

Scientific Societies and the Professionalization of Knowledge:
A Long-Term History Based on Three Case Studies

Research Thesis
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Abstract

Historians of science and knowledge traditionally identified a ‘professionalization of science’ process – the gradual emergence of a dichotomy between the hobbyist amateur and the scientific professional - somewhere in the mid-nineteenth century. While this narrative has received extensive criticism for its essentialism, teleology, and universality, it nonetheless continues to inform much historical work. This thesis introduces a new approach to professionalization. It abandons the essentialism, teleology and universalism that are usually associated with amateurism and professionalism, but it upholds amateurism and professionalism’s significance to historical experience. Thus, instead of treating amateurism and professionalism in a traditional sense, they are reconceived of as time-and-place-bound actors’ categories and as such as genuine elements of the social fabric. More specifically, professionalism in knowledge cultures is viewed as one guise of epistemic hierarchy, the set of hierarchical social relations that dictates the evaluation of knowledge on the basis of the social standing of its source rather than its intrinsic validity.

The aim of this article is to reconstruct epistemic hierarchy in a specific, local context. It consists of three case studies that, taken together, trace the evolution of epistemic hierarchy in the particular setting of the Zeeuwsch Genootschap der Wetenschappen, a scientific society in Middelburg, the Netherlands. For each case, the epistemic hierarchy in which an individual ZG-member operated, is studied. These members are, respectively, lawyer and historian Samuel de Wind (1793-1859), physician Johannes Cornelis de Man (1818-1909), and the teacher and amateur malacologist Cornelis Brakman (1879-1955). A surprising image emerges from the case studies, one with two main characteristics. First, professionalism did not materialize until later than the traditional narrative suggests, namely in the early twentieth century. Second, this emergence of professionalism signified an increase in the rigidity of epistemic hierarchy. Although both these findings apply primarily to the case of the Genootschap, the article ends by suggesting that they may have a wider relevance.

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Preface and Acknowledgements

The conceptualizing and writing of this thesis started in February of 2018, about half a year ago. However, my connection to its topic goes back much further. In the spring of 2015, I took the history of science course taught by Ad Maas at University College Roosevelt, for which I wrote a paper about the nineteenth-century history of the Zeeuwsch Genootschap der Wetenschappen (ZG from now on). Ad then proposed to me to continue to work together on ZG-related topics, which resulted in our mutually coordinated presentations at the *Gewina* conference in the summer of 2017, as well as in the initiation of this thesis, with him as the daily supervisor. Overall, Ad has provided me with, and guided me through, several amazing opportunities in the past years.

In the same spring semester of 2015, I also wrote my bachelor's thesis about the anthropological contributions of ZG-member Dr. Johannes Cornelis de Man, who, albeit in a different light, is also among the topics of the present thesis. This topic was suggested to me by my supervisor Arjan van Dixhoorn, who helped me develop the research approaches that I've continued to apply to the ZG, and, moreover, who has continued to support me with advise and commentary, including during the writing of this thesis.

For all these reasons, I owe much gratitude to Ad and Arjan. Besides thanking them, there is another factor that shaped the research process and therefore deserves an elaborate mention. The ZG's journal, *Archief*, will be publishing a commemorative issue in celebration of the society's 250th anniversary in 2019. Arjan, who is part of the editorial board of that issue, approached me – already before I had begun my thesis research - to contribute an article. I accepted his offer and decided in advance that my contribution would be a modification and translation (to Dutch) of the outcome of this thesis. This version of the thesis is now also almost finished and has already entered the editing process. I thus want to thank the editorial board of *Archief* for offering me a platform to publish my findings before I had even started my research.

I also thank David Baneke for being the official supervisor; Rijksmuseum Boerhave for providing a workplace and in-house assistance each Wednesday (and, again, Ad for arranging that opportunity); the Leiden University Library where much of this thesis was written; the Zeeuws Archief and the Zeeuwse Bibliotheek where much of its sources were consulted; Bert Theunissen for being the second reader; my fellow HPS students, with whom I could always exchange experiences; and, last but not least, my parents, brother, and friends for their help and support through some of the frustrations that a project like this inevitably entails.

Finally, one remark about a linguistic choice I made: I decided to leave almost all Dutch names and quotations untranslated. This is because, first, there are no readymade translations available, and providing my own unchecked translations might raise suspicions of misrepresentation. Second, I anticipate that everybody that will read this thesis will know Dutch, and, if not, I think that the text will still be perfectly intelligible even if its snippets of Dutch are not.

Leiden, September 9, 2018

Introduction

The anthropometric publication *The Races of Europe* (1899), by the American economist and racial theorist William Z. Ripley, contains a reference to Dr. Johannes Cornelis de Man, one of the three individuals that are subject of this study. To thank De Man for his assistance with the chapter on the craniology (skull size typology) of Zeeland, Ripley states that: ‘Dr. De Man, of Middelburg, is also an authority upon the specially interesting district of Zeeland’.¹ This sentence indicates that, much like the current situation, *authority* played a legitimizing role in the knowledge culture of De Man’s time. As Steven Shapin explains, this kind of *epistemic authority* is not always derived from the inherent value of the knowledge expressed, but can also depend on the personal background and moral status of the knower: ‘while the irrelevance of the personal in scientific knowledge-making has been vigorously asserted at least since the seventeenth century, familiar people and their virtues have *always* been pertinent to the making, maintenance, transmission, and authority of knowledge’.² The significance of knowledge authority, in other words, implies that the validity of knowledge is not exclusively acquired through argumentation and empiricism; the reputation of its source plays an important role too. The peck order that results from this mechanism is sometimes referred to as an *epistemic hierarchy*.³ One example of an epistemic hierarchy is the dichotomy between amateurs and professionals, in which the professional is assigned more authority than the amateur on the mere basis of his or her status as a professional. A doctor’s diagnosis, for instance, carries more authority than the medical insights of a lay person.

This study takes the notion of epistemic hierarchy as its central theoretical construct. More specifically, it historicizes epistemic hierarchy by viewing it through the prism of the history of the Zeeuwsch Genootschap der Wetenschappen (Zeelandic Society for the Sciences, from now on abbreviated to ‘ZG’), a scientific society founded in Vlissingen in the province of Zeeland, the Netherlands, in 1769. The ZG still exists today, and has been located in Middelburg, Zeeland, since it moved headquarters in 1801. Within the framework of the ZG, the focus lies specifically on the meaning of the epistemic-hierarchical phenomena of *amateurism* and *professionalism* and the related constitutive process of *professionalization*. Doing this within a more general conceptual framework (epistemic hierarchy), rather than looking at the histories of these particular phenomena in isolation, eliminates the danger of anachronism, i.e., a priori projecting these categories *onto* the history. Notably, epistemic hierarchy is not merely a sub-category of general social hierarchy. Although they often develop along parallel lines, dynamics in a society’s epistemic hierarchy and developments in its social hierarchy are not necessarily causally related; sometimes they are even unequivocally contradictory. In order to make that contrast clear, this thesis also ventures to single out developments in the rigidity of epistemic hierarchy from developments in social mobility, i.e., the ability of people to move across different social strata. Hence, social mobility recurs throughout this thesis as a secondary theme.

In practice, the approach outlined above is achieved using two underlying research questions. How, first, have epistemic hierarchies evolved, viewed from the perspective of past ZG-members? And how, second, does that picture compare to the existing historiography of

¹ W.Z. Ripley, *The Races of Europe*, 295.

² S. Shapin, *The Scientific Life*, 4.

³ My use of the term epistemic hierarchy was inspired by A. Ho, *Trusting Experts and Epistemic Humility in Disability*, 102-123.

professionalization? In answering these questions, the history of the ZG provides interesting cases to study. This is because the ZG's reputation, as a non-academic knowledge institute, has been subject to change throughout the past two and a half centuries. Its past activities, in other words, can at sometimes be characterized as elitist, and at other times as ordinary; at sometimes as professional, and at other times as amateurish.

Ch. 1 – Historiographical Context and Theoretical Framework

The two research questions mentioned in the introduction demand a short reflection on the historiographical context in which this research takes place. According to a more traditional conception among historians of science, the second half of the nineteenth century was characterized by a shifting epistemic hierarchy as science and scholarship were being *professionalized*.⁴ A 1967 assertion by the American historian George H. Daniels, regarding the professionalization of American science, is a good case in point:

*Recent writers on the history of science in America generally agree that conditions underlying the pursuit of science changed drastically during the nineteenth century. By the middle of the century, the earlier pattern of gentlemanly scientific activity was rapidly becoming obsolete. The amateur was in the process of being replaced by the trained specialist – the professional who had a single-minded dedication to the interests of science. The emergence of a community of such professionals was the most significant development in nineteenth-century American science.*⁵

In a similarly emblematic way, the American historian Frank M. Turner writes about the professionalization of British science in 1978:

*From the 1840s onward the size, character, structure, ideology, and leadership of the Victorian scientific world underwent considerable transformation and eventually emerged possessing most of the characteristics associated with a modern scientific community. [. . .] By 1880 the university chemistry faculties had expanded to twenty-five professors and thirty-four other instructors. Figures for the other sciences when calculated will probably reveal similar magnitudes of expansion.*⁶

These examples support Paul Lucier's claim that professionalization was often viewed in relation to the emergence of the research university as the primary locus of knowledge practice.⁷ Particularly notable is that this development is usually recorded by historians that are primarily concerned with the history of universities, the history of academic disciplines, or the biographies of individual academics. These historians use professionalization as an element in their creation story of the modern research university.⁸

While the examples above pertain to science in the Anglo-Saxon world, the notion of professionalization has also permeated the historiography of Dutch science. Because – for better or worse - a large part of the historiography on the ZG paradigmatically embeds the society in a national context, a more extensive discussion of the professionalization narrative in Dutch historiography is appropriate. In some instances, Dutch historiography adopts the professionalization narrative explicitly. P.A.J. Caljé, for instance, contends the following

⁴ For an elaborate historiographical overview of professionalization, see R. Barton, *Men of Science*, 73-119.

