholarship

A second recurring concept in cultural studies of scholarship is that of an emphasis on practices. Even if these studies primarily seek to uncover intellectual, moral and social values, they often try to understand these norms through an analysis of what people do. Latour and Woolgar claim to use 'the notion of anthropological strangeness' to 'depict the activities of the laboratory as those of a remote culture'.[123] Knorr Cetina argues that she uses culture to refer 'to the aggregate patterns and dynamics that are on display in expert practice […]. Culture […] foregrounds the machineries of knowing composed of practices'.[124] Few people are as adamant in their conviction of the importance of a practice turn in science studies as the sociologist Andrew Pickering, who states that '[...] all of the stock appreciations of scientific knowledge — as objective […], as relative to culture […], as relative to interests […] — can be translated into particular understandings of scientific practice'.[125]

[123] Latour, Bruno and Steven Woolgar, *Laboratory Life*, 36.
[124] Knorr Cetina, Karin, *Epistemic Cultures*, 8, 10.
[125] Pickering, Andrew, 'From Science as Knowledge to Science as Practice,' in: Pickering, Andrew (ed.), *Science as practice and culture*, University of Chicago Press, Chicago, 1992, 1–26. 7.

Historians of scholarship have also adopted this emphasis on practices. Shapin and Schaffer claim that they 'want to understand the nature and status of experimental practices and their intellectual products'.[126] Jardine and Spary set out 'to portray natural history as the product of conglomerates of people, natural objects, institutions, collections and finances, all linked by a range of practices'.[127] Sita Steckel is another enthusiastic proponent of a practice-based history of science, arguing that the approach promises a better understanding of academic cultures through more appreciation of the various aspects and contexts of the conduct by historical agents.[128] The interest in practices also spread to the history of the humanities. Müller aims to explore epistemic practices among 19th century historians, in the light of local perspectives.[129] Paul argues that the epistemic virtues in which he is interested 'are taught, learned and exercised in practices rather than disciplines'.[130] Tollebeek, finally, argues that the study of daily practices promises unique insights into the epistemological, ethical, aesthetic, ideological and emotional commitments of scholars.[131]

A similar focus on practices has also been advanced by scholars interested in the gendered character of scholarship. Ludmilla Jordanova, for example, describes gender as 'a cultural product […] assigned […] through social and cultural practices'.[132] With an explicit nod to Geertz, she argues that a major advantage of using the concept of gender is that it allows for the drawing of 'big pictures [that] come from a rich sense of context, from an appreciation of how science, in its broadest senses, inhabits and is produced by its milieux'.[133] In the introduction to a volume on gender and science, Marina Benjamin also emphasises the importance of paying close attention to context and 'historically specific [sets] of relationships between women and science'.[134] Bonnie Smith combines gender and practices even more explicitly in a paper on the centrality of seminars and archival research to 19th century academic historians. She states that 'a rigidly adhered-to set of practices' was foundational to the historical profession and argues that these practices 'yielded distinctive ways of imagining historical work, ways that included highly gendered fantasies, that

[126] Shapin, Steven and Simon Schaffer, *Leviathan and the Air-Pump*, 3.
[127] Jardine, Nicholas and Emma Spary, 'The natures of cultural history,' 8.
[128] Steckel, Sita, 'Einleitung: Akademische Wissenkulturen zwischen Mittelalter und Moderne,' in: Kintzinger, Martin and Sita Steckel (eds.), *Akademische Wissenskulturen: Praktiken des Lehrens und Forschens vom Mittelalter bis zur Moderne*, Schwabe, Basel, 2015, 1–5. 2.
[129] Müller, 'Geschichte machen,' 419.
[130] Paul, Herman, 'Performing history,' 11.
[131] Tollebeek, Jo, 'L'historien quotidien: pour une anthropologie de la science historique moderne,' *Schweizerische Zeitschrift für Geschichte*, 61(2), 2011, 143–167. 153.
[132] Jordanova, Ludmilla, 'Gender and the historiography of science,' *British Journal for the History of Science*, 26, 1993, 469–483. 482.
[133] Ibid., 472.
[134] Benjamin, Marina, 'Introduction,' in: Benjamin, Marina (ed.), *Science and Sensibility: Gender and Scientific Enquiry*, 1780–1945, Basil Blackwell, Oxford, 1991, 1–23. 9.

