Gentlemen of Science

Scientific societies and personae during the professionalization of the sciences in the Netherlands, 1840-1876

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1. Introduction, theoretical framework and sources

Introduction

The general feeling of being detached from society has been felt by multiple groups which some would call the 'elite'. The old democratic left political elite in the United States, as Slavoj Zizek commented on the American elections, has been out of touch with 'the anxieties and fears of ordinary people'.[1] This feeling of 'detachment' seems to plague the universities as well. The main goals of the initiative 'science in transition', started by academics, is to ameliorate public understanding of science and its stakeholders, thus implying that there is a divide between the practice of science (or a part of the intellectual elite) and society.[2] In another take on university education, Bert van der Zwaan has argued that if nothing is changed about privatization policies in university education, the university will become too elitist, causing a dual (educational and economic) social partition between the wealthy and the less wealthy.[3] Whether one agrees with these sentiments or not, the discussion is there.

Another important discussion regarding science is being conducted as well: what is the background of the many specialisations of science, and is the way the sciences are organised desirable? Tackling this question historically, Rens Bod, Jaap Maat and Thijs Weststeijn state that the divide between the humanities and the sciences is a very recent one, and that despite this divide, there was many 'interdisciplinary' research incorporating insights which crossed disciplinary boundaries between the early nineteenth and the early twenty-first century.[4]

All these mentioned positions on the reputation of science (and intellectual elites in general) today imply their own favoured 'kind' of scientist or intellectual. I wish to research the persona, or images of the 'ideal' learned figure in scientific societies in the Netherlands in the period 1840-1876, the early years of professionalization in the sciences and humanities, providing a possibly interesting historical context to the mentioned discussions. I chose to research scientific societies rather than universities themselves, to enrich the perspective on the early period of scientific professionalization in the Netherlands. Although the specific

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[1] RT, '"Terrifying political earthquake": Slavoj Zizek shares his take on Trump's win in US elections', https://www.rt.com/usa/367065-zizek-interview-trump-awakening/ , November 15, 2016 (November 30, 2016).

[2] Science in transition, 'Over Science in transition', http://www.scienceintransition.nl/over-science-in-transition , date unknown (November 30, 2016).

[3] D. van Alkemade, '"Hoger onderwijs moet drastisch op de schop"', http://binnenland.eenvandaag.nl/radio-items/70623/_hoger_onderwijs_moet_drastisch_op_de_schop_ , November 28, 2016 (November 30, 2016).

[4] R. Bod, J. Maat and T. Weststeijn, 'Introduction: The Making of the Modern Humanities', in: R. Bod, J. Maat and T. Weststeijn (eds.), *The making of the humanities* III: *The Modern Humanities* (Amsterdam 2014) 13-24, 13.

context of scientific societies will be the main focus in this research, I will try to locate in which ways scientific societies engaged with the professionalization of the sciences in the Netherlands. I will consider two historical, two physical and two medical societies for a comparison between different scientific fields. For history, I chose the *Historisch Genootschap* (abbreviated to HG in the following sections) located in Utrecht and *Prodesse Conamur* (abbreviated to PC in the following sections) in Arnhem. For physics, I chose the *Natuurkundig Genootschap* (abbreviated to NG in the following sections) in Groningen and the *Natuur- en scheikundig genootschap* (abbreviated to NSG) in Deventer. In the case of medicine, societies seemed to be tied more strongly to professional schools and medical professionals. For medicine, I chose to analyse *Disce Docendus Adhuc* (abbreviated to DDA in the following sections) in Rotterdam and the *Genootschap ter bevordering van de natuur- genees en heelkunde* (abbreviated to GBNGH in the following sections) in Amsterdam. Both societies were located and tied to medical schools.

The persona is an illuminating concept to show how scientific society members presented themselves, as scientific societies needed certain kinds of members to exist at all. That 'certain' persons were necessary for scientific societies (and the wider scientific establishment) more interestingly points to the social mechanism of inclusion and exclusion. To include desired virtues, attitudes, behaviour, bodies, et cetera, is also to exclude those who were undesirable within scientific societies.

By looking at the scientific societies of different disciplines in the sciences and the humanities, this research aims to discover similarities and differences between practicing various sciences in different scientific societies. What this research will not provide is an extensive analysis of the contemporary problems mentioned earlier. The only argument made is that the historical context I will offer can serve as a possibly illuminating background on these issues. This is not to claim some fully 'objective' position towards these problems, but to merely claim that this research is not the place to discuss these issues extensively.

The main question I will try to answer is threefold: how did scientific societies in the Netherlands 'do' science, how did these practices relate to the professionalization of the sciences, and what kind of persona did the (changing) practices of the scientific societies imply? In its turn, as we already contended, these favoured personae also implied who were 'unfavourable' persons within the scientific societies. Moreover, despite the main focus being the practices of scientific societies, we can hint at relations between academic disciplines, possibilities for further research, as well: for example, was there something like a 'physics envy' as Alan Tapp concludes on 'soft science' nowadays, in the sense that the 'scholarliness' of a discipline takes physics as their point of measure?[5]

The periodization of this thesis is based on two considerations. Firstly, some of the scientific societies were founded in the 1840s (the HG) or underwent significant changes (PC changed its wide focus of

[5] A. Tapp, 'Physics envy', *Marketing intelligence and planning* 25-3 (2007) 229-231, passim.

literature and natural science to literature and history in 1849) in this decade. Secondly, in 1876, with a new law on higher education, universities were obliged by law to 'produce' professional academic researchers instead of broadly educated intellectuals. In a sense, the new education law of 1876 (arbitrarily) marks the end of the 'early history' of scientific professionalization in the Netherlands.

Theoretical framework

In this section, I will address three important theoretical issues. The first theoretical issue is the conceptualisation of what a persona is. For this, I would like to use and criticise Amartya Sen's conceptualisation of 'identity' as found in his book *Identity and violence*, by which I also claim that the persona indeed is a form of identity. Persona, as shortly defined in the previous section, is an 'ideal-type' identity, which necessarily means it is not an individual identity and thus that it in a sense transcends the individual. We say, for example, that historian (X) 'embodies' the ideals of a professional historian, meaning that the ideals are not just that of historian (X) but possibly also of many other (aspiring) historians, and that an actual professional historian only materializes when one puts the identity of 'the professional' 'on his body' (as I will claim later, more strongly, this materialization is also necessary for the persona to exist at all). Sen discusses individual identities in his book, but also elaborates on the formation of group identities. If we accept that a persona of 'the scientific society-member' can become visible by both (self-)identifications of individuals and by comparing different identifications by different people claiming to belong to the same, in this case, scientific society, then Sen can provide insights which are also useful for researching personae.

Immediately in the prologue, Sen puts his main thesis forward in very clear language: 'A solitarist approach can be a good way of misunderstanding nearly everyone in the world.'[6] This 'solitarism' is the belief that human beings can be categorised according to their allegiance to one single group. Against this, Sen poses what I would like to call a 'multiple identity theory'. As Sen puts it: 'in our normal lives, we see ourselves as members of a variety of groups – we belong to all of them.'[7] Later in his book, Sen criticises Samuel Huntington's solitarist worldview of a 'clash of civilisations', which is 'founded on the presumption that humanity can be pre-eminently classified into distinct and discrete civilisations.'[8] Herman Paul also acknowledges that a scholarly persona can be comprised of multiple identities: he defines scholarly persona as '*models of scholarly selfhood*, or as models of abilities, attitudes, and dispositions that are regarded as crucial

[6] A. Sen, *Identity and violence: the illusion of destiny* (New York 2007) xii.
[7] Sen, *Identity and violence*, xii.
[8] Ibidem, 11.

for the pursuit of scholarly study.'[9] There are also many ways of 'being an academic', with many different possible personae.[10]

Second, Sen argues that identity is not just a matter of self-ascribing oneself to identities. We also, in certain cases, need to convince others of our identities. There is a possibility of a complete disjunction between the way we see ourselves and the way others see us. Some identities might even be considered irrelevant in order to demean others by ascribing a person to a single identity. Sen's example is an anti-Semitic attitude towards Jews. For anti-Semites, only the 'Jewishness' of a Jewish person matters.[11] In the second chapter, it will become clear that the 'new professionals' had to convince others of being experts in their field. Secondly, as will become clear in both the case of history and medicine, competitors in prestige were for example respectively 'hot-headed' or 'quacks', hence experts defined who were deemed not-expert in solely negative terms on some occasions. Personae of the professional created and needed audiences, but also boundaries of what was and was not 'expertise'.