⁵ G.H. Daniels, *The Process of Professionalization in American Science*, 151.

⁶ F.M. Turner, *The Victorian Conflict between Science and Religion*, 362.

⁷ P. Lucier, *The Professional and the Scientist in Nineteenth-Century America*, 699-732.

⁸ For examples of this tendency, see C. Wellmon, *Organizing Enlightenment*, 17, or D.A. Wright, *The Professionalization of History in English Canada*, 3.

concerning the second half of the nineteenth century: ‘het begrip ‘professionalisering’ wil ik gebruiken om de overgang aan te kunnen geven van een genootschapscultuur, die zich op lekenparticipatie en burgerschapsvorming richt, naar één waarin de vorming en versterking van een beroepsgemeenschap gebaseerd op specialistische kennis domineert[;] deze overgang kan men in de cultuur, in de wetenschap en in de sociale structuur van Nederland waarnemen’.⁹ Similarly, Bert Theunissen argues the following: ‘[Pieter] Harting stond weliswaar aan het begin van het professionaliseringsproces dat de natuurwetenschappen in de negentiende eeuw zouden doormaken, maar van een scheiding tussen het wetenschappelijke en het maatschappelijke was bij hem nog geen sprake’.¹⁰ Frans van Lunteren, then, asserts that ‘interessant in dit opzicht is de rol van de HBS in de professionalisering van de natuurwetenschappen[;] de HBS vervulde een brugfunctie tussen de universiteit en specifieke maatschappelijke groeperingen voor wie hoger onderwijs minder voor de hand liggend was’.¹¹ Finally, the notion of professionalization is also sometimes explicitly mentioned in the specific historiography of Dutch scientific societies. Hans Groot, for instance, devotes an entire chapter to what he views as the professionalization initiatives of the Bataviaasch Genootschap in the 1850s and 1860s.¹²

In other instances, the professionalization narrative is adopted *implicitly*, as an invisible but omnipresent interpretative framework through which other mid-nineteenth-century developments (e.g., bureaucratization, institutionalization, modernization, nation-building) are viewed. An example of this tendency can be found in Martin P.M. Weiss’ interpretation of a quote by Volkert Simon Maarten van der Willigen (1822-1878), a curator of Teylers Museum in Haarlem. Weiss asserts that ‘Van der Willigen was of the opinion that while untrained amateurs were welcome to act as the recipients of knowledge handed down to them by specialized researchers, they should not think that they were capable of participating in the actual research process, and should not imagine that they were on an equal footing with trained researchers’.¹³ That interpretation is based on the following assertion by Van der Willigen, made in an 1848 speech:

*Sterrekundige waarnemingen waren te allen tijde meer boven het bereik van velen verheven en vorderen bijzonderen toeleg; treffende natuurkundige proeven daarentegen van binnen den kring van een ieder. Terwijl nu nog een ruim veld van onderzoek en bespiegeling overblijft, houden velen zich met proefnemingen bezig en gaan op ontdekkinge uit; zij leveren onnauwkeurige waarnemingen, waar reeds de volkomenste worden gevorderd, en valsche onderstellingen, die tot hare vernietiging nieuw onderzoek eischen [...]*¹⁴

What is crucial here, is that this interpretation would never have been framed in terms of ‘amateurs’ and ‘specialists’ if it did not rely on a preconceived understanding of professionalization occurring around that time. The quote itself does not indicate that the vocabulary of an amateur-specialist dichotomy was in use. Therefore, there is little reason to assume that ‘amateurs’ and ‘specialists’ were actors’ categories. Moreover, if this quote would

⁹ P.A.J. Caljé, *Student, universiteit en samenleving*, 474.

¹⁰ B. Theunissen, *Nut en nog eens nut*, 59.

¹¹ F. van Lunteren, ‘Van meten tot weten’, 135.

¹² H. Groot, *Van Batavia naar Weltevreden*, 349-443.

¹³ M.P.M. Weiss, *The Masses and the Muses*, 177.

¹⁴ *Ibid*, 177-178; V.S.M. van der Willigen, *Over natuur- en sterrekundig onderzoek*, 37.

be placed in any other time frame, it would most likely simply be read as a condemnation of the bad knowledge practices ('onnauwkeurige waarnemingen', 'valsche onderstellingen') that result from low research standards ('een ieder' can engage in physics debates); a conception of an amateur-specialist dichotomy is not necessary for this quote to be intelligible.

In short, the professionalization narrative remains pervasive, both on an explicit and on an implicit level. At the same time, however, revised interpretations that are critical of both general and scientific professionalization have proliferated since the 1970s. Scholars have drawn attention to a definitional issue; it is difficult to pinpoint the essence of professionalism, and anthropological research demonstrates that conceptions of professionalism depend heavily on cultural context.¹⁵ The traditional conception of professionalization has also been criticized for ignoring that professionalism is often advertently constructed in attempts to monopolize certain knowledge skills. After all, the professional knower has more authority than the amateur by default, and as such acquires the power to exclude the latter.¹⁶ Finally, the professionalization thesis is seen as problematic because of a more general historiographical trend; universal processes, like professionalization (but also similar 'metanarratives' like *modernization*, and societal or scientific *progress*), are increasingly seen as teleological, and therefore contradictory to the principle of historical contingency.¹⁷

Criticisms like these have motivated other historians of knowledge and science to revise the professionalization narrative without entirely rejecting it. In recent years, for instance, a number of case studies have appeared in which the professionalization trajectories of specific scholarly or scientific fields, in specific places, are examined. These strategies are thus explicitly aimed at avoiding geographical and temporal generalizations.¹⁸ Furthermore, a 2001 issue of the *Journal of the History of Biology* was entirely devoted to a revision of professionalization in Victorian England. Lucier introduced the theoretical axiom of that issue as follows: 'the revisionists [in this issue] have begun by tearing apart the static dichotomy of 'professional' and 'amateur' and replacing it with dynamic social analyses of how such categories were constructed and conceived'.¹⁹ The present thesis adopts a similar approach: while it is not concerned with the value of essentialist conceptions of professionalization, it *does* hypothesize that professionalization has been historically significant as a social construct or as an element of the social structure, but only in the experience of specific people, in certain places, at specific times.

As illustrated above, professionalization is often viewed in the context of the history of academia. This contextualization may result in tunnel vision, because it regards professionalization solely *from the perspective of the professional*. It is therefore interesting to *decenter* the perspective by looking at professionalization from the angle of the 'amateur' - in

¹⁵ M. Neil, J. Morgan, *The Professionalization of Everyone?*, 10.

¹⁶ R. Dingwall, *Accomplishing Profession*, 331-349.

¹⁷ F. Lyotard, *La condition postmoderne*; J. Golinski, *Making Natural Knowledge*, 67-68; Lucier, 'The Professional and the Scientist', 702.

¹⁸ See, for example: N.M. Brooks, Alexander Butlerov and the Professionalization of Science in Russia, 10-24; A.W. Coats, *The Professionalization of American Social Science*, 227-233; J.C. Walker, *Gentlemanly Men of Science*, 83-114.

¹⁹ A. Desmond, *Redefining the X Axis*, 3-50; Lucier, *The Professional and the Scientist*, 702.

this case the scientific society in the nineteenth- and early twentieth century.²⁰ Interesting questions in this light are: how much epistemic authority did the non-academic knower have, lose, or retain? Or: how did he or she experience his or her relation to academic knowledge? These questions are not only relevant to the history of scientific societies, but also give insight into the societal function of the university. These questions will guide the remainder of this thesis.

That remainder begins with three chapters, each of which describes the life of a ZG-member. These are, respectively, namely jurist and historian Samuel de Wind (1799-1859), physician and polymath Johannes Cornelis de Man (1818-1909), and amateur malacologist Cornelis Brakman (1879-1955). These three individuals lived in different timespans, and the respective analyses will show that these timespans were each characterized by yet a different social and epistemic stratification. While the three case studies are initially treated mostly in isolation, the final chapter consist of a comparative analysis, which, moreover, employs Pierre Bourdieu's notion of *capital* as an analytical tool.²¹ The aim thereby is – to reiterate it in a slightly different phrasing - to gain insight into the long term history of epistemic hierarchies, and thus to contribute to the relevant historiography. A second, more implicit, aim is to add to the historiography of the ZG.

²⁰ As the terminology indicates, this approach is inspired by and analogous to Andrew Cunningham and Perry Williams' revision of the big picture of history of science at large, in: A. Cunningham and P. Williams, De-Centring the 'Big Picture'.

²¹ P. Bourdieu, The Forms of Capital.

Ch. 2 – Case 1: Samuel de Wind (1793-1859)

“Dat verdienstelijke en in kunst of wetenschap uitmuntende mannen vaak uit den nederigsten stand gesproten zijn, en, zonder het voorregt eener beschaafde opvoeding, alleen door eigen genie *zichzelven* gevormd hebben, is eene daadzaak, waarvan de geschiedenis aller volken, maar wel bijzonder die van *Nederland*, veelvuldige voorbeelden oplevert”²²

Samuel de Wind, 1837



Fig. 1: undated illustration depicting De Wind²³

The first case study is about ZG-member, jurist, and historian Samuel de Wind. The biography presented here is primarily based on an obituary (‘levensschets’ in Dutch) that was written shortly after De Wind’s death by Klaas Rutger Pekelharing, who, at the time, was the reverend of the Mennonite (Doopsgezinde) community in Middelburg. The obituary was published in the 1860 issue of the yearly proceedings (*Handelingen*) of the Maatschappij der Nederlandsche Letterkunde.²⁴ A second important source is the article about De Wind in Frederick Nagtglas’ *Levensberichten van Zeeuwen*.²⁵ In what follows, the case of De Wind is used to illustrate a societal transition, namely that of a class society (‘standenmaatschappij’) to a post-class society (‘post-standenmaatschappij’). This transition was accompanied by an epistemic hierarchy that became less rigid and, hence, allowed for more upward movement.