also enticed people into the profession and shaped its nature'.[135] In these gendered fantasies, common practices of scholarship were conceptualised as manifestations of quintessentially masculine virtue. Archival research was, for example, presented as a challenge involving the sort of suffering and torture that only a strong and courageous man could handle.[136]

Most of these authors assume that the meaning of the word 'practice' is somehow self-evident. However, Victoria Bonnell and Lynn Hunt notice that '[...] "practice" can be as ambiguous as culture'.[137] Most of the uses of the term by historians of scholarship fit Joseph Rouse's tentative characterisation of practices as 'patterns of activity in response to a situation'.[138] This description suggests that studies of scholarly practices should not deal with everything that their protagonists do, but only with those acts that conform to some sort of pattern. The practices investigated in this study were selected on the basis of their contribution to patterns of scholarly evaluation. This patterned character also suggests another quality of practices; namely that they 'exist only through being continually reproduced'.[139] Because every instance of reproduction allows for some deviation from the established pattern, practices are subject to gradual change. This susceptibility to change through ever-changing reproduction suggests that the values of individual agents can shape existing practices.

An understanding of practices as patterns of activity, therefore, combines two perspectives on agency. In the first place, this characterisation underlines that the scope of action by individual agents is shaped by existing patterns. This is reflected in this study's exploration of acts that fit well-established means of assessing scholarship, such as editorial decision-making and writing letters of recommendation. Secondly, the characterisation of practices as patterns of activity draws attention to the extent to which agents can shape these patterns. This is reflected in this study's emphasis on the examination of the way in which virtues relate to each other on the level of day-to-day scholarly work. Since constellations of commitment are subject to change, individual agents are in a position to continuously reassess the relative weight of different virtues. Against this background, all the case studies below illustrate the agency of scholars whose assessments of virtue

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[135] Smith, Bonnie G., 'Gender and the Practices of Scientific History: The Seminar and Archival Research in the Nineteenth Century,' *American Historical Review*, 100(4), 1995, 1150–1176. 1150.
[136] Ibid., 1173.
[137] Bonnell, Victoria E. and Lynn Hunt, 'Introduction,' in: Bonnell, Victoria E. and Lynn Hunt (eds.), *Beyond the Cultural Turn: New Directions in the Study of Society and Culture*, University of California Press, Berkeley (CA), 1999, 1–32. 12.
[138] Rouse, Joseph, *Engaging Science: How to Understand Its Practices Philosophically*, Cornell University Press, Ithaca (NY), 1996. 26.
[139] Ibid.

can be understood as efforts to shape their own careers, the careers of their colleagues, and their institutional surroundings.

The structure of this study

The first four chapters of this study each build on the examination of one particular practice. Chapter 1 explores personal correspondence between scholars, Chapter 2 looks at considerations of editors of scholarly journals, followed by Chapter 3 that looks at the evaluative content of published book reviews. Finally, Chapter 4 deals with letters of recommendation for professorial appointments. Admittedly, these are not the only practices that would have invited 19th century German scholars to assess their peers' virtues. An investigation of peer interaction at conferences or a closer look at the founding and functioning of learned societies would have fitted in.[140] I chose, however, to focus on those practices that are most likely to convey the voice of individual scholars. In this light, a focus on conferences or learned societies would be questionable. The elements of these environments that would be of most interest to this study would be the informal exchanges between attendees and members. However, unlike correspondence, these conversations were not preserved for posterity. Therefore, both conferences and learned societies are addressed only when they are discussed in any of the main sources used in this study.

Chapter 1 explores how scholars have commented on each other's work before that work would be shared with a broader audience. This entails very disparate practices, such as the pre-publication reviewing of books and journal contributions and the testing of newly developed medical drugs. It shows how a relationship of trust between individual scholars created the conditions that allowed for informal criticism. However, it also shows that there are significant differences in how philologically inclined orientalists, experimental psychologists and bacteriologists deal with their colleagues' work. These differences can be understood as the result of specific characteristics of these disciplines. A very salient characteristic of orientalist philology, for example, is its reliance on solitary work routines. Experimental psychology, on the other hand, is typically the product of the