Sen also identifies the role of social context and contingency in the role of multiple identities. His example is the vegetarian linguist going to a restaurant. At the restaurant, his vegetarian identity may be more important than the linguist identity. For this research, this insight matters in the sense that in some instances, professional identities were not as explicit and important in scientific societies as they were in academia (and thus relative to the social conditions of different places), which will be explained when the relation between professionalization and scientific societies will be problematized. Sen also identifies that (1) some identities may be more contingent than others, and (2) mere classifications might turn into important identities later. Here, Sen uses the example of people needing a large shoe size. When shoes would get scarce, these shoes would be harder to come by. Then shoe size, from a mere classification, would be able to become an important identifier instead, due to the possibly shared hardship of finding good shoes.[12] As goes for scholarly persona, identities (in this instance, 'large shoe wearers') are highly dependent on material contexts: persona are likewise not solely 'ideal' constructions, but ideal-types which rely strongly on historical conditions, as we shall see.

However, there is a possibility of a too strong relativism based on contingency. Belonging to a group might have a stronger influence on practices not directly associated with the operations of that group (in this case: belonging to a scientific society) than Sen describes here. Paul puts this as follows:

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[9] H. Paul, 'What is a scholarly persona? Ten theses on virtues, skills, and desires', *History and Theory* 53-3 (2014) 348-371, 353.
[10] Paul, 'What is a scholarly persona?', 364.
[11] Sen, *Identity and violence*, 6-8.
[12] Ibidem, 25-27.

[…] Scholarly personae are more than momentary instances of scholarly self-fashioning. They are not identical to an individual's "performance" of scholarly identity, but provide the coordinates within which such performances are recognizable as acts of scholarly self-fashioning. […] They never coincide with individual performances. they are better understood as ideal-typical models.[13]

The notion of 'self-fashioning' implies a self behind actions more than is present in post-structural philosophy like that of Judith Butler, when she states that 'gender is [only] doing'.[14] This is actually a problem which is also present in the famous dilemma of Theseus' ship. The paradox of the ship is that there was a ship sailing for a long time, and in the process, so many parts got replaced that the ship consisted completely out of replaced parts. Meanwhile, one of the sailors was collecting all the original parts and reconstructed the boat with the old parts. Which one is the original object? My answer would be that both ships share in the ideals of being the ship, without assuming Platonically that there is an 'absolute' ideal ship, but merely asserting that the set of traits associated with the original ship is ascribed to by both ships. Both ships perform being the ship, but they also refer to ideals of 'ship-ly' self-fashioning which transcend the individual experience of the single performance. Both ships are however dependent on the individual performances and historical contexts: they are both dependent on the materiality of their identity. This understanding of the different roles and development offer a criticism of a too strong emphasis on contingency in the works of Sen and Butler, but does not deny the importance of performances of identity and the materiality of identity and persona. It understands an identity, and thus also personae, as a fashioning of the self which necessarily occurs through several interactions with material contexts.[15]

The definition of personae given above also criticises a 'rational' understanding of a persona. Lorraine Daston and Otto Sibum for example, understand personae as 'a cultural identity that simultaneously shapes the individual in body and mind and creates a collective with a shared and recognizable physiognomy' and 'creatures of historical circumstance; they emerge and disappear within specific contexts. A nascent persona indicates the creation of a new kind of individual'.[16] The strong focus on the rational aspects of personae in these arguments becomes more clear when they claim that personae have 'Cartesian co-ordinates […] [which] cause things to happen in the world'.[17] In other words, the attitudes, virtues and performances which personae imply seem to 'steer' reality, whereas my claim is

[13] Paul, 'What is a scholarly persona?', 354.
[14] A. Halsema and M. Wilmink (eds.), *Judith Butler. Genderturbulentie*, I. van der Burg and N. Helsloot, (transl.) (Amsterdam 2000) 62-63.
[15] I do not claim here that 'identity' and 'persona' are synonyms, but merely that, as I see persona as a form of identity, what applies for the concept of 'identity' can to a certain extent apply to the concept of 'persona' as well, as I have hopefully argued successfully. Second, I leave any 'ontological' debates about how the 'inductions' of individual experiences relate to their eventual 'deductions' in the form of personae to further research.
[16] L. Daston and H. Otto Sibum, 'Introduction: Scientific Personae and Their Histories', *Science in context* 16-1/2 (2003) 1-8, 2-3.
[17] Daston and Sibum, 'Scientific Personae', 7.

different: personae do not 'steer' reality, but are dependent on reality. As I will try to show in this research, personae also implied certain practices like 'civilised' consumption of goods. Personae are necessarily 'bodily' when they speak of 'strength' and gender norms, and even socio-economic entities: as I will try to show in this research, the scientific 'experts', audiences and other members of the scientific societies were, either implicitly or explicitly, expected to be middle-class and to a significant extent economically affluent; 'professionals' were not just professionals because of their allegiance to attitudes and virtues, but also their allegiance to a job that had to pay. Moreover, the references to 'implicit' notions also refers to the fact that this understanding of persona also focusses on unintentional aspects of a persona: the well thought-out and rational subject Daston and Sibum imply, I will try to show, is also formed by more unintentional and less thought-out expressions.

Unintentional persona aspects imply that there are also less clear gestures signalling a persona. This also directly relates to the issue with how to research a source critically and what it entails to be 'critical'. Rita Felksi has recently argued that 'critique' has been defined increasingly as being 'suspicious' of the source. To put it more precisely: a 'suspicion' in the sense that the text 'hides' or does not mention something (whereas suspicion of 'deeper meanings' of texts is sometimes deemed 'old-fashioned'). Felski wishes to show that this understanding of critique has its merits, but also its limits: a text can be engaged in multiple ways, for example in depth (implying a more 'constructivist' view and 'coordinates') rather than in width (for example present in post-structural theory: that the constructed text implies an unspoken norm, for example heteronormativity, which could be seen as 'weak signals').[18] I agree with Felski here. Hence I will adopt 'suspicion-reading' and depth-reading alike, using it instrumentally when deemed necessary.

Perfect examples of describing both 'coordinates' and 'weak signals' through respectively depth-reading and 'suspicion-reading' is given by Mineke Bosch. She firstly focusses on the description of history as a 'social arena' by Bunna Ebels-Hoving, which she bases on Ebels-Hoving's explicit descriptions of personal experiences, which we can define as a 'depth-reading', scrutiny based on what the text 'tells'.[19] Later in her article, Bosch finds that Ebels-Hoving gives away personal details not in clear sentences but through 'glimpses and flashes' in her text: Ebels-Hoving was a grandmother (which pointed to an ascetic life: a grandmother is 'beyond' sexuality), a musician and knowledgeable in classical languages (pointing to genius and creativity), had no personal stakes in science and did not need science for her personal financial support (pointing to 'aristocratic' independence and impartiality). All these values and personality traits pointed to a persona of a 'trustworthy' scientist.[20] Here, instead of just arguing on the basis of what is said in the writings

[18] R. Felski, *The limits of critique* (Chicago 2015) passim.
[19] M. Bosch, 'Het "ik" van de historicus in *Geschiedenis als metgezel*', *Low Countries Historical Review* 127-3 (2012) 109-117, 113.
[20] Bosch, 'Het "ik"', 115.

of Ebels-Hoving, Bosch goes beyond the text and is able to find a persona 'hiding' behind (or rather 'outside of') the text. Here, through 'suspicion-reading', Bosch finds meaning behind several 'weak signals'.

A second theoretical issue is how to view relations between professionalization and scientific societies when engaging with the sources. Joris Vandendriessche names three criticisms regarding this question. Firstly, seeing these societies as passively supporting professionalism undervalues their sometimes lively contributions to the formation of 'professional' sciences in the course of the nineteenth century. Secondly, sociologically inspired historiography has downplayed the diversity of the, in Vandendriessche's case, medical profession, and has been seen as letting too much presentism into their picture, i.e. the dominant position of the medical profession as having 'developmental steps' in the past. Third, the criticism on the too homogenous presentation of the medical profession in sociologically inspired research has led again to a too one-sided story of one group of physicians (public health professionals) as having their own set of practices differing from those of the medical elite, but seeing this group as a prime example of all nineteenth century physicians (which was not true: it was part of a trend which dated back to at least the eighteenth century). The question is, then, according to Vandendriessche, how to view scientific societies as spaces of science in their own right, and not as agents of professionalization.[21]

What I hope to show in my research is that, even when viewing scientific societies in their own right, they cannot be seen separately from the processes of professionalization when considering the second half of the nineteenth century. Moreover, Vandendriessche himself states that societies did have the role of a place where scientific standards were met. In emphasising the dynamic concept of what 'science' meant (through discussion and agreement), he claims to be able to surpass the earlier mentioned problems in historiography of medical scientific societies.[22] Yet, that does not make the 'agency question' illegitimate: certain agents would have certain roles and certain amount of power in the process of professionalization. Hence I would like to define the role of individual societies as unique spaces engaging with the professionalization processes at different moments and in varying degrees.

The last theoretical issue is to give a definition of professionalization. First and foremost, 'professionalization' will be treated as an umbrella term describing processes of specialization, questions of expertise and authority in scientific knowledge, and the formation of professions in accordance with this intellectual authority. The term 'professionalization' is thus not an actor's category, but a historian's category.