De Wind came from a family of physicians.²⁶ Pekelharing describes De Wind’s father, Paulus de Wind (1767-1797), for instance, as ‘praktiserend geneesheer’. To determine what

²² S. de Wind, Bijdrage over Jan Adriaansz. Leeghwater. In: *Vaderlandsche letteroefeningen*, jaargang 1837. Amsterdam, 1837, 745.

²³ Zeeuws Archief (ZA), Inv. nrs. 297 *Zelandia Illustrata*, vol. IV, fol. 948.

²⁴ K.P. Pekelharing, Levensschets van Mr. S. de Wind, 242-262; F. J. van den Branden, J.G. Frederiks. *Biografisch woordenboek der Noord- en Zuidnederlandsche letterkunde*, 599.

²⁵ F. Nagtglas, *Levensberichten van Zeeuwen*, 981-983.

²⁶ P.C. Molhuysen, P.J. Blok (ed.), *Nieuw Nederlandsch Biografisch Woordenboek*, 1138-1139.

exactly Pekelharing means with this qualification, it is necessary to review the basic elements of the organization of Dutch medicine in the second half of the eighteenth century. At that time, there existed a distinction between the barber surgeon ('chirurgijn' or 'heelmeester', from now on simply referred to as 'surgeon'), who focused mostly on external medicine, and the physician ('arts' or 'medicinae doctor'), who focused mostly on the theoretical aspects of medicine – anatomy and theories of disease –, as well as internal medicine. Until 1798, the surgeons were organized in guilds (gilden). The guilds supervised the training of surgeons and monitored the execution of surgeries. Unlike surgeons, physicians had to follow a much longer educational trajectory before they could practice their occupation; they first had to attend a Latin school, after which they had to obtain a promotion in medicine at one of the universities.²⁷ Paulus de Wind attended the Latijnsche School in Middelburg between 1779 and 1783, gained practical experience at a pharmacy in Amsterdam from 1786, and finally completed his medical studies at Leiden University, where he received a promotion in 1790; this trajectory indicates that he was a doctor, and not a surgeon.²⁸

This choice of occupation gives insight into the social status of the De Wind family when combined with a few other aspects of Paulus' life. It is perhaps somewhat anachronistic to apply a hard qualification to this status, but the term 'elitist' nonetheless seems appropriate. This is because, first, doctors occupied a high place on the social ladder of the eighteenth-century class society – much higher than surgeons; within the class society, doctors belonged to the so-called *brede burgerij*, which positioned them above surgeons, who belonged to the *middenstand*.²⁹ Second, in his examination of the situation in Gouda between 1700 and 1780, Joop de Jonge has shown that the Gouda elite took active measures to defend its elitist status, mostly by controlling the flow of their wealth, as well as through arranged or otherwise convenient marriages.³⁰ The De Wind family appears to have engaged in similar behavior. Paulus' choice to study medicine, for instance, was predetermined by his parents. Moreover, Paulus married - only after his parents and his future parents-in-law had reached a marital agreement - his own cousin, in what could be an ultimate act of class endogamy.³¹ Third, the De Wind family seems to have been financially well off. In addition to facilitating Paulus' time at the university, the family was able to fund a study trip to London, on which Paulus embarked in 1790-1791.³²

These biographical aspects indicate that Paulus enjoyed a high social status. At the same time, however, a change in the social relations of the medical world was beginning to take place during Paulus' life. Willem Frijhoff attributes the following development to the end of the eighteenth century: 'zowel op beroepstechnisch als op sociaal vlak [vindt er] een toenadering plaats tussen de geneesheren en de heelmeesters'. In other words, medical workers – both

²⁷ J.Z.S. Pel, *Chirurgijns, doctoren, heelmeesters en artsen*, 9-10.

²⁸ B.D. de Wind, *Levensbeschrijving van Paulus de Wind, Samuelszoon (1767-1797)*. In: ZA, inv. Handschriftenverzameling Zeewsch Genootschap der Wetenschappen, fol. 2666.

²⁹ Pel, *Chirurgijns, doctoren, heelmeesters en artsen*, 9; W. Frijhoff, *Non satis dignitatis*, 390.

³⁰ J. J. de Jong, *Met goed fatsoen*, 11-12; K. Douma, *De adel in Noord-Brabant 1814-1918*, 32.

³¹ De Wind, *Levensbeschrijving van Paulus de Wind, Samuelszoon (1767-1797)*.

³² P. de Wind, *Journal gehouden gedurende mijn verblijf te London van den 30 September 1790 tot 21 Meij 1791 - Verslag van zijn verblijf en studie vroedkunde, 1790-1791*. In: ZA, Inv. Handschriftenverzameling Zeeuwisch Genootschap der Wetenschappen, 1400-1999, fol. 6223.

surgeons and doctors - begin to converge into a cohesive occupational sector with a uniform identity: 'niet sociale status, maar de sociale functie gaat thans een overheersende rol spelen in het zelfbewustzijn van [de] beroepsgroep'. This merging development, moreover, diminishes the net social prestige of doctors. Frijhoff speaks of an augmentation of the 'sociale afstand ten aanzien van met name de juridische en bestuurlijke sector'.³³ The gradual decline in the status of doctors *may* explain why Samuel de Wind, as ostensibly the first of his family, chose a career in the legal sector over one in the world of medicine – even if his actual motives remain unknown.

Paulus de Wind died when his son Samuel was four years old, in 1797, from pneumonia. From 1805, Samuel attended the Latijnsche School in Middelburg, but he was forced to leave the school without a degree in 1809. According to Pekelharing, this premature withdrawal had something to do with the deteriorating conditions of the French time, although he does not elaborate on what exactly these conditions were. Given the year of the Wind's withdrawal, 1809, however, these conditions possibly consisted of the events surrounding the 1809 British invasion of Walcheren (the so-called Walcheren Campaign or Walcheren Expedition). During this invasion, the British expeditionary force was confronted with an epidemic of disease (the so-called Walcheren Fever, or 'Zeeuwse koorts' in Dutch), which would cause approximately 4000 deaths among British soldiers, while it barely touched the local population.³⁴ After leaving the Latin school early, De Wind left Middelburg for Leiden, where he enrolled in the university. In Leiden, he graduated already in December of 1811, with a degree in law, although he received schooling in classical languages and Dutch as well. Whether such a short duration of study was common is unclear. In his study of Groningen University in the nineteenth century, Caljé has shown that a typical curriculum lasted about five years in 1815. However, he notes that 'dit regime [. . .] het laatste [was] dat de praktijken van het Ancien Régime en de Franse tijd weerspiegelde, en het eerste van de periode na de bevrijding van de Fransen'.³⁵ The situation may therefore well have been different in 1811. In Leiden, De Wind encountered several renowned professors, including law scholar Joan Melchior Kemper (1776-1824), poet and politician Johannes van der Palm (1763-1840), Leiden's first Dutch scholar Matthijs Siegenbeek (1774-1854), and the swiss professor of classical languages Daniël Wytttenbach (1746-1820). After his graduation, De Wind worked for a lawyer in Leiden, while also continuing to take classes at the university.

In 1814, De Wind returned to Middelburg, where he found his own law practice. He would live in his place of birth for the rest of his life. He became increasingly interested in history and historiography, and began to do research on, and publish about, the history of law, the history of the 'Vaderland', and specifically the history of Zeeland. Although also a prolific lawyer, De Wind would eventually become best known as a historian. According to Pekelharing, De Wind's historical methodology was strongly influenced by the ideas of Willem Bilderdijk (1756-1831). This is somewhat puzzling considering De Wind's later involvement with the liberalism-inspired reforms within the ZG during the 1850s; Bilderdijk and his

³³ Frijhoff. *Non satis dignitatis*, 405-406.

³⁴ M.R. Howard, *Walcheren 1809, 1642-1645*; A. Neele, *De ontdekking van het Zeeuwse platteland*, 138.

³⁵ Caljé, *Student, universiteit en samenleving*, 133-135.

followers were conservatives who diametrically opposed liberal and progressive tendencies.³⁶ Perhaps De Wind's political preferences followed a transformation similar to the one in Dutch society at large in the years leading up to Thorbecke's constitution of 1848.³⁷ In any case, it is hard to discern an explicit political ideology in De Wind's written work, with the exception of, perhaps, a mild form of nationalism and an implied opposition to the Belgian separation of 1830.³⁸

After his return to Middelburg, De Wind also continued to read about, and publish on, much literature, both classic and modern. Pekelharing's bibliography indicates that De Wind wrote about thirty works in total, of which about twenty-four had an historical topic and the others were concerned with either law or literature. As his magnum opus, De Wind initiated the *Bibliotheek der Nederlandsche geschiedschrijvers*, an attempt at an historiographical encyclopedia of the Netherlands, the first part of which was published in Middelburg between 1831 and 1835. This work was left unfinished, apparently partly because the Belgian revolt in 1830 caused a shift in the meaning of the predicate 'Nederlandsch'.³⁹

De Wind's reputation in the scholarly world was rising, which is reflected in a series of official positions he obtained. From 1815 he was a member of the ZG. In 1834 he became one of the ZG's directors, and from 1855 until his death in 1859 he was its chairman. He was also a member of many other societies, including the Maatschappij der Nederlandsche Letterkunde (from 1824), the Utrechts Genootschap (from 1827), the Provinciaal Friesch Genootschap (from 1838) and a number of foreign (Belgian and German) scientific associations. From 1838, he had been a member of the second class of the Koninklijk Instituut van Wetenschappen, but in 1851 Johan Rudolph Thorbecke discontinued that society and founded the Koninklijke Nederlandsche Akademie van Wetenschappen (KNAW), with a focus on the natural science, in its place. This meant that humanistic scholars like De Wind, but also, for instance, poet and historian Isaäc Da Costa, received 'eervol ontslag'.⁴⁰ According to Pekelharing, De Wind was greatly offended by this episode. It is perhaps therefore that, in 1856, when the KNAW changed its position and offered De Wind membership after all, De Wind declined.⁴¹

In addition to these scholarly activities, De Wind continued to make a career in the legal and administrative world. In 1818, he became substitute-officer of the Middelburg court. In 1833, he was appointed state attorney (rijksadvocaat) and member of the Middelburg city council. In 1838 he became vice president of the provincial court of Zeeland, where had already been officer from 1834. At one point in the 1840s, De Wind was approached for a position in the Supreme Court (Hoge Raad), but – for reasons unexplained by Pekelharing - he was not interested. In 1841, his legal achievements earned him the position of Knight in the Order of the Netherlands Lion.