[140] Some interesting studies about these issues are already available. For a closer look at international conferences in the 19th century, see Everett-Lane, Debra Adrienne, 'International Scientific Congresses, 1878–1913 : Community and Conflict in the Pursuit of Knowledge' (diss., Columbia University, 2004); Feuerhahn, Wolf and Pascale Rabault-Feuerhahn (eds.), *La Fabrique internationale de la science. Les congrès scientifiques internationaux de 1865 à 1945. Revue germanique internationale*, 12, 2010. Examples of studies of very different German learned societies include: Hoffmann, Dieter, Birgit Kolboske and Jürgen Renn (eds.), *"Dem Anwenden muss das Erkennen vorausgehen" Auf dem Weg zu einer Geschichte der Kaiser-Wilhelm-/Max-Planck-Gesellschaft*, Edition Open Access, Berlin, 2015; Preissler, Holger, 'Die Anfänge der Deutschen Morgenländischen Gesellschaft,' *Zeitschrift der Deutschen Morgenländischen Gesellschaft*, 145(2), 1995, 241–327.

social setting of the laboratory. Bacteriologists also face a typical challenge; more than anyone else, they have to deal with high expectations about the applicability of their findings.

Chapter 2 takes a closer look at the relationship between researchers and the editors of scholarly journals. The case studies draw attention to the fact that the editors were not simply making sure that only the best scholarship was published. Editorial decisions were shaped by the interests and expectations of at least three groups of stakeholders, namely those of publishers, audiences and contributors. The journals analysed in this chapter (*Philosophische Studien*, *Zeitschrift der Deutschen Morgenländischen Gesellschaft* and *Literarische Centralblatt)* also differ in some notable aspects that cannot be reduced to disciplinary differences. The *Philosophische Studien* is characterised by the fact that the journal was the brain child of one omnipotent editor, Wilhelm Wundt, who did not have to worry about his journal's profitability. The *Zeitschrift* was shaped by the fact that it was the official organ of the *DMG*, a society that aimed to represent all German orientalists. The *Centralblatt*, finally, was characterised by its continuous struggle for commercial success.

Chapter 3 investigates published book reviews. At least one modern-day author stated that a close look at such reviews would be of interest to anyone trying to understand assessments of good scholarship, arguing that '[...] readers of published book reviews are given various kinds of judgements that they do not find in scholarly articles that critique other people's work. How good is the writing style? Is the prose lucid? Is the work well organised? Are there typos?'[141] This chapter analyses the book reviews that Nöldeke and Wundt wrote for the *Literarische Centralblatt,* in the 1870s. This offers an overview of the qualities of individual scholars and their works that merited praise and criticism. Because Nöldeke wrote about both theology and philology, while Wundt reviewed both medical and philosophical works, it is possible to make a complex comparison between disciplines. This comparison suggests that reviews in different disciplines could be shaped by a variety of assessments of virtue.

Chapter 4 takes a closer look at the letters of recommendation that were sent to the Ministry of Education, in order to influence its appointment decisions. The case studies in this chapter are largely based on the correspondence of Friedrich Althoff. Behring's troubled appointment in Marburg is one of the cases examined, in addition to discussions about the sometimes controversial appointment of members of the Wundtian school of psychology to philosophical chairs. The discussion of these and other cases shows how hiring decisions were based, only to a limited extent, on the ideals of academic excellence that could be demonstrated in scholarly publications. In addition, these case studies show that, even if ideals of scholarly excellence and sociability were

[141] Shatz, David, *Peer Review: A Critical Inquiry*, Rowman & Littlefield, Lanham (MD), 2004. 111.

shared across disciplines, individual faculties could value very specific virtues. An appointee at a medical faculty was expected to be a good manager of the university clinic, whereas an appointee at a philosophical institute could expect some concerns about the supposed morality of his publications and personal character.

Chapter 5 differs from the preceding ones in that it does not examine yet another type of practice. Instead, it sets out the central argument of this study by bringing together the assessments of scholarly virtue discussed in the previous chapters and presenting these as the constituent parts of one moral economy. I argue that this moral economy shapes a wide variety of relationships between individual scholars, academic institutions and the outside world.

The study concludes with an epilogue. This epilogue does not draw further conclusions about the moral economy of late 19th and early 20th century German scholarship. Instead, it offers reflections on how this moral economy translates to a modern-day setting. After all, contemporary academics still recognise most 19th century virtues of scholarship and most of the practices described in this study still exist today, in some form or other; the majority of researchers still engage in private correspondence with their peers; many of today's academics continue to be involved with journals and their editors; book reviews still provide ample opportunities for praise and criticism; and it is still rare for scholars to be appointed to any prestigious academic position without the support of their peers. Therefore, a better understanding of the moral economy of scholarship of the past might help us to make more sense of the workings of modern-day academia, too.