More precisely, the definition of professionalization I will handle in this research is that professionalization in science was a process in which scientific knowledge specialized increasingly, in contrast

[21] J. Vandendriessche, *Arbiters of Science. Medical societies and scientific Culture in Nineteenth-Century Belgium* (Leuven 2014) 9-18.
[22] Vandendriessche, *Arbiters of Science*, 18.

to the widely educated scholar we will encounter in this research. This specialized knowledge was (and still is) a guarantee of expertise, an expertise which had to be proven and performed, as it was not readily accepted by everyone, as we shall see. Exercising this kind of expertise also implied an authority over the claimed knowledge field: the specialized expert was an 'authority in his field', as the common expression goes. Lastly, exercising this authority eventually had to lead to a profession, taking the term 'professionalization' quite literally. What I hope to show in this research is that the university is not the only place where the processes of professionalization in science can be studied. This will enrich our view on the history of scientific professionalization in the Netherlands.

Source material

The largest part of my source material will consist of the archives of the scientific societies containing mostly regulations, notes on meetings and discussions, and correspondence. It is contended that these 'inner' workings of an academic society can shed light on desired behaviour, which could tell more about what made a 'good' society member. Where possible, I considered publications of societies as much as possible. I incorporated commemorations (historical reflexion always tells something about the one writing it), research supported by (mainly historical) societies in books and journals, and tributes to scientists or honorary members (of course, these tributes emphasised what it meant to be a 'good' society member or academic). Especially in 'specialist' publications, other norms were present than within societies.

Pieter Huistra's explanation of 'meeting points' in historical societies corroborates the thesis that academic norms were relative to their context. In the case of historical research in the Netherlands, Huistra describes two major 'meeting points' where all who were interested in history could meet one another outside their usual working sphere: historical journals and historical societies. The historical journals were a place where all those interested in history would come together to share their research. Indeed: the contributions did not necessarily have to come from academics. The only criterion was that the knowledge in a text was specialist. These places of knowledge exchange were places of 'dry history': only the knowledge itself was important. This was very different within the historical societies. Here, history came to life much more: issues were being discussed, networks of (mainly academic) specialists developed, and passed away members were commemorated to solidify the identity of the society. These networks were kept active mostly by a select group of 'core members'. Moreover, as was the case with the entire public sphere: the sphere of the historical society was specifically male, which correlated with the sometimes strongly gendered

understanding of subject (male) – object (female, for example sources as 'virgins' or 'princesses') relations.[23] Thus to understand the personae constructed by scientific societies, it is interesting to look at both the inner processes of the society and their communication to the outside world. The possibilities of different (unwritten) codes of behaviour in different circumstances, of these codes referring to one persona or different facets of the same persona, or the existence of competing personae, are all considered.

Terminology: 'scientific' societies, 'burgerlijke' *intellectuals and* 'gezelligheid'

Three terms used in this research require more explanation. First, I will use the word 'scientific societies', yet in this research, 'scientific' is a translation from the Dutch 'wetenschappelijk'. 'Wetenschap' is mostly the direct Dutch translation of the English word 'science', but the English word has a very strong association with the natural sciences, while for disciplines like history, the word 'humanities' is mostly used. In Dutch, the term 'wetenschap', which could literally be translated to a kind of 'craftsmanship' of knowing, can mean both the humanities and the sciences, due to the conceptual width of the word. When the concept 'scientific societies' in this research is used, it will mean the same as the Dutch word 'wetenschap', so referring to both the humanities and the natural sciences.

Second, the term '*burgerlijke* intellectuals' will not be used often, but it is an important concept signifying the societal place of the societies and actors considered in this research. The most direct translation would be 'bourgeois intellectuals'. Despite the fact that the considered individuals mostly did belong to an elite in society which could be described as 'bourgeois', this term over-emphasises purely economic relations and does not cover the socio-cultural values associated with *burgerlijke* intellectuals enough. These *burgerlijke* values will be discussed in the following chapter in more detail. For now, it is sufficient to point out the choice for '*burgelijke*' rather than 'bourgeois' intellectuals, despite their close relationship.

Third, the Dutch word *gezelligheid* will be mentioned often in this research. There is no direct translation of the word, but 'gezelligheid', in a sense, both means 'cosiness' and 'communality' at the same time. It signifies being present in an entrusted environment where a group of people come together and express a comfortable community spirit, mostly also in a likewise comfortable setting in the material sense.

[23] P. Huistra, *Bouwmeesters, zedenmeesters. Geschiedbeoefening in Nederland tussen 1830 en 1870* (Leuven 2013), 61-90.

2. Setting the stage: Dutch scientific, medical and historical societies in their historical context

Introduction

In this chapter, we will look at the place of scientific, medical and historical societies in Dutch society in the mid-nineteenth century, and their relation to professionalization. We will first look at the 'stage': what did the process of professionalization mean for the disciplines covered? Second, how did the 'décor', the scientific societies, function on stage? Third, who were the members of the scientific societies, the 'actors', and what was expected of them? Last, we will consider that which permeated the entire 'script': the gendered definitions of the stage, the societies and the actors.

The stage: academic professionalization and positivism in the Netherlands

One of the most important philosophical ideas for specialisation and professionalization has been positivism. To Richard Olson, positivism is just one of many theories he describes as 'scientism': a term to 'indicate the transfer of ideas, practices, attitudes and methodologies from the context of the study of the natural world, which was assumed to be independent of human needs and expectations, into the study of humans and their social institutions, without imposing any judgment on the legitimacy of such an appropriation.'[24] Scientism includes for example Marxist theories, liberal political economic theories and policy and of course positivism. As Olson concludes, by the mid-nineteenth century many intellectuals and politicians were gradually incorporating scientistic theories in their work, with Auguste Comte's positivism being one of the most popular ones.[25]

Despite disagreements on what positivism could entail, Comte and many other academics did agree about the assertion that science did not end in the lab.[26] In order for learned men (not women) to use knowledge to the benefit of mankind, a moralization of the upper class was deemed necessary.[27] Interestingly, the call for moralisation was consonant with the elite ideals of moral probity and serving as moral role models, as we will see later in this chapter. Moreover, this again underlines the need to be useful for society, like many Dutch academics and society members also stressed.

Historians in the Netherlands were, just like Comte prescribed, supposed to be both 'objective' scientists and intellectuals engaged with society. Eva Supèr describes this as a paradox between history having

[24] R.G. Olson, *Science and scientism in nineteenth-century Europe* (Urbana 2008) 1.
[25] Olson, *Science and scientism*, 3-8.
[26] For discussions regarding for example the division between 'Great positivism' and 'Small positivism', see: J. Tollebeek, *De toga van Fruin. Denken over geschiedenis in Nederland sinds 1860* (Amsterdam 1996) 47-48.
[27] Olson, *Science and scientism*, 78-81.

a 'scientific' and a 'societal' goal. Fruin for example is known for his concept of the 'historical view', which required the historian to leave his own subjectivity behind as much as possible, to take every historical 'party' into account (its good and bad sides) in order to gain this historical view. Only then would one engage in 'impartial' history. Fruin would see an impartial view (meaning: not exclusively protestant or catholic) in seeing all parties as engaging in a 'national' cause. This, of course, places him strongly into the context of the liberal nationalism of a large part of Dutch politics at that time.[28] This shows how 'objectivity' and engagement with society were conflated. Huistra also emphasises that history was considered important for the present, for the emancipation of certain groups in society (like Catholics), for learning life lessons to both historian and reader, and for doing 'justice' to history. 'Just' interpretations of the execution of Johan van Oldenbarnevelt in 1619 were a case in point. History, in short, was supposed to be useful for society in the present.[29]

These ideals were voiced in a time of scientific renewal and amelioration of the state of science in the Netherlands. The natural sciences in the Netherlands, according to Klaas van Berkel, were rising up from the sombre state they were in during the first half of the nineteenth century. After the recognition of problems in science in the 1840s (extremely lengthy professorships, standards of being broadly educated leading to hefty amounts of tasks for teachers, a disdain for theory, and failing initiatives), the realisation came that something needed to change. Natural science modernised (theories were revised and improved) and professionalised, a process which more or less formalised in 1876 in the new laws of education. The Dutch university was to become a place of both education and research, and especially the role of research within the university increased. Yet, as Van Berkel shows, after 1876, much work was to be done to professionalize the universities further. In the first years of its existence, the new education law met with a lot of parliamentary resistance due to the risen costs of higher education (which eventually subsided in the course of the 1880s).[30] The laws of 1876 might be the signifier or even the formalization of a process, but not the conclusion.