³⁶ For an elaborate discussion of these liberalism-inspired reforms, see the article by Ad Maas in the commemorative essay collection that will be published in honor of the ZG's 250th birthday in 2019.

³⁷ Interestingly, Thorbecke himself also became a liberal only later in life, having originally been a loyal supporter of the autocratic and conservative king Willem I. See, for example, R. Aerts, *Thorbecke wil het*.

³⁸ S. de Wind, *Bibliotheek der Nederlandsche geschiedschrijvers, eerste deel*, IV, XII.

³⁹ *Ibid.*

⁴⁰ See also K. van Berkel, *De stem van de wetenschap*.

⁴¹ Pekelharing, *Levensschets van Mr. S. de Wind*, 257-258.

On the basis of his life course, De Wind can be interpreted as what Caljé calls the *strategic elite*.⁴² Caljé shows that the second half of the eighteenth century was characterized by a fusion between the nobility and the patriciate, which led to the emergence of the post-class society. Caljé observes that this new elite generally obtained a better education than previous generations, and had a striking interest in intellectual and scientific matters. Samuel de Wind, with his diverse career and broad intellectual orientation, embodied this proliferation of knowledge practice among the elite. Moreover, based on his education and his study trip, the qualification of *strategic* also applies to De Wind's father. Because the transition into the post-class society implies an increase in social mobility, the strategic elite can be explained as a reactionary phenomenon, characterized by the preservation of elitist positions no longer through intergenerational wealth and possessions, but instead through skills and diligence. The strategic elite can also be understood in an international cultural context, namely one in which the German neo-humanistic *Bildung*-ideal was on the rise.⁴³ Pekelharing explicitly characterizes De Wind as '*gebildet*'.⁴⁴ In any case, it is clear that De Wind's time was marked by the transition into a post-class society, in which mere epistemic performance was increasingly indicative of epistemic authority and social standing.

In other words, epistemic hierarchy became more flexible. This can also be illustrated using an example from De Wind's historical experience: his exceptionally broad conception of the occupational category of 'historian' ('*geschiedschrijver*'). Although De Wind was a lawyer without any kind of formal historical training, he had full access to the historical discourse of his time. In *Bibliotheek der Nederlandsche geschiedschrijvers*, moreover, De Wind aims to give a systematic overview of Dutch historians. This requires him to mention on what grounds he considers someone to qualify as a historian. His answer to this question, which he presents in the introduction, highlights the social boundaries of a knowledge-based occupation and thereby illuminates the elasticity of the epistemic hierarchy of his time. De Wind does not mention any institutional prerequisites, but holds a rather practical and simple approach: if you have published something historical, you are considered a historian.⁴⁵ Denise Phillips has argued that 'for the most of the period [before 1848], there are significant analytical benefits to seeing all of Germany's natural researchers, nascent university professionals and small-town naturalists alike, as belonging to a single intellectual world'.⁴⁶ De Wind's case suggests that this principle applies to the contemporary situation in the Netherlands as well; a distinction between amateurs and professionals did not exist.

De Wind married his cousin Cornelia Dobbelaer de Wind in 1821. Her dates of birth and death are unknown, but it is clear that she died before De Wind. Together, they had two daughters, one of whom died in 1855. Like in the case of his father, De Wind's cousin marriage can possibly be read as a form of class endogamy, which would fit the picture of him as part of the *strategic elite*. However, because cousin marriages were fairly common, the validity of this interpretation is difficult to ascertain.⁴⁷ After a short period of illness, De Wind died on August 19, 1859, in Middelburg.

⁴² P.A.J. Caljé. *Student, universiteit en samenleving*, 264-265.

⁴³ Theunissen, '*Nut en nog eens nut*', 35.

⁴⁴ Pekelharing, *Levensschets van Mr. S. de Wind*, 257.

⁴⁵ De Wind, *Bibliotheek*, XV.

⁴⁶ D. Phillips, *Acolytes of Nature*, 13.

⁴⁷ D. Haks. *Huwelijk en gezin in Holland in de 17de en 18de eeuw*, 39-42.

Ch. 3 – Case 2: Johannes Cornelis de Man (1818-1909)

“Waag ik het dus nog eens een stap te doen op craniologisch gebied, en het weinige te geven, wat ik heb, dan is het alleen om geene onverschilligheid te toonen in een tak der wetenschap, die in alle landen beoefend wordt, en eenmaal misschien de afwijkingen in de menschenstammen zal oplossen of ophelderen. Wat ik nu doe, is dus maar eene poging, om aan te toonen, dat er op dit gebied ook in Nederland wel iets zou te doen zijn, indien er maar lust en medewerking bestond. Anderen na mij moeten iets beters leveren.”⁴⁸

Johannes Cornelis de Man, 1865



Fig. 2: a photograph of De Man taken near the end of the nineteenth century⁴⁹

The second case study is focused on physician Johannes Cornelis de Man. Much was written about De Man's life in the first years after his death in 1909. What follows is primarily based on the detailed obituary by W. Polman Kruseman, *Ter herinnering aan dr. J.C. de Man*, the short biography by Dirk Schoute, *Het wetenschappelijk leven van dr. J.C. de Man*, as well as a

⁴⁸ J.C. de Man, *Bijdrage tot de kennis van den schedelvorm in Walcheren*. In: ZA, inv.nrs. 26, fol. 340, 1.

⁴⁹ ZA, inv. nrs. 297, fol. 155, nr. 19.

few more recent sources.⁵⁰ These sources will be used to illustrate that De Man's working life took place during another bout of shifting social and epistemic dynamics. On the one hand, social mobility had increased somewhat, which allowed people who initially were not part of the elite to obtain a certain level of social standing and epistemic credibility. On the other hand, however, a tendency to institutionalize knowledge-based occupations surfaced. This increasing focus on institutional standing actually strengthened epistemic hierarchy.

De Man was born on September 20, 1818. Like De Wind's father, De Man's father Johannes de Man (1783-1856) is characterized as 'praktiserend geneesheer'.⁵¹ In this case, however, that term refers to a barber surgeon instead of a doctor. This becomes evident from Johannes' solely practical training, which he received initially in Middelburg and later in Amsterdam. He passed the required surgeon exam in Middelburg in 1808.⁵² De Man describes his father as 'van geboorte een burgerjongen' and as 'eenvoudig van aard en zeer werkzaam'.⁵³ After passing his surgeon exam, Johannes established a thriving medical practice in Middelburg. Eventually, he was also appointed to the Provinciale Geneeskundige Commissie, initially as a member (1814) and later as secretary (1818). That this appointment sparked 'grote verbazing' suggests that Johannes was of lower social standing than what was traditionally conventional.⁵⁴ At the same time the appointment speaks in favor of Frijhoff's argument that the doctors' class and the surgeons' class were slowly merging together.⁵⁵ That Johannes, as a barber surgeon, had his own medical practice highlights the relatively unorganized state that had unfolded in Dutch medicine after the abolishment of the guilds.

As Schoute confirms, Johannes continued to work his way up in Zeeland's medical sector: '[het is] duidelijk dat [Johannes] door ijver en toewijding omhoog kwam'.⁵⁶ In 1819, for instance, Johannes was one of the cofounders of the medical reading association De Harmonie, in which De Man himself would later also become active. In 1825, he was appointed as lecturer in anatomy at the new Provinciale Geneeskundige School (1824), one out of six medical schools in the Netherlands that were founded to standardize the schooling of surgeons.⁵⁷ That middle class men like Johannes were able to significantly improve their social position on the basis of their merits, may explain the emergence of the *strategic elite* that was referred to in the previous chapter; it is likely that the increased upward social mobility forced upper class families, like that of De Wind, to acquire and apply knowledge and skills as a means to safeguard their elitist positions.⁵⁸

Johannes died in 1856, from bronchitis. Little is to be found about De Man's mother, Maria Elisabeth Tauscher. De Man describes her as a 'niet geheel onbemiddelde wees, die op

⁵⁰ *Encyclopedie van Zeeland*, 280–281; E.S. Houwaart, *De hygiënist*; W. Polman Kruseman, *Ter herinnering aan dr. J.C. de Man*; D. Schoute, *Het wetenschappelijk leven van dr. J.C. de Man*; D. Schipper, *Challenging Derivative Explanations of Scientific Racism*, 1-17.

⁵¹ Polman Kruseman, *Ter herinnering aan dr. J.C. de Man*, 1.

⁵² Pel, *Chirurgijns, doctoren, heelmeeesters en artsen*, 200.

⁵³ J.C. de Man, *De geneeskundige school te Middelburg*, 24-25.

⁵⁴ *Ibid.*

⁵⁵ Frijhoff, *Non satis dignitatis*, 405-406.

⁵⁶ Schoute, *Het wetenschappelijk leven van dr. J.C. de Man*, 2.