Medicine was professionalising in the second half of the nineteenth century as well. William Bynum sees an increasing engagement between the natural sciences and medicine in the Western world in this period. 'Increasing' points to the fact that the engagement with sciences like chemistry was nothing new for medical scientists. What made the cooperation of disciplines so different was first, its intensity. Second, the way in which natural sciences were conducted and applied to medicine showed a change from speculative

[28] E. Supèr, 'Het recht der historische kritiek. Het 'Heiligerleedebat' (1868-1869) en de professionalisering van de Nederlandse geschiedschrijving', *Tijdschrift voor geschiedenis* 128-2 (2015) 245-268, 255-266.
[29] Huistra, *Bouwmeesters, zedenmeesters*, 185-221.
[30] K. van Berkel, *In het voetspoor van Stevin: geschiedenis van de natuurwetenschap in Nederland, 1580-1940* (Meppel 1985), 105-143.

experimentation to more materialist and positivist ways of conceiving how scientific experimentation should help medicine: statistics and natural laws were gradually replacing the speculation that supposedly characterised the use of experimentation in medicine before the nineteenth century.[31]

For the historical sciences, professionalization also meant 'academization' in the course of the late nineteenth and early twentieth century. The university became the most important place for historians to practice their trade. Despite the fact that places like scientific societies still mattered, the academy was 'the' place of professional history. Yet at the same time, the home became an important vocational sphere as well, which was not entirely new. What is interesting, is the persistence of the 'homely' background of the historical discipline until well into the twentieth century. This created a very double interpretation of the homely sphere. On the one hand, it was a private sphere of rest, comfort and trust. Yet it also increasingly (or persistently) became a sphere of work for the historian. [32]

Despite of the ameliorations in science due to professionalization, in medicine, not all medical scientists were happy with the strong positivist trend in medical science. According to Vandendriessche, in Belgium, gentlemanly science was seen as 'antidote' to the perceived over-emphasis on positivist theory and research, and an answer to the perceived challenge to gentlemanly authority by the 'medico-professionals'. It encompassed for example the older tradition of building a national history of medicine. Medical history also had other functions according to the gentlemen. It was, first of all, another exercise in positivist research, as Vandendriessche concludes that research in medical history was cast in the same positivist terms as the contemporary medical practices, a matter of finding true facts. It was an exercise of fact-accumulating just as was the case in medical research. Second, the gentlemen believed that students were too easily carried away by innovations and new theories in medicine. Learning the history of medicine emphasised tradition and the careful contemplation of new theories in medicine, fostering moderation in reaction and an insight in the processes of science. Third, it was contended by some that the 'old masters' provided the contemporary medical scientist with unique insights: the history of medicine was seen as a collection of observations which could still be useful to the reader and interpreter. Moreover, some gentlemen still regarded the wide education and background of earlier medical scientists, who were also capable of dealing with history as 'physician-poets', positively. In the second half of the nineteenth century, the commemorative practices focussed increasingly on contemporary heroes, hailing their 'scientificness', which became a new community pillar for the medical 'scientific' elite as opposed to the larger community of medical professionals.[33]

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[31] W.F. Bynum, *Science and the Practice of Medicine in the Nineteenth Century* (Cambridge 1994) 92-117.
[32] J. Tollebeek, *Fredericq & Zonen. Een antropologie van de moderne geschiedwetenschap* (Amsterdam 2008) 81-84.
[33] Vandendriessche, *Arbiters of science,* 274-285.

More problems along the road

The sciences did not only have to deal with problems within their own ranks. Trust in scientific expertise was not widespread in Dutch society. An excellent example of this was the position of the medical scientist. Frank Huisman asserts that Dutch academic medical experts were certainly not the only players in the field of medicine. They had to compete with alternative medicine, quacks, and the rising pharmaceutical industry. The legislations of 1865 (when Dutch parliament agreed to advocate by law to have one unified academic medical professional group and one unified academic pharmaceutical professional group to take care of the healthcare in the Netherlands) did not give the academic medical staff a monopoly in the field of healthcare. Academic medical experts actually experienced a lot of difficulty spreading the message that they were 'the' experts, and it is even fair to state that they did not succeed very well in the course of the nineteenth century. The new university legislations of 1876, demanding by law that universities would 'produce' professional specialist researchers rather than broadly educated scholars, which inspired the creation of a lot of sub disciplines, did not help either. Hence, the identity of the 'expert' might have been created, it certainly did not display itself in practice.[34] William Bynum also describes that doctors in other European countries had to negotiate with their patients and audience to gain credibility.[35] So even when people did visit doctors, the trust in expertise was certainly not a given.

'Professional' historians (as we will discuss later, the formation of history as an academic discipline, at least in the Netherlands, was a process which lasted well into the early twentieth century) were struggling with others for the recognition of their professional status as well. As Marita Mathijsen shows, academic history was not the only history practiced in the nineteenth century. Next to the 'objective' and 'professional' history, one could find romantic history (with a stronger emphasis on the literary side of a story), source publications (by editors), and literary writers who wrote for example historical novels. Moreover, any combination of the above mentioned kinds of historians was possible.[36] This shows that professional historians did not just struggle with others, but that they also had historians in their midst who engaged in 'non-professional' history.

In the United Kingdom, the male scientific elite was defending its standards not only against women (as we will discuss later), but also against other publishers and authors who were seen by the intellectual elite

[34] F. Huisman, 'Expertise and Trust in Dutch Individual Health Care', in: J. Vandendriessche, E. Peeters and K. Wils (eds.), *History and Philosophy of Technoscience* VI: *Scientists' Expertise as Performance. Between State and Society, 1860-1960* (London 2015) 173-190, 178-181.
[35] Bynum, *Science and the Practice of Medicine*, 93-94.
[36] M. Mathijsen, 'History Made More Scholarly and Also More Popular: A Nineteenth-Century Paradox', in: R. Bod, J. Maat and T. Weststeijn (eds.), *The making of the humanities* III: *The Modern Humanities* (Amsterdam 2014) 145-155, passim.

as spreading for example 'godless science' and bad knowledge. Moreover, some journalists openly admitted they knew little of science, but nevertheless referred to scientific knowledge when it affected societal affairs like politics. The pious elite men had to carefully construct their narratives and arguments to persuade the reader, and even the size and form of the publication were serious factors of consideration (for both elite and 'lower' publishers).[37] In short, the gentlemen were not the only players in the field, and scientific knowledge was used and communicated in many different ways and with different goals in mind. Building trust in scientific expertise was not just a problem for Dutch scientists.

A second problem, especially for physicists and mathematicians, was the job market. Remieg Aerts states that the job market for mathematicians and physicists was not very hospitable due to its narrowness.[38] Van Berkel asserts that the founding of technical schools in the 1860s in the Netherlands did provide jobs for mathematicians and physicists as teachers, but that as soon as the amount of students at technical schools dropped in the 1870s, their job market turned bleak.[39]

Historians (and other literary scholars) found their jobs for a large part through nation building, as the rise of nationalism in nineteenth-century Europe was accompanied by a system of cultural nationalism as well, which Joep Leerssen described as a 'cultivation of culture'. Every part of culture which could belong to a specific nation could be 'cultivated' to fit the nationalist narrative. Important people in this process were literary scholars, which could encompass poets, literary writers as well as historians and other academics concerned with products of the human mind. Also in the Netherlands, literary scholars were active in this cultural system, especially academics and poets. Moreover, many academics were literary writers, politicians and vice versa: there was no necessarily strict boundary between the different organisational layers of cultural nationalism. There was likewise no strict boundary between different nation-states, which created work for literators. As Leerssen argues, '[national] identity is a silhouette which is formed at its edges', by which he means that there were quite some cultural border-conflicts between nations on for example land claims and claims on certain works of literature being inescapably part of this or that nation.[40]

The development of professionalization in history was, besides engaging in writing 'national canons', in a sense similar to developments in medicine. Medicine adopted the theories and techniques of the natural sciences. Historians did not necessarily follow the tenets of the natural sciences, but they were clearly influenced by the natural sciences and a shared positivist philosophy. Robert Fruin, a prominent

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[37] J.A. Secord, *Victorian Sensation. The Extraordinary Publication, Reception, and Secret Authorship of* Vestiges of the Natural History of Creation (Chicago 2003) 46-61 ; Secord, *Victorian Sensation*, 191-122.
[38] R. Aerts, 'Bevoegde autoriteiten. Burgerlijke intellectuelen in de negentiende eeuw. Een portret', *De negentiende eeuw* 22 (1998) 72-95, 79.
[39] Van Berkel, *In het voetspoor van Stevin*, 136-138.
[40] J. Leerssen, *De bronnen van het vaderland. Taal, literatuur en de afbakening van Nederland 1806-1890* (Nijmegen 2011) 15-22.

figure in the professionalization of history and the first academic having a chair at the university solely dedicated to national history, was known to be influenced significantly by physicists.[41] Moreover, Tollebeek notes that in multiple western countries, the historical seminar was being compared with the laboratory.[42] It can thus be argued that the natural sciences did not need 'someone else', but that both medicine and history needed the natural sciences for recognition and self-identification.

The fact that the natural sciences became a standard for professionalization was a bitter irony. While natural scientists and mathematicians struggled to find a job, professionalizing disciplines like history and medicine wanted to be 'just like them'. This did, however, do nothing about the hardships of finding a job as a natural scientist. What was good was, apparently, not easy.

The 'décor' of the stage: scientific societies in the Netherlands and their relation to professionalization

How did the scientific societies fit in the intellectual landscape of the Netherlands? Let us first consider the NG in Groningen, which was founded by five law students and one medicine student from Groningen in 1801. During the nineteenth century, the society went through various name changes and fusions, of which the most interesting one is the name change to 'Natuurkundig Genootschap' in 1862, as from now on, it was decided that performing experiments within the society was no longer necessary. Only the communication of scientific knowledge itself was deemed important. Franck Smit, who wrote the introduction to the history of the NG, claims the reasons remain unclear. Throughout most of its nineteenth-century history, the NG did not do any research itself, but mostly reproduced or communicated existing knowledge. The return of experiment and the introduction of original research within the NG happened during the 1890s with the formation of a research branch of the society.[43]

According to Harry Snelders, other Dutch scientific societies in the nineteenth century tended to focus on communicating existing scientific knowledge and performing experiments displaying this existing knowledge as well. Creating scientific knowledge was left to the academics. Hence the success of societies was largely determined by the availability of academic expertise. It is the reason why Snelders states that in university cities, or cities with other learning institutions, societies tended to thrive better. After the first half of the nineteenth century, scientific societies were losing their prominent presence in Dutch intellectual

[41] Tollebeek, *De toga van Fruin*, 16-17.
[42] Tollebeek, *Fredericq & Zonen*, 54-55.
[43] A. Blauw and K. Wiese, *Een spiegel der wetenschap: 200 jaar Koninklijk Natuurkundig Genootschap te Groningen* (Groningen 2001) 9-25.

culture, a prominence which dated back far into the eighteenth century.[44] Snelders links the decline of activity of scientific societies to the professionalization and specialization of the natural sciences, causing science to become too difficult to fully grasp for the laypeople and thus less interesting.[45]

Mart van Lieburg's description of the history of the Rotterdam medical society DDA, founded in 1838, supports this argument. DDA had a strong influence on science until at least 1850. Yet after 1850, the first signs of stagnation were visible. In 1869, the society disbanded. One of the major reasons for the loss of interest was, according to the society itself, the difficulty of keeping up with science within the medical society.[46] It is however important to note that the perceived tasks of many medical societies were mostly very different from those of scientific societies. Due to the changes in the structure of medical science (professionalization and 'academization'), many medical societies changed from societies where science was being discussed and discussions being settled (as was common in the eighteenth and early nineteenth century), to places of 'cosiness' and social gathering for medical scientists (as became common during the second half of the nineteenth century).[47] While scientific societies focussed strongly on the communication of scientific knowledge, medical societies seemed to be turned much more inwards towards the profession itself, but both were in their own way affected by professionalization and specialisation.

Some scientific societies survived. The NG still exists today, and still describes as its main goal to communicate science to a wider audience. They nowadays have very little competition in doing so.[48] The question of why some societies did survive and others did not is interesting. Van Berkel, Lieburg and Snelders argue in the case of the Amsterdam medical society GBNGH, that the society adapted to changes in the sciences, of which the incorporation of the natural sciences within the departments of the society was a prime example. Secondly, the GBNGH was (eventually) situated in a city with a university, while many other societies were not.[49] Adaptability and proximity to a university seemed important conditions for survival.

Spreading knowledge was not the only task of scientific societies: some scientific societies were much more focussed on the discipline of their science. The GBNGH, for example, was seen as the place for all Dutch medical scientists and specializations to come together.[50] This reflected debates which were conducted

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[44] H.A.M. Snelders, 'De natuurwetenschappers in de lokale wetenschappelijke genootschappen uit de eerste helft van de negentiende eeuw', *De negentiende eeuw* 7 (1983) 102-122, passim ; Van Berkel, *In het voetspoor van Stevin*, 84-89.
[45] Snelders, 'De natuurwetenschappers', 118.
[46] M.J. van Lieburg, 'Geneeskunde en medische professie in het genootschapswezen van Nederland in de eerste helft van de negentiende eeuw', *De negentiende eeuw* 7 (1983) 123-145, 131-134.
[47] Van Lieburg, 'Geneeskunde en medische professie', passim. This thesis is also supported in: K. van Berkel, M.J. van Lieburg and H.A.M. Snelders, *Spiegelbeeld der wetenschap: Het Genootschap ter Bevordering van Natuur-, Genees- en Heelkunde, 1790-1990* (Rotterdam 1991) 118, and: Vandendriessche, J., *Arbiters of* Science, 342.
[48] Blauw and Wiese, *Een spiegel der wetenschap*, 6.
[49] Van Berkel et al., *Spiegelbeeld der wetenschap*, 57-58.
[50] Ibidem, 116-117.

in the 1840s in the Netherlands on the unity of the discipline of medicine. It was attempted to create a place where doctors, surgeons, obstetricians, and many other specialists could meet.[51] Along with this emphasis on unity, the professionalization of medicine through engagements with chemistry and physics were welcomed and strongly supported. Since the 1850s, it was the specific task of the GBNGH to ameliorate medical science itself.[52] The increasing engagement between medicine and natural science, and more positivist-minded medical scientists, led to the change of name of the GBNGH to the *Society for Natural Science, Medicine and Surgery* in 1870. That natural science was mentioned firstly in the new name was no coincidence and quite confusing for some. Some still regarded natural science as a helping hand for medicine, while natural science became the foundation of medicine in the course of the late-nineteenth century. The section of the natural sciences in the society even started printing their own journal, the *Monthly Journal For Natural Science*, which lasted until 1898. The last three decades of the nineteenth century formed a period of substantial growth of the society, with different sections in the society representing different sciences involved in medicine.[53]

GBNGH members also emphasised the importance of medical history. We find the same arguments for writing medical history as in Belgium: writing a national history or 'canon' of medicine, and using the history of medicine to gain insight in the practices of contemporary medicine. Due to the profound effect of the natural sciences on medical methods , medical scientists active within the GBNGH were no longer interested in the factual contents of the discipline in other times, but rather in the methods of medicine, which supposedly had teleologically matured from their 'child-like' phase.[54]

The Arnhem-based society PC was meant for professionals to a large extent as well. PC was a scientific and later specifically historical debating society meant for the intellectual and societal elite, which can clearly be judged from its early history (1792-1840).[55] The HG in Utrecht was one of the products of the realisation that in the early 1840s, the level of historical research was lagging behind other European countries, as was the case with the natural sciences. In the course of the decade, Dutch academic research underwent significant changes, and the quality of research grew. This created an uneasy position for the historical societies, as the place of historical research increasingly was academia. Through adaptation to the

[51] Ibidem, 102-107.
[52] Ibidem, 21.
[53] Ibidem, 23-33.
[54] Ibidem, 34-38.
[55] A.G. Schulte, 'Overal lieten zij hun sporen na. Grepen uit twee eeuwen geschiedenis van het Arnhems Historisch Genootschap onder de zinspreuk "Prodesse Conamur"', in: A.G. Schulte (ed.), *Arnhems historisch genootschap Prodesse Conamur, 1792-1992: overal lieten zij hun sporen na* (Zutphen 1992) 25-68, 31-40.

situation by reformulating the goals of the societies, many societies could live on.[56] After 1845, The HG was to become one of the societies which would survive: an organisation for 'scientific' practitioners of history.[57]

It was clear that the HG was aiming for more cooperation between different 'branches' of history. For example, H.J. Royaards proposed yearly meetings between historians and archivists, and wished to intensify contacts between those groups.[58] From the 1850s onwards however, not just professional historians could join the HG. Anyone with an interest in historical studies could join (as it would foster historical interest more). This historical interest, however, meant an almost exclusive focus on national history.[59] The HG was clearly incorporated in the nation building process. Moreover, as we shall see in the chapter dealing with the HG, the openness to those 'merely' interested in history, not necessarily the 'scientific' practitioners envisioned as members earlier, signified a move away from the wish to be a strictly 'scientific' and 'professional' society, which was not accepted by all members.

The HG also expanded their business outside of the walls of their own society. The HG wanted to keep the interests of history in the minds of those within the HG (by publishing the *Kroniek van het Historisch Genootschap* to keep non-Utrecht members updated on progressions within the HG) and outside of the HG, nationwide, as the HG concerned itself with for example the preservation of heritage and archives. The HG also published many historical sources, which mostly meant critical editions of those sources, and critical evaluations on what historical research ought to encompass. However, Leen Dorsman and Ed Jonker conclude that the value of their publications lay not so much in publishing sources but rather in fostering the consciousness that history mattered. Only after 1876 would the HG be more important to the (still) professionalising discipline.[60] Despite their lesser importance for the historical profession before 1876, they did foster historical consciousness in Dutch society.