⁵⁷ M.J. van Lieburg, *De microscopie in het onderwijs van de klinische scholen in Nederland*, 83.

⁵⁸ Caljé, *Student, universiteit en samenleving*, 264-265.

de Markt [in Middelburg] haar eigen huis bezat'.⁵⁹ These favorable financial circumstances, in combination with his father's achievements, allowed De Man himself to, as it were, grow up in a higher social environment than his father had, a few decades earlier. Schoute describes this transition as follows: 'waarschijnlijk voorzien van de erfelijke eigenschappen van dezen vader, met diens voorbeeld voor ooge, staande op een hooger maatschappelijk niveau, en dank zij de niet geheel onbemiddelde moeder ook finantieel beter gesteund, is De Man onder gunstige omstandigheden zijn wetenschappelijk leven ingegaan'.⁶⁰

This 'wetenschappelijk leven' started with the pursuit of a high education. According to Polman-Kruseman, De Man attended a primary school and then enrolled in, consecutively, the French school and the Latin school in Middelburg. Although the French schools had been founded as a more practically-oriented alternative to the mostly theoretical approach of the Latin schools, in some cases they also served merely as an extra prestigious intermediate phase between primary- and Latin school.⁶¹ In 1836, De Man received the gymnasium degree *summa cum laude*, after which he studied medicine at the university in Leiden. There, he passed his bachelor's degree (*kandidaatsbul*), again *summa cum laude*, in 1839. He then obtained three promotions, as had become the requirement for a full medical license; on June 13, 1841, he became a medical doctor, on December 20, 1841, he received his promotion in obstetrics, and on October 10, 1842, he acquired his promotion in surgery.⁶² In 1842, in between his promotions, he embarked on a study trip to Paris and Vienna because he wanted to familiarize himself with the modern medical practices abroad.

The high education that De Man received was probably facilitated by the recent improvement in the social standing of his family. It can also be understood in the context of a broader societal development. In the first half of the nineteenth century, the formalizing (i.e., legally defining and demarcating) of medicine became an increasingly important societal objective. One of the aspects that was pursued in this light is the delineation of (institutional, educational) prerequisites for medical practice. This aim can be interpreted as a reaction to the relative lack of regulation that had resulted from the abolishment of the guilds. Its implementation began with the so-called *Organiek Besluit* of 1815, in which higher education (including higher medical education) was redefined. It later ended in 1865, with the *Wet Uitoefening Geneeskunst* of the second Thorbecke government, in which medicine gained a complete legal definition, and which determined precisely who was allowed to practice medicine, and in what capacity.⁶³ A similar tendency towards occupational institutionalization emerged in other occupational fields, such as in engineering.⁶⁴ De Man's choice for a good education is in line with this development.

⁵⁹ De Man, *De geneeskundige school te Middelburg*, 24-25.

⁶⁰ Schoute, *Het wetenschappelijk leven van dr. J.C. de Man*, 2.

⁶¹ W. Frijhoff, *Crisis of modernisering?*, 50.

⁶² M.J. van Lieburg, *De medische beroepsbevolking ten plattelande gedurende de 19^e eeuw*, 135; G.A. Lindeboom, *Geschiedenis van de wetgeving op het gebied van de artsenopleiding, het artsexamen en het artsdiploma*, 1818-1819.

⁶³ M.J. van Lieburg, *De natuurkundige staatsexamens voor medische studenten en de constructie van een natuurwetenschappelijke basis voor de artsenopleiding tussen 1865 en 1880*, 139-180.

⁶⁴ See, for instance, the description of the campaign for the legal acknowledgment of engineering as an occupation, in G.P.J. Verbong, *De spanning tussen aanbod en vraag*, 84.

De Man's promotions inaugurated a long and diverse career that earned him a significant reputation both in medical and in scientific circles. After his final promotion in 1842, De Man established his own medical practice in his hometown. His medical career advanced quickly. Between 1845 and 1859 he was the city physician ('stadsgeneesheer') of Middelburg. In 1848, De Man and fellow doctor A.A. Fokker founded the Zeelandic department of the Nederlandse Maatschappij tot Bevordering der Geneeskunst. Like his father, De Man became a member of the reading society De Harmonie (from 1844 until his death, including from 1889 as director). He initially published much on medical matters, especially about diagnosing and preventing epidemics on the basis of statistics – an innovative approach that was quickly gaining ground, advocated by a group of liberal physicians known as 'hygienists'.⁶⁵ From the 1860s De Man limited his medical activities to maintaining his medical practice. He used the remaining time to explore other intellectual fields, including anthropology, craniology, history (mostly of Zeeland), and paleontology. From 1845, he was active in the ZG; for many years he was curator of its museum, and between 1895 and 1900 he was its president. Much of his findings appeared in *Archief*, the ZG's journal, although he also published some works by himself. In 1893 he was declared Knight in the Order of the Netherlands Lion.

De Man's activities outside of medicine give insight into the meaning of, and the mutual relation between, amateurs and professionals at the time. On multiple occasions, De Man seems to suggest a distance between himself and the ZG on one side, and a professional domain of science on the other side – although he, notably, does not use the actual word 'professional'. For instance, he positions himself in his book *De geneeskundige school* (1902) explicitly as some sort of hobbyist:

*De hierna volgende bladzijden hebben geen wetenschappelijk doel en bezitten zelfs niet veel geschiedkundige waarde, omdat Middelburg geen Salerno of Cordova is geweest, de behandelde mannen geen Doctores Orientis et Occidentis en de schrijver geen Plutarchus. Men gelieve ze dus slechts te beschouwen voor hetgeen ze zijn, de tijdverpoozing in ledige uren van iemand, die toch niet altoos geheel werkeloos wil zijn.*⁶⁶

Similarly, in the introduction of a catalog of the ZG's zoological objects that De Man published in 1879, he characterizes the ZG's collecting endeavors as rather amateurish – again, without using that exact terminology:

*Het genootschap beoogt met zijne verzameling niet zoo zeer de schijn te willen hebben van eene wetenschappelijke collectie te bezitten; wat het beoogt is te toonen, dat het de voorwerpen bewaart, die door leden of begunstigers worden geschonken, en dat het poogt langzamerhand die voorwerpen bijéén te zamelen, welke gerekend kunnen worden te behooren tot de Fauna van Zeeland.*⁶⁷

⁶⁵ See also Houwaart, *De hygiënist*.

⁶⁶ De Man, *De geneeskundige school te Middelburg*, V.

⁶⁷ J.C. de Man, *Naamlijst van voorwerpen van zoölogische aard alsmede van anthropologische aard en pathologische voorwerpen, toebehorende aan het Zeeuwsch Genootschap der Wetenschappen*. Middelburg, 1978, 5. Can also be found in: ZA, inv. nrs. 26, fol. 162.

He also downplays the scientific value of the ZG during a 1895 speech to his fellow ZG-members:

*Wij [willen] niet zijn eene kleine Academie, maar niets meer dan een College van mannen die voor een deel aan de wetenschap hunne plaats in de Maatschappij verschuldigd zijn en die den weg willen openhouden voor de weinigen, die gebruik willen maken van de door onze voorvaderen bijeengebrachte schatten of bij ons steun willen zoeken, wanneer zij de producten van hun geestesarbeid in breederen kring willen bekend maken.*⁶⁸

Yet De Man might also have been using this modest tone as some kind of rhetorical strategy, constructing an image of a distance between himself and a professional domain that had little basis in reality. Several biographical aspects support this thesis. As a physician working outside of academia, De Man was part of a movement, the hygienists, that did not only gain a foothold in the scientific debates about public health in general and contagious diseases in particular; these non-academic physicians in fact *took over* those debates. One might argue that, by replacing the traditional highly theoretical and pathophysiology-oriented discourse with a pragmatic, statistics-based science of epidemiology, these non-academic physicians stood at the forefront of the rise of ‘modern’ medicine in the Netherlands.⁶⁹

In a similar vein, De Man was not academically trained in the science of craniology, but that did not stop him from participating in international craniological debates. Towards the end of his life, around 1900, he corresponded about craniological matters with renowned foreign scientists like the Englishman John Beddoe (1826-1911) and the aforementioned American William Z. Ripley.⁷⁰ That the latter considered De Man amongst the leading craniological authorities of Europe, is suggested in the remark below, made in a letter to De Man, dated March 1, 1898. In it, Ripley asks De Man to help him with a bibliography of the anthropology of Europe that he was working on:

*Many of the leading authorities of Europe have already cooperated by sending us complete lists of their works. It would greatly assist us if you, also, would kindly cooperate to insure completeness and accuracy.*⁷¹

That, correspondingly, De Man did not shun contact with prominent scientists, becomes clear from a remark he makes in *Bijdrage tot de kennis van den schedelvorm in Walcheren*: ‘ik wensch aan deze mededeeling, ofschoon zelf geen historicus of archaeoloog zijnde, toch eenige gedachten te knopen, over hetgeen de wetenschap van anderen heeft geopperd omtrent Zeelands verleden’.⁷² This blurring of disciplinary boundaries suggests that, while there may have been *images* of epistemic hierarchies in which the historian or archeologist stands superior to the hobbyist, an unbridgeable gap between amateur and professional scholars did not exist. As the case of Brakman will suggest, this dichotomy did not materialize until the early twentieth century.

⁶⁸ Polman Kruseman, *Ter herinnering aan dr. J.C. de Man*, 50.

⁶⁹ Houwaard, *De Hygiënist*, 345.

⁷⁰ ZA, inv. nrs. 26, fol. 340.

⁷¹ *Ibid.*

⁷² De Man, *Bijdrage tot de kennis der schedelvorm in Walcheren*, 7.