PC was active in fostering historical consciousness as well. It is clearly documented that PC had close ties with the Arnhem Public Library from its founding in 1856 and throughout its entire existence through gifts of natural artefacts and books, and through personal contacts and involvements between PC and the Public Library.[61] There was also great care for material culture and historical artefacts. Through maintaining archives, supporting museums, and through engaging in multiple other activities in preserving

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[56] L.J. Dorsman and E. Jonker, *Anderhalve eeuw geschiedenis. (Nederlands) Historisch Genootschap 1845-1995* (Den Haag 1995) 5-8.
[57] Dorsman and Jonker, *Anderhalve eeuw geschiedenis*, 10.
[58] Ibidem, 12-13.
[59] Ibidem, 15.
[60] Ibidem, 15-21.
[61] H. Chr van Bemmel, 'Prodesse Conamur en haar twee "dochters" de Openbare Bibliotheek en het Arnhemsche Leesmuseum. Relaties tussen Prodesse Conamur en de Openbare Bibliotheek', in: A.G. Schulte (ed.), *Arnhems historisch genootschap Prodesse Conamur, 1792-1992: overal lieten zij hun sporen na* (Zutphen 1992) 127-152, passim.

the material culture of Gelderland, PC has maintained an active role in managing the historical artefacts of the province throughout its history.[62] Like the academic historians, they apparently felt the need to be of use for society. As we shall see within the walls of PC, societal questions also came to the fore increasingly through socio-political debates from the 1860s onwards.

The 'actors' reciting the script: prominent members of the scientific societies

Who were 'legitimized' to engage in science, and thus for a large part as main figures and educators in scientific societies, in the nineteenth-century Netherlands? First, the men of science (they were almost exclusively men) did not consider themselves 'intellectuals'. 'Intellectual' was a term only used (negatively) at the end of the nineteenth century. They were considered to be part of the 'religious and learned class', upper class society members who were deemed 'learned' one way or another. A university education, in most cases, was implied nonetheless.[63] University students were mostly of a high social standing and a wealthy background. The task of universities was, since 1815, to prepare the students for a life in the learned class. This also meant that there was almost no focus on innovative scientific research.[64] Studying was, in a sense, a socio-cultural luxury. Moreover, the social sphere of academia was very small: contacts were very personal and discussions hardly went beyond the individual. Even the estimated reading public, including 'people's editions' readers, did not go beyond 40.000, at that time about one percent of the Dutch population. Only after 1880 did political and intellectual culture extend beyond the higher classes.[65]

The largest group of learned men were 'literary figures': writers, academics, and to some extent journalists. Financial independence and education mostly determined if one could be considered a learned man. These values especially expressed themselves in the complaints about journalists who had to write in order to survive financially. Moreover, many journalists were considered polemical and hot-headed figures, implicitly opposed to the calm academics of the learned class.[66] This focus on intellectual modesty was also present in academic writing, which had to be a sharp, thoughtful and modest reproduction of traditional learning.[67]

As was the case with being part of the broad group of 'learned men', inclusion of those who were deemed professionals within more specific academic disciplines also meant excluding those who did not

[62] A.G. Schulte, 'Prodesse Conamur en de zorg voor de materiële cultuur. Van Geldersch Museum tot Gemeentemuseum', in: A.G. Schulte (ed.), *Arnhems historisch genootschap Prodesse Conamur, 1792-1992: overal lieten zij hun sporen na* (Zutphen 1992) 153-173, passim.
[63] Aerts, 'Bevoegde autoriteiten', 73-76.
[64] Ibidem, 76-77.
[65] Ibidem, 83-86.
[66] Ibidem, 79-83.
[67] Ibidem, 77-79.

belong in those ranks. In the late nineteenth century, Belgian historian Paul Fredericq was, for example, very clear about who were good and who were bad and thus repudiated.[68] It was a matter of who could and could not be trusted. Those working under and around him were supposed to be industrious, alert, persistent and steadfast. They also had to have a developed character or willing to develop one, and a certain enthusiasm was expected.[69] A prominent member of PC, Jan Willem Staats Evers (1828-1894), was remembered as someone who loved his research, but at the same time adopted a very distanced stance toward his sources, as a spectator of events, so exactly as having this mix of detachment and enthusiasm.[70] As was the case with medical scientists, this meant that a certain degree of attachment to the discipline meant detachment from everything outside of it, a certain amount of asceticism.[71]

The image of gentleman scientists in the United Kingdom, which was defended until at least the 1850's, was that of a man of decent formality, morality, respectability, lack of self-interest and openness, and thus fairly reminiscent of the ideals of the Dutch intellectual.[72] They ideally were descendants of established families. Secondly, they also had to be wealthy, because being a gentlemanly scientist meant living lavish and independent of the struggles for income, as was the case with the Dutch elite. This independence was intertwined with trustworthiness, disinterestedness and dispassionateness: all values associated with the ability to live solely for understanding the creation of God.[73]

Burgerlijke intellectuals in the Netherlands, those who tried to operate inside as well as outside of the 'learned class', mostly saw themselves as (moral) educators of the people, who operated within the power structures of Dutch society. That said, they mostly did not criticise those power structures. Many intellectuals rather were nation builders, developers of the national identity. Famous nineteenth-century thinkers like Multatuli who were very critical of Dutch society were exceptions. Careful philological and juridical criticism were the modes of criticism favoured by the majority of the learned class. It fitted very well with the positivist belief in a form of science which was merely built up of facts. Ironically, as Remieg Aerts notes, this 'factual view' eventually was one of the reasons Christian worldviews widespread amongst the old elite were declining in popularity after 1880, giving room to 'exceptional' and critical thinkers we now know as 'intellectuals'.[74]

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[68] Tollebeek, *Fredericq & Zonen*, *70*-71.
[69] Ibidem, 74-75.
[70] A.G. Schulte, 'Mr. Jan Willem Staats Evers (1828-1894)', in: A.G. Schulte (ed.), *Arnhems historisch genootschap Prodesse Conamur, 1792-1992: overal lieten zij hun sporen na* (Zutphen 1992) 199-210, 202.
[71] Vandendriessche, *Arbiters of science,* 295-301.
[72] Secord, *Victorian Sensation*, 403.
[73] Ibidem, 405-407.
[74] Aerts,'Bevoegde autoriteiten', 86-91.

Permeating the entire 'script': the gendered professional identity

What influenced every part of the stage we have described were the gender divisions found in many western societies throughout the nineteenth and (parts of) the twentieth century. The private sphere of the home was mostly seen as the feminine sphere of family life, while the public sphere increasingly became the space of men. This implies that women were in control over one sphere and men over the other. This is an implication which Tollebeek nuances in his description of the 'homely' work sphere of the historian. While it was indeed correct that the women in the historian's house mingled with the work of the historian as for example copyist or even as attendant of meetings of historians, the home became a working place for the man or men of the house. This meant that despite the fact that the private sphere was feminized, it, at least for the professional historian, was a place of work and rest for the man, centred around the man's needs, indeed a 'man's place'.[75] This division between a male and female sphere was also present in the medical sciences. Vandendriessche states that the only way the increasing distance between the feminine domestic and the masculine professional sphere could be crossed was during periods of mourning, when the widow presided over the heritage of the deceased husband and had to have contact with the scientific male circles. It was one of the few times both worlds met.[76]

Even in the work of one of the most important philosophers for the professionalizing sciences, in Comte's later writings on the 'Religion of Humanity', we find a reproduction of the mentioned gender divisions. While love and compassion were deemed important values, he saw one very particular source of those values: women. However, to see this merely as a positive evaluation of supposed feminine values leaves out important conclusions Comte had on the role of women in society. As he saw women as humans 'of the heart', that also meant that women were specifically tied to the sphere where compassion played a vital role to Comte: the private sphere. Women were, due to their loving nature, meant to nurture children. Paradoxically, this loving 'nature' was to be implemented in the public sphere as well, which supposedly was less compassionate than the private sphere due to its masculinity.[77] Traditional gender roles were thus not only present in the academic disciplines themselves. Moreover, the almost direct correlation with confining women to certain social spheres as Tollebeek and Huistra describe it is striking. It reminds us that the constitution of the positivist subject was not only determined by moral and intellectual categories, but also had a very clear gendered meaning ascribed to it.

[75] Tollebeek, *Fredericq & Zonen*, 99-109.
[76] Vandendriessche, *Arbiters of science,* 301-306.
[77] Olson, *Science and scientism*, 78-81.

Conclusion

As was already posited earlier, professionalization can thus be taken to mean many things. The four aspects of professionalization we already described appeared clearly in this chapter. Professionalization was *the construction of scientific expertise*, which was based, especially as we have seen in the GBNGH, on *specialized knowledge*. Both historians and medical scientists had to compete with others for the recognition of their status as experts in their field, and thus their greater *authority* than others in those fields. Physicists and the NG, on the other hand, did not encounter this problem. Their status as experts was largely unquestioned. Moreover, 'expertise' was defined in terms of resembling or incorporating the natural sciences, at least by historians and medical scientists. So despite their often bleak financial situation, they were the intellectual standard for expertise. Professionalization thus meant *the formation a professional identity*. As was visible in for example history, the ideal historian was a passionate and yet distanced observer of history, who was also engaged in societal affairs and cared to work for the benefit of society. Their commitment to the public sphere also signified their male character. As was the case with the natural and medical sciences, the identity of the scientist was mostly defined in male terms. Women were mostly barred from entering the scientific stage. The inclusion of specific kinds of men excluded women, and 'unable' men, from the scientific stage in academia as well as scientific societies. Moreover, those who did not belong to the *burgerlijke* intellectuals (the less educated, the poor, women etc.) were to follow the advice and wisdom of the men on the scientific stages, at least in the eyes of the scientists and high-ranking scientific society-members themselves.