De Man married Neeltje Elisabeth Kamerman, a daughter of a Reformed reverend from Kloetinge, Zeeland, on July 4, 1849. Because the occupation of reverend required an academic training, and because candidates for the occupation were usually recruited among the higher classes, it seems that De Man married within the upper class.⁷³ The couple lived in the St. Pieterstraat in Middelburg, and had three children, including Maria de Man, who would later also become active in the ZG as curator. The couple belonged to the highest segment of the Middelburg community not only in terms of social standing, but also financially. This becomes apparent, for instance, from the fact that son Johannes Govertus (1850-1930) was not bothered by any financial obstacles when he quit his job as curator of the Rijksmuseum van Natuurlijke Historie in Leiden, in order to dedicate himself to unpaid, autonomous biological research. From 1893, moreover, he conducted this research in a house in Yerseke, Zeeland, purchased for him by his parents, and built 'naar zijn eigen smaak'.⁷⁴ Pel has also determined that the De Man family possessed f. 170.668,52 in 1897 - a unusually significant amount of capital at the time.⁷⁵ De Man died on January 2, 1909, in Middelburg.

⁷³ D.J. Bos, *In dienst van het koninkrijk*, 366.

⁷⁴ L.B. Holthuis, Man, Johannes Govertus de (1850-1930). In: *Biografisch Woordenboek van Nederland I*. Accessed on 1-6-18 via <http://resources.huylgens.knaw.nl/bwn1880-2000/lemmata/bwn1/man>

⁷⁵ Pel, *Chirurgijns, doctoren, heelmeeesters en artsen*, 217.

Ch. 4 – Case 3: Cornelis Brakman (1879-1955).

“Een en ander uit de thans geldende theorieën lijkt me nogal vreemd, maar dat kan ook komen door gebrek aan inzicht.”⁷⁶

Cornelis Brakman, 1928

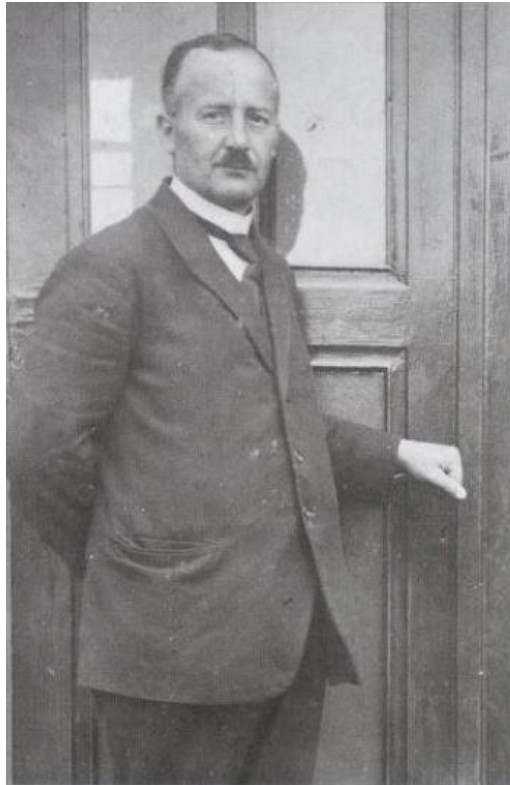


Fig. 3: a photograph of Brakman, taken around 1930⁷⁷

The third and final case study is centered on ZG-member and -curator, primary school teacher, and amateur malacologist Cornelis Brakman (1879-1955). The case is used to illustrate that, in Brakman's time, a strict, institutionalized separation had emerged between amateurs on one side, and professionals on the other. The 1994 issue of *Archief*, the aforementioned ZG-journal, revolved around the society's 225th anniversary. According to W.G. Beeftink, ecologist and contributing author, this theme necessitated a reflection on Brakman's life and his significance to the ZG.⁷⁸ Beeftink subsequently presents a reconstruction of Brakman's biography, largely based on the 221 letters that Brakman wrote and addressed to Drs. Pieter Jacobus van der Feen (1892-1987) between 1926 and 1951.⁷⁹ In doing so, Beeftink remains close to the literal quotes and the biographical aspects revealed between the lines. This chapter builds further upon Beeftink's article, in combination with a few other sources.

Cornelis Brakman was born in the village of Cadzand in Zeelandic-Flanders, on May 25, 1879. The book *Geschiedenis van de familie Brakman* shows that both Brakman's father

⁷⁶ Letter dated 17-8-1930, in: ZA, inv. nrs. 26, fol. 339.3.

⁷⁷ W.G. Beeftink, *Cornelis Brakman*, 147.

⁷⁸ Beeftink, *Cornelis Brakman*, 145.

⁷⁹ J.H. Kluiver, *Jaarverslag over 1987 van de hoofdconservator*, X-XV.

(1823-1877, also named Cornelis), his grandfather Izaak (1823-1877), as well as most other (male) members of his more distant family, were ‘gareel- of zadelmakers’; Brakman thus came from a family of artisans.⁸⁰ The Brakman family was Dutch Reformed, and several family members were closely involved with their local church.

The family occupied a low position on the social ladder. Their artisanal background already suggests that, and it is also confirmed by genealogist J.A. Brakman, who introduces his family history, which was published in 1922, as follows:

*Wie meenen mocht, dat deze Geschiedenis er eene is van mannen, die schitterende daden hebben verricht, groot in deugden (en ondeugden), of van mannen, die een belangrijken invloed op hunne omgeving hebben geoefend, vergist zich. Wat hier volgt, is slechts de geschiedenis van eenvoudige menschen, die bescheiden hebben geleefd, en met grooten ijver hebben gewerkt voor hun gezin, doch daardoor, al is het op kleine schaal, nuttig voor de maatschappij zijn geweest en die dus niet tevergeefs hebben geleefd.*⁸¹

Brakman himself was similarly conscious of his low social standing. In a 1930 letter to Van der Feen, he asserts that:

*Omgang met mensen uit beschaafde kringen heb ik feitelijk niet gehad. Van mijn geboorte tot nu heb ik geleefd onder dorpsmensen van de eenvoudigste soort.*⁸²

Brakman attended the normal school (normaalschool in Dutch, the equivalent of the current-day Pabo), initially in Oostburg and later in Middelburg, where he was trained to be a primary school teacher (onderwijzer). This choice of occupation was not uncommon among contemporaries of Brakman with a similar background, and was often motivated by a striving for a better economic and social position.⁸³ After completing his education, Brakman was appointed as teacher at the public primary school in Nieuw- en Sint Joosland, a small village bordering Middelburg. He remained employed at this school until his retirement in 1939. From 1932, he had also been its director. His work at the school took place in the context of a local ‘schoolstrijd’ (school struggle). While the public school was the only school in the village, several initiatives to found a special, Reformed school were launched. Advocates of public education feared, however, that the village was too small for a second school. The founding of a special school would thus jeopardize the existence of the public school. Not entirely surprising in light of his occupation, Brakman seems to have sympathized with the ‘secular’ side of this conflict; upon Brakman’s retirement, an anonymous speaker references ‘de liefde en den trouw welke hij altijd betoond had voor het openbaar onderwijs’.⁸⁴ Nevertheless, Beeftink describes that Brakman upheld a good relation with the local reverend, one of the proponents of the special school. From 1924 Brakman was even the ‘Ontvanger’ (host) of the Reformed church in Nieuw- en Sint Joosland.

Brakman was a nature enthusiast and harbored an enormous fascination with the natural sciences. Initially, he was mostly interested in plants and birds, but from 1922, he became

⁸⁰ J.A. Brakman, *Geschiedenis van de familie Brakman, 1540-1921*, 83-85.

⁸¹ Brakman, *Geschiedenis van de familie Brakman*, V.

⁸² Letter dated 6-2-1930, in: ZA, inv. nrs. 26, fol. 339.3.

⁸³ J. Exalto, *Volharden bij het ideaal*, 2015, 80.

⁸⁴ Anon., *Afscheid van den heer C. Brakman*, 2.

involved with malacology (the study of mollusks). He became an avid collector, spending much time seeking mollusks on the beaches of Zeeland. He would identify and catalogue his findings himself, using his own collection of books on the subject. It was through these malacological activities that Brakman came into contact with the ZG. Between 1934 and 1942 he was curator of the mollusk collection in the society's museum. By donating an important part of his own collection of mollusks, Brakman made a significant contribution to the ZG collection named 'Naturalia'. In addition to his involvement with the ZG, Brakman was a member of the Nederlandse Malacologische Vereniging from its founding in 1934. In the following years (specifically between 1936 and 1950), he published a total of nine articles in this society's journal *Basteria*. Moreover, Brakman was curator of the Zeeuws Herbarium between 1941 and 1949.⁸⁵

To say something about the epistemic hierarchy with which Brakman was confronted, it is first necessary to emphasize two circumstances. First, during Brakman's life, malacology was practiced only sparsely within the Dutch universities, with only a few 'professional' biologists specializing in malacology. Overall, at least in the eyes of Brakman, Dutch malacology was underdeveloped compared to the surrounding countries. Second, Beeftink's analysis suggests that Brakman's knowledge of mollusks was not or barely inferior to the knowledge of his 'professional' counterparts. Van der Feen, in one of the ZG's yearly reports that was issued in 1955, shortly after Brakman's passing, confirms Brakman's aptness:

*Leken menen, dat men met behulp van een determineertabel op eenvoudige wijze kan vaststellen, tot welke soort een natuurhistorisch voorwerp behoort. Brakman, met zijn geoefende blik en grote kennis van de literatuur, begreep, dat iedere afgrenzing van een soort slechts een werkhypothese is, die door iedere generatie van onderzoekers opnieuw kritisch beoordeeld moet worden.*⁸⁶

These two factors – little expertise in the universities, and a highly competent amateur – may generate the expectation that Brakman and professional malacology would seek each other's cooperation. The reality, however, was different. On the one hand, Brakman maintained contact with certain professional institutions, such as the Rijksherbarium in Leiden, and certain professional individuals, of which C.O. van Regteren Altena, doctoral candidate at the University of Amsterdam, is perhaps the most notable because Brakman provided him with material for his research. On the other hand, however, Brakman experienced, in the words of Beeftink, a 'gebrekkige ondersteuning en soms zelfs [een] afwijzende houding' from within the universities.⁸⁷ This is already reflected in Brakman's relation with Van Regteren; although the two cooperated in a mutually contributive way, Van Regteren was primarily interested in Brakman's materials, while holding the latter's intellectual advice in rather low esteem. Another example is Brakman's relation with Dr. H.C. Blöte, a curator at the Rijksmuseum voor Natuurlijke Historie in Leiden. Brakman had sent *Carditas*, a specific category of mollusks, to Blöte, along with a request for help with the identification process. Blöte, however, refused. According to Brakman, Blöte found it 'mallootig, dat [Brakman] zelf tracht te determineren'.⁸⁸

⁸⁵ W.S.S. van Benthem Jutting, In memoriam Cornelis Brakman, 569. W.S. Unger, Jaarverslag over 1954/55, XII-XIII.

⁸⁶ Van der Feen is quoted by W.S. Unger in: Unger, Jaarverslag 1954/1955, XII.

⁸⁷ Beeftink, Cornelis Brakman, 166.

⁸⁸ Letter dated 30-1-1930, in: ZA, inv. nrs. 26, fol. 339.3.

Even worse, Blöte neglected to return the Carditas. Brakman reacted by showing himself somewhat annoyed at first ('ik zou de schuldige wel eens willen dooreenrammelen')⁸⁹, but eventually laughed the matter off ('arme Blöte, schuilevinkje te moeten spelen voor een dorpschoolmeester').⁹⁰

Brakman's difficult relation with the professional realm is indicative of a rigid epistemic hierarchy. He lacked the epistemic credentials necessary to gain respect in professional circles, and that had nothing to do with a lack of knowledgeability. More likely, it was because he had not followed the proper educational trajectory to become a professional scientist. The examples given above make clear that Brakman lived in a time where hyper-formal interaction was the norm. Institutional achievements, such as an academic training, played a decisive role within that dynamic. This could also explain why it did not occur to Brakman to show any kind of hostility towards the Reverend in Nieuw- en Sint Joosland during the 'schoolstrijd', or why he reacts relatively mildly to Dr. Blöte, who refuses to return his mollusks. Brakman simply lacked the authority to act subversively towards someone with the institutional status of a clergyperson or a scientist. An insurmountable separation between amateurs and professionals had materialized.

Not *only* Brakman's lack of education shaped his complicated relation with professional malacologists; his 'simple' background and upbringing played a role in itself as well. This becomes particularly evident from the correspondence between Brakman and fellow curator Van der Feen. The latter had attended the gymnasium and had earned a masters degree (doctoraaldiploma) from Utrecht University thereafter. Moreover, he was married to Dr. Woutera Sophie Suzanna van der Feen-van Benthem Jutting (1899-1991), a professional biologist and malacologist who worked for the Zoölogisch Museum of the University of Amsterdam.⁹¹ These biographical details indicate that there was a discrepancy in social standing between Brakman and Van der Feen. Beeftink shows nicely how this discrepancy manifested itself in the humble manner in which Brakman positions himself towards Van der Feen.⁹² A copied quotation, from a 1930 letter, as an example:

*Dat ik U er toch mee lastig val, is in de hoop, dat een of andere waarneming op mijn fietstochten U zou kunnen interesseren; in de hoop U daarmee te toonen, dat ik U dankbaar ben voor de mooie boeken en andere hulp, die ik van U mocht ontvangen. Andere pretenties heb ik niet.*⁹³

Brakman lived in Nieuw- en Sint Joosland until his death. He married Johanna Adriana Reijnoudt in 1902. The couple had five children between 1903 and 1916. Brakman died in his place of residence on March 6, 1955.

⁸⁹ Ibid.

⁹⁰ Letter dated 26-5-1930, in: ZA, inv. nrs. 26, fol. 339.3.

⁹¹ Kluiver, Jaarverslag, x; P.J. van der Feen, Dr. W.S.S. van Benthem Jutting, 309-317; ZA, inv. nrs. 309, fol. 2.

⁹² Beeftink, Cornelis Brakman, 148.

⁹³ Letter dated 6-2-1930, in: ZA, inv. nrs. 26, fol. 339.3.

Ch. 5 - Analysis: Bourdieusian *Capital* and Shifts in Epistemic Hierarchy

Inspired by Dorothee Sturkenboom's productive employment of the term, this comparative analysis draws upon Pierre Bourdieu's notion of *capital* to give an extra interpretative dimension to the long term developments that emerge from the case studies.⁹⁴ Capital is a rather general concept that refers to the means that are necessary for social functioning, as possessed by an individual. The amount of capital possessed by an individual determines the amount of economic and social agency that he or she can exert. The concept becomes more clear when the different forms of capital - economic, social, and cultural - are considered. Economic capital, such as possession rights, can immediately be converted into money. Social capital, such as a noble title, consists of the social obligations and rights that warrant the individual a certain place in society, and can be immediately converted into money only under certain conditions. Societies prefer certain forms of capital over others - a dynamic that has a bearing on both the degree of social mobility and the rigidity of epistemic hierarchy. For instance, if a society values mostly economic and social capital - both forms that are often acquired through inheritance -, it tends to have little social mobility. This is not necessarily the case with the third form of capital, cultural capital. Bourdieu makes a distinction between three forms of cultural capital: embodied cultural capital, objectified cultural capital, and institutionalized cultural capital. Embodied cultural capital consists of an individual's consciously- or unconsciously acquired knowledge and familiarity with the cultural context in which he or she is embedded. In the objectified state, cultural capital refers to the material possession of cultural objects, such as books or paintings. Institutionalized cultural capital, finally, refers to the formal recognition of cultural capital by an institution, e.g., an academic degree.⁹⁵

The case studies suggest an image of the long term history of capital in Dutch society broadly, and Dutch knowledge cultures in particular. That image, which is presented below, ignores the history of objectified cultural capital, because it is largely irrelevant and because discussing it would require a separate investigation focused on the history of private material ownership and its social and epistemic function. While that is not the objective here, it is worth mentioning that Huib J. Zuidervaart has traced the declining prevalence of private scientific collections, mostly in favor of institutional collections, in the late eighteenth century. He argues that private collections had initially been 'not only a tool for observation, demonstration, or experiment, [they] could also be used as a social vehicle'.⁹⁶ The disappearing of these private collections suggests that the importance of objectified cultural capital was diminishing in the knowledge culture that prevailed in the Netherlands in the years around 1800. In a more general sense, it shows how objective cultural capital has its own history that merits (further) investigation.

Focusing on the other forms of capital, the following picture emerges. Until the second half of the eighteenth century, the Netherlands (or, rather, Dutch Republic) was a class society in which social dynamics were primarily shaped by economic and social capital. Towards the end of that century this societal emphasis was diminishing. Instead, cultural capital in the embodied state was gaining prominence. In contrast to the membership of a certain class ('stand'), embodied cultural capital is *acquirable*. As such, the transition towards a societal

⁹⁴ Bourdieu, *The Forms of Capital*, 241-258; P. Bourdieu, *Les trois états du capital culturel*, 3-6; D. Sturkenboom, *Bourdieu in de provincie*, 16-41.

⁹⁵ *Ibid.*

⁹⁶ H.J Zuidervaart, *Cabinets for Experimental Philosophy in the Netherlands*, 13.

emphasis on embodied cultural capital signaled an increase in social mobility *and* a decrease in the rigidity of the epistemic hierarchy, thereby contingently constituting an instance in which social mobility and epistemic hierarchy develop in the same direction. All of this becomes manifest in the life De Man's father Johannes, who is of 'lower' birth, but is nonetheless able to penetrate 'higher' social circles, which facilitated his son's entry into the social and financial elite of Middelburg, as well as epistemic circles – the Provinciale Geneeskundige Commissie, the Provinciale Geneeskundige School, etc.. The same dynamic can be recognized in De Wind's identification with the strategic elite, because a post-class society with a certain amount of social mobility forces its elite to obtain embodied cultural capital in order to defend its privileged position.

A more general indicator of an increasing societal emphasis on embodied cultural capital – one that was already hinted at in the chapter on De Wind – was the popularization of the notion of *Bildung*, a romantic ideal of self-cultivation through cultural education.⁹⁷ The dissemination of the *Bildung*-philosophy went hand in hand with a flexible epistemic hierarchy. Phillips investigates the *Bildung*-notion in Germany, where it originated. She argues that 'late eighteenth-century authors used *Bildung* as a criterion to divide up the social world', and concludes that the qualification *gebildet* was awarded to 'a group that cut promiscuously across the divisions of the three-estate model of society'.⁹⁸ To be sure, the situation in the Netherlands was different; here, the so-called *Bildungsbürgertum* was less visibly present than in Germany, purportedly because it was not bolstered by an emerging state-controlled bureaucracy.⁹⁹ But insofar as *Bildung* did shape Dutch scholarship, it likely engendered a similar meritocratic impulse.

During the career spans of both De Man and Brakman, then, cultural capital continued to structure social relations. However, it increasingly manifested itself in the institutionalized, instead of the embodied, state. That transition, in turn, reversed the weakening of epistemic hierarchy that had occurred in De Wind's and Johannes De Man's time (while, as is explained in the last paragraph of this chapter, having an opposite bearing on social mobility). All of this is reflected in the life of De Man, whose impressive education matched the context of an institutionalizing climate, but also in the life of Brakman, whose difficult relation with his professional counterparts exemplifies the increasingly rigid epistemic hierarchy. On a more general level, the transition towards a societal emphasis on institutionalized cultural capital manifested itself, for instance, in the legal demarcation of occupational groups according to institutional standards, as described in the chapter on De Man. An additional example is the institutionalization of scientific research within universities (and the corresponding decline in the prestige of scientific societies), which is summarized by Klaas van Berkel as follows:

⁹⁷ For an elaboration on the significance of *Bildung* and the related Humboldtian model of education in the Netherlands, see Bert Theunissen case study about Jan van der Hoeven, in: Theunissen, *Nut en nog eens nut*, 37-56.