More practically, professionalization also meant *the formation of professions*, based on the authority of being a specialized expert. Historians and historical societies found their jobs in preserving history and 'making' history to help build the Dutch nation state. Medical scientists, although through much effort and few success throughout the nineteenth century, were slowly becoming the doctors and healers of the same nation. Physicists had a much more difficult task when finding a job. The few jobs around were mostly in teaching. Only in the late-nineteenth century did the search for a job become easier.

In this chapter we have already seen that the scientific societies did have their role in professionalization, but also their own place in the intellectual landscape of the Netherlands, which cannot simply be reduced to having a role in professionalization. In the following chapters, we will look more closely to the activities of the scientific societies, how they were engaging with the processes of professionalization, and what kind of personae they produced. The first society we will consider is PC.

Part two: ‘small stages’ and ‘professional’ crowds. Dutch scientific societies close to the scientific microcosm

3. *Prodesse Conamur* in Arnhem

Introduction

On November 27 1870, a proprietor commented on PC that they were known as a society spreading 'knowledge and civilization' in a mode of *gezelligheid*.[78] As we will see, this image of PC was an image the members of PC themselves also cultivated. The goal of PC was, since 1849, the improvement of literature and historical studies. It was mainly a local society: PC clearly distinguished between 'strangers' and 'residents of Arnhem' who were not members (and could be introduced once per winter). Chairmen (they were most certainly men) and directors were chosen democratically.[79]

In this chapter, the notions of knowledge, civilisation and *gezelligheid* will be the most important ones. Civilisation through knowledge, in an atmosphere of *gezelligheid*, was the most important activity of PC. Throughout their mid-nineteenth century history, however, this notion underwent significant changes. In the following paragraphs, we will see how their change from a 'science and humanities' society to a specifically humanities-oriented society in 1849, and their change from a more 'formal' society characterized by lectures to a 'debating club' where theses were discussed in an orderly fashion from 1858 onwards, structured the 'civilization through knowledge' idea. This was also followed by a change in topics and tone. We will see a scientific society changing progressively into a socio-political 'debating club' with minor attention to literature and history. This change tells us more about the different personae present within PC in this period, as knowledge of course also needed its 'translators' and speakers, which was especially the case in socio-political questions. Before I will begin with addressing the changes in 1849 and 1858, I will elaborate more on the notion of 'civilization through moderation', which remained largely unchanged at least until well into the 1870s.

Underlining the notion of 'civilization' through knowledge, practicing literature studies and the sciences was considered the 'most noble concern of civilised man' in a speech in 1842, in celebration of the fiftieth anniversary of PC.[80] In PC, the 'sun of enlightenment and civilization' was shining.[81] At the same time, the speaker, Jacob Matthaeus de Kempenaer (working member and later honorary member of PC), already reproduced most of the values associated with civilization. He reassured the audience that his story

[78] Gelders Archief, 2055: Arnhemse historische vereniging Prodesse Conamur (GA, APC afterwards), 16, Brief over het huren van een lokaal te Arnhem ter oprichting van een leesmuseum, 27 november 1870 (author unknown).
[79] GA, APC, 2, wetten van het genootschap (1871) p. 1 ; 3. The statutes barely changed on these points compared to those in 1849, see: GA, APC, 2, wetten van het genootschap (1849) passim.
[80] J.M. de Kempenaer, *Redevoering over de beoefening der letteren en wetenschappen, de edelste bemoeijing voor den beschaafden mensch* (Arnhem 1842) 5.
[81] De Kempenaer, *Redevoering*, 10.

would not be read 'with stirring tone', as the 'resurrected enthusiasm of my younger years' had 'passed', as 'the experience of male years have given me the touchstone, to distinguish the content of human matters'. On the other hand, his 'own beliefs' were a 'guiding woman' in his story.[82] Not only does this display the value of moderation, but also the assertion that a male gaze can distinguish worldly matters, while personal (implicitly 'less objective') beliefs are described in female terms. It shows who was deemed capable of 'grown' reflection (a precondition for civilization) and who was not.

In the meetings, 'civilization through education' was a widespread belief. On February 3, 1840, learning the history of the 'fatherland' was defined as a 'school of civil virtues'.[83] Moderation was also expressed in the sense that education ought to aim for universal education, as it was contended that 'a one-sided development of bodily powers and abilities of the mind' would be 'disadvantageous' to the 'moral education of man'.[84] There were also discussions about 'the intervention of the government to foster moderation, thrift, and modesty' and language as a 'measure of civilization'.[85]

These values remained largely unchanged throughout the 1870s. On January 9, 1871, education was described as 'enlightenment' using 'moral models': 'who has science is truly great'.[86] During the debate on March 13, 1871, it was contended that 'immoral imagery' was only allowed when it instilled fear for immoral behaviour.[87] Morality was not just concerned with knowledge, but also with culture. Moreover, morality was thus not a given: thus had to be fostered and it could also be threatened. We will now turn to the exercises and specific contexts of civilization and moderation through knowledge throughout the mid-nineteenth century within PC.

1840-1858: from general scientific society to literary-historical society

Before 1849, PC was a society which tried to cover all academic disciplines. On the 8th of January that year, the members would look with 'attention, precision and concern' to the matter whether the tasks of PC needed modification.[88] A month later, with sixteen votes against two, a change from all academic disciplines to a specialization in literature and history was made.[89] When we look at the printed letter sent to all members (a new registration form), we get an idea about the justification for this change:

[82] Ibidem, 5-6.
[83] GA, APC, 7, 3 februari 1840, 12e vergadering van leden.
[84] GA, APC, 7, 30 november 1840, 2e vergadering van het bestuur.
[85] GA, APC, 7, 4e vergadering van het bestuur, 18 december 1840 ; 6e bestuursvergadering 11 december 1843.
[86] GA, APC, 9, Vergadering 9 januari 1871.
[87] GA, APC, 14, Gedrukt vergaderingsverslag 13 maart 1871.
[88] GA, APC, 8, 6e vergadering bestuur, 8 januari 1849.
[89] GA, APC, 8, 9e vergadering bestuur, 5 februari 1849.

The natural sciences have ceased to be an object of sole curiosity; in the meantime, she has taken the rank, which she deserves as a science, and as such demands serious research and exclusive practicing. […] If one wanted to keep her unified tightly with literature and history, with her current height, one would sacrifice the one to the other.[90]

Two things are interesting in this letter. Firstly, the emphasis on 'exclusivity' and specialization bears witness to one of the first steps of professionalization: the creation of specialized fields of knowledge in which one could gain expertise (the natural sciences were, after all, not an 'object of sole curiosity' anymore). Secondly, it seems that literature and history did not have that same status yet, as they do not get explicitly named as specialized fields. There is, however, a recognition that these fields are serious enough to pursue: literature and history needed to be studied separately, as otherwise, one would sacrifice 'the one' (the natural sciences) to the 'other' (literature and history).

The switch to literature and history instead of the natural sciences seemed to have a rather practical reason. Since a few years, PC had already taken the now formalized direction, as was stated in the printed letter from 1849 and visible in the strong decline in interest in any discipline other than literature and history during the meetings in the 1840s.[91] In the words of the board (J.W. Elink Sterk and Is. An. Nijhoff), the society 'responded […] to the changing demands of time'.[92]

Who were the civilizers and appreciators of knowledge within PC? When we look closer to the earlier mentioned speech in 1842, we get an idea of who the civilizers of PC were, and who were allowed in the *gezellige* sphere. According to Kempenaer, the identity of society member was the sole important signifier: 'Here we only know one kind of member'; class and ranks faded, as there was only an identity in the 'expansion of knowledge and refinement of taste'.[93] The world stage was filled with 'loud shouting' and 'insane running […] to satisfy our impure urges'.[94] But 'thou [seize] the touchstone of your unspoiled reason', 'calm' and truthful, and all earthly matters turn out to be 'vain'.[95] PC was the place for 'strict debates', refined taste, liveliness and diligence with an eye for weaknesses.[96] 'Thou escape that restless stage, to, come to yourself, in the silence of the reading room […] in the company' of other scholars to 'expand knowledge [and to] lay off many aberrations', to arrive at truth.[97]

Despite the implications of neutrality and equality, when we look at other sections of the speech, we clearly see a distinct class of people emerging which were allowed to moor the social island of PC. For

[90] GA, APC, 21, Standaardbrief voor aanmelding lidmaatschap, april 1849.
[91] GA, APC, 21, Standaardbrief voor aanmelding lidmaatschap, april 1849', ; GA, APC, 7, passim.
[92] GA, APC, 21, 'standaardbrief voor aanmelding lidmaatschap, april 1849'.
[93] Kempenaer, *Redevoering*, 20-21.
[94] Ibidem, 6.
[95] Ibidem, 7.
[96] Ibidem, 23.
[97] Ibidem, 7.