⁹⁸ Phillips, *Acolytes of Nature*, 63.

⁹⁹ A. Maas, Civil Scientists: Dutch Scientists between 1750 and 1875. In: *History of Science*, 48.1, 2010, 75-103.

*Rondom 1800 waren de universiteiten in Nederland niet veel meer dan de onderwijsinstellingen zoals ze ooit bedoeld waren. In de jaren veertig begon het beeld echter te kantelen. Onderzoek werd door steeds meer hoogleraren als een onmisbaar onderdeel van hun takenpakket gezien en het was niet ongebruikelijk dat studenten daarbij betrokken werden.*¹⁰⁰

Two aspects of this institutionalization process and subsequent increase in epistemic hierarchy require further elaboration. First, the historiography often regards this institutionalization process as, ipso facto, professionalization. Van Lunteren, for example, illustrates the ‘professionalisering van de natuurwetenschappen’ during the 1890s with a development that echoes, foremost, institutionalization: ‘men was niet meer enkel experimentator door aanleg of belangstelling, men was het door opleiding’.¹⁰¹ The construction of such an institutional barrier, however, does not equal professionalization, at least if professionalization is conceived from an actors’ perspective: as the emergence of an *experienced* amateur-professional dichotomy. On the contrary, this dichotomy does not appear to have arrived until the early twentieth century, during Brakman’s life. A discursive analysis on a larger scale – perhaps one comparable in approach to Ruth Barton’s review of the significance of professionalization in the language of Victorian science - is needed to establish this ‘delayed’ emergence of professionalization on a firmer empirical basis.¹⁰² However, the given that the categories ‘amateurs’ and ‘professionals’ did not yet feature in De Man’s experience of the scientific world is already indicative of its correctness.

Second, it is notable, perhaps even surprising, that the increase in epistemic hierarchy that eventually led to the emergence of an amateur-professional dichotomy did not entail a parallel decrease in social mobility, nor a decline in the societal appreciation for meritocratic principles. This is worth mentioning because it highlights the difference between epistemic hierarchy and general social hierarchy, and therefore shows the value of epistemic hierarchy as a separate analytical category. First, research by social historians has indicated that the overall social stratification of Dutch society stayed roughly the same between 1850 and 1940, while the total amount of upward and downward social movements actually increased somewhat.¹⁰³ Second, the second half of the nineteenth century actually marked the period in which a principle of meritocracy replaced a culture of friendship in Dutch science. Van Berkel describes that new ethos, which began emerging among scientists in the 1830s, as follows: ‘men wilde breken met de goedbedoelde gelijkheidsgedachte en meer letten op de verschillen in kwaliteit van standpunten en meningen, *ongeacht wie ze naar voren bracht*’.¹⁰⁴ Notwithstanding this upsurge in (the societal emphasis on) social mobility and meritocracy, however, the positions within the epistemic hierarchy – as much as they were increasingly determined on the basis of institutional status instead of pedigree, a shift that in itself signals the increase in social mobility -, became all the more solid and inflexible. This culminated in a strict amateur-professional dichotomy in the early twentieth century.

¹⁰⁰ Van Berkel, *De stem van de wetenschap*, 282.

¹⁰¹ Van Lunteren, ‘*Van meten tot weten*’, 134-135.

¹⁰² Barton, ‘Men of Science’.

¹⁰³ H.D. van Leeuwen, I. Maas, *Social Mobility in a Dutch Province*, 619-644.

¹⁰⁴ Van Berkel, *De stem van de wetenschap*, 279. Italics added for emphasis.

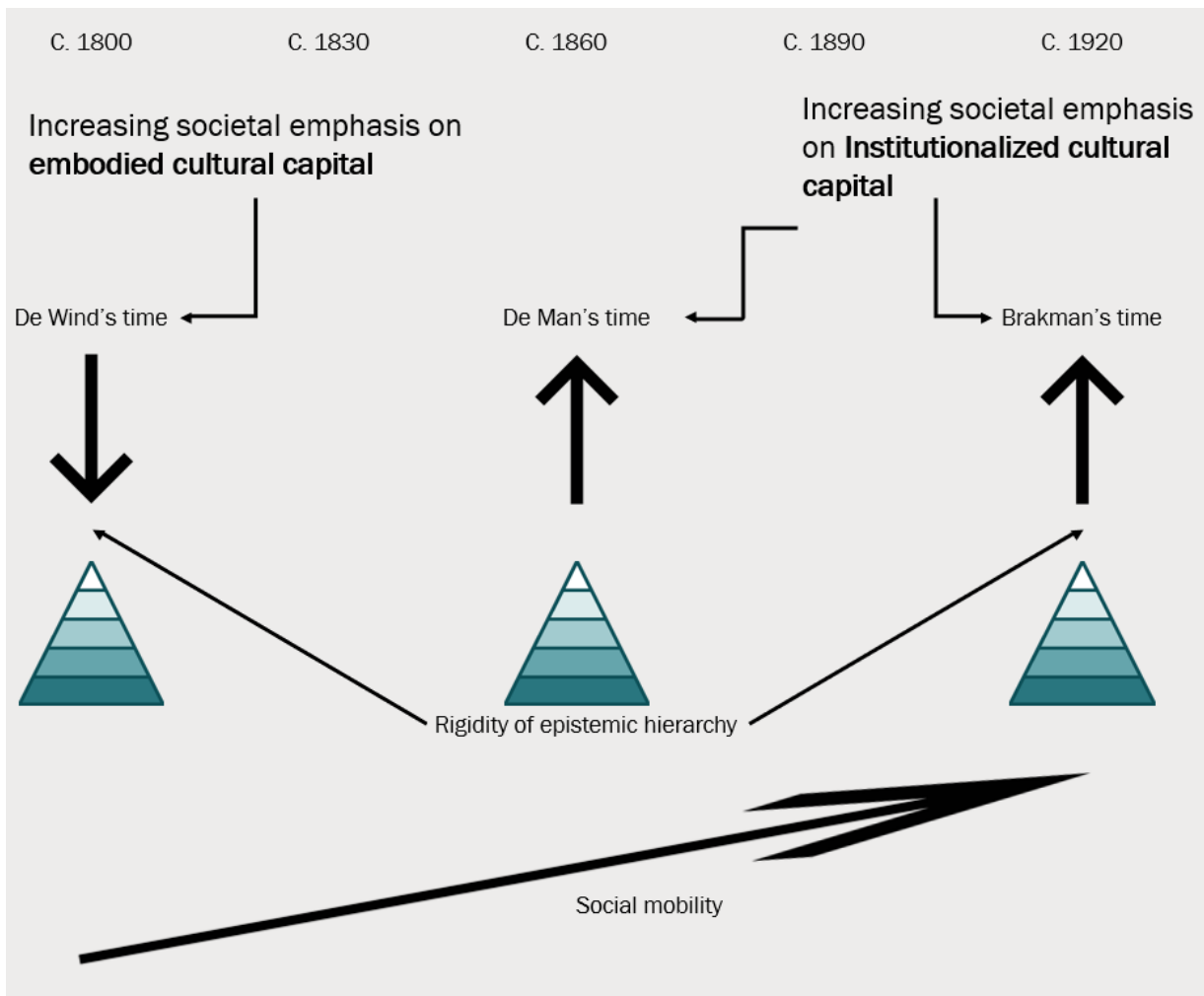


Fig. 4: schematic depiction of the long term developments that emerge from the case studies

These findings, which are depicted schematically in the figure above, can be reformulated in terms of two main conclusions. First, the dichotomy between amateurs and professionals emerged later than what is assumed in the traditional narrative of professionalization, namely in the early twentieth century, instead of during the second half of the nineteenth century. There was, however, a preceding process in which knowledge-based occupations were already being *institutionalized*, and this institutionalization is sometimes mistakenly characterized as the constitutive process of this dichotomy (i.e., professionalization). Second, this process of institutionalization made epistemic hierarchy more rigid, even if social mobility remained stable or continued to increase. To be sure, these two findings are *in principle* only applicable to the cases treated in this research, and even if the secondary evidence cited throughout this study suggests that they have a much wider relevance, they still merit further investigation. Importantly, the contingent appearance of these findings is, in fact, where part of their value lies; they confirm that, and illustrate how, supposedly universally applicable narratives of professionalization ignore differences in social and epistemic dynamics on the local, regional, and national level.

Epilogue: the Zeeuwsch Genootschap and the Professionalization of Knowledge

As already indicated in the preface, this research was initiated with a twofold aim in mind: first, to develop it into a thesis with which to conclude my masters in history and philosophy of science at Utrecht University, and second, to gather the material for an article in the commemorative essay collection that will be published in light of the ZG's 250th anniversary in 2019. With this second aim in mind, it is appropriate to conclude by highlighting the relevance of this thesis to the historiography of the ZG.

On the one hand, this relevance stems from the fact that the cases show that the ZG and her members were affected by, and reacted to, changing epistemic hierarchies. More concretely, the relation of the ZG to amateurism, professionalism, and preceding epistemic dynamics, is one of the central themes in the society's history. Future ZG-historians can benefit from this insight. On the other hand, these case studies underscore the continuing historical significance of the ZG, because they show how microhistories can be distilled from the society's diverse past in order to explore broader historical developments in which the society was embedded, and in order to nuance preexisting overarching narratives about those developments. Making these sources of relevance explicit, I hope, will help sustain interest in ZG and encourage historians to direct their attention the abundance of ZG-related archival material that still remains unexplored.

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