Kempenaer, the low amount of members indicated the 'excellence of the working environment', 'opened [to] many' and closed off 'for the everyday common people'.[98] In another part of the text, the boundaries are specified further:

'Where did thou find more pleasure: under the gothic arches, with beautifully dressed show-offs […] or at the homely hearth during zealous scientific research?' ; 'in the middle of a loud folk festivity […] or under the majestic tree, where the old Cato discussed matters of philosophy with three friends?'[99]

The first part of the quote obviously refers to upper class and aristocratic environments, while the second part of the quote refers to lower class environments, both in a negative way. This places the audience of Kempenaer, members of PC, in a specifically bourgeois setting. Moreover, this middle-class environment is supposedly both free of material excesses and the 'loudness' of folk culture. The bourgeois subject presupposed here is the reclusive and ascetic thinker which we will find in many forms in other scientific societies. The isolation associated with this persona was, however, a shared reclusiveness with other like-minded thinkers. At least the members of PC seemed to agree with their characterization.[100] Yet being able to afford the calm 'homely hearth' described above, in combination with the earlier mentioned 'acquirement of taste', ironically signified material wealth, presented in a dignified manner in order not to seem emotionally or materially excessive. As Thorstein Veblen could conclude in 1899 on this form of 'conspicuous consumption', 'excellence in eating, drinking etc. presently affects not only the manner of life, but also the training and intellectual activity of the gentleman of leisure. […] Closely related to the requirement that the gentleman must consume freely and the right kind of goods, there is the requirement that he must know how to consume them in a seemly manner.'[101]

The earlier mentioned 'eye for weaknesses' signified the specifically male background of PC. One of the weaknesses of the members of PC, according to Kempenaer, was the beauty of women: 'we would, by looking at you [women], see our experiments fail many times.'[102] Not only does this deny the entrance to PC for women, but it also prescribes a certain gender role for women. Women were meant to be 'beautiful' and not minding serious rational thinking, while the otherwise absent-minded men were supposed to do the hard and serious intellectual work.

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[98] Ibidem, 22.
[99] Ibidem, 8-9.
[100] GA, APC, 7, 2e buitengewone vergadering, 21 november 1842.
[101] T. Veblen, *The Theory of the Leisure Class. An Economic Study of Institutions* (London 1970) 64. Original version published in New York, 1899.
[102] Kempenaer, *Redevoering*, 24.

In this period of PC's existence, we find a society of male and (implicitly) bourgeois thinkers who distanced themselves from the 'noise' of society. The 'isolated ascetic' did not last throughout the remainder of the nineteenth century, however. In the following section, we will see that parts of the isolation were abandoned for a persona which was more committed to societal affairs, and that the ties of 'asceticism' were not abandoned, but loosened. It also meant that the focus on science and literature made place for a stronger societal and political focus.

1858: from scientific society to 'debating club'

From 1858 onwards, PC was increasingly meant to be a *gezellige* society. They tried to improve this in 1858 by allowing 'a glass of wine and a cigar' during the meetings, which would foster a 'more unconstrained and social tone' and a '*gezellig[e]* gathering'.[103] We see again, in Veblian terms, how the (bourgeois) suppositions of dignified and moderate ways of consumption found their way in PC, as 'wine and cigars' were not allowed, but '*a glass* of wine and *a* cigar'.

A 'comfortable' tone was clearly present in letters. The formal mode of communication to those outside the society (to prospect members, or to institutions about reservations for example) contrasted the more informal tone of letters to those within PC (missives, amendments or library messages).[104] A clear example of this is a letter of resignation for the function of head of PC on January 3, 1875, which was not written in a highly formal sense, while in for example the *Historisch genootschap* in Utrecht, these matters were handled quite formally. No evidence of indignation about this letter was found.[105] The fact that this was possible highlights the informal part of the social background of PC.

In the course of that same year, the lecture, the most usual form of knowledge-communication within PC until then, was abolished due to the too 'formal and time-consuming' character of lectures. Literature and science had to be fostered, but in a way which was 'pleasant and useful amicable' for all members.[106] L.H. Slotemaker, a prominent member, also liked to contrast a non-*gezellige* and 'genteel' exchange with a more comfortable one.[107] However, the 'debating society' which formed seemed, in terms of structures of debates, rather strict. Discussion statements had to be handed in before the next meeting.[108] Discussions themselves were strictly moderated. Everyone who defended the proposed thesis had to sign in to the meeting's list, and they could speak at a maximum of three times (with some exceptions like

[103] GA, APC, 2, Wetswijziging 'M.M.' (1858).
[104] GA, APC, 16, passim ; GA, APC, 21, passim.
[105] GA, APC, 16, Opzegging van het voorzitterschap, 3 januari 1875.
[106] GA, APC, 15, Verslag uitgebracht in de buitengewone vergadering, 1858-1859 (1859).
[107] GA, APC, 15, Ongedateerd verslag van L.H. Slotemaker (date unknown).
[108] GA, APC, 2, Wetten voor PC (1871) 6-7.

mentioning peculiarities). Non-signed-in respondents in the discussion could only respond in order when the speaker agreed. After that, answers and amendments to the thesis and responses could be given. Lastly, the speaker could retract his thesis when he disagreed with the modifications in the thesis after discussion.[109] Throughout the 1850s and at least until the 1870s, the reports on the discussions expressed the 'orderly' fashion of the meetings and discussions. The adversarial mode of discussion was exercised in virtually every discussion.[110]

The sense of 'order' and 'seriousness', despite the *gezellige* surrounding, also found its expression in the virtue of commitment. This was for example expressed in the change of article thirteen of the statutes in 1858. The mentioning of 'normal member[ship]' in that article was changed to 'working member[ship]', as the privilege to appoint honorary members could then be given solely to working members, who earned this privilege because of their 'time and assiduousness' given to PC. This status was now also explicated in article 28.[111] Participation also had to meet certain standards. One letter in 1859, sent to the board of PC in praise of Nijhoff's knowledge, summed up all the aspects which were deemed to be determining the quality of Nijhoff's analyses: 'fervor', 'regard' and 'thoroughness' in all matters.[112] A focus on working members did not mean that normal members were not expected to participate as well: in a convocation on October 18, 1875, it was stated that 'members are being remembered of article 17 of the code, determining that this first meeting of the societal year must be visited by all members living in Arnhem, forfeited on a fine of 0,50 guilders.'[113] It also showed that the rules were less strict for those who did not live in Arnhem. The 'forced locality' (due to practical issues such as travel time) of scientific societies was a condition which influenced virtually all considered scientific societies, as we will see on many occasions. Nevertheless, PC members were to give their best at committed participation, regardless of their function and location.

The changing environment of PC also signalled its epistemological and topical changes. The focus of PC expressed a move 'outwards' towards societal affairs, especially during the 1870s. We can reasonably doubt, however, that Dutch society was ever completely out of the picture. Even Kempenaer stated in 1842 that 'the state of the fatherland sparked concern' amongst the members of PC.[114] In the 1850s, the function of PC members as 'nation builders' was implicitly expressed in the usual preference of Dutch literature and (regional) history over other topics.[115] They could include minor topics, which were also published on by members, like a 'historical sketch of Dutch educational laws' which was published by one of the founding

[109] GA, APC, 3, Reglement voor de orde tijdens de verdediging van stellingen (year unknown, most likely from the mid-nineteenth century), 2-4.
[110] GA, APC, 8, passim ; GA, APC, 9, passim ; GA, APC, 14, passim.
[111] GA, APC, 2, Wetsherziening 1858.
[112] GA, APC, 16, Brief aan het bestuur over dhr. Nijhoff, 26 januari 1859.
[113] GA, APC, 23, Convocatie voor de vergadering op maandag, 18 oktober 1875.
[114] Kempenaer, *Redevoering*, 11.
[115] GA, APC, 8, passim.

members of PC in 1846, Adriaan van den Ende.[116] Despite their 'isolationism', PC member did already connect with concerns of the Dutch nation before 1858.

In the 1870s, this concern for societal affairs became expressed more explicitly. Moreover, we immediately get an insight in how class relations shape thought on society. Almost all discussion points in meetings during the 1870s were concerned with societal-political issues, with only a few exceptions. An interesting example is the issue of how to deal with socialist and communist ideas, especially important for the government: 'serious study [of these ideas] is pressingly necessary', which is not strange considering the French socialist and communist revolutionaries eventually forming the Paris Commune a few weeks later.[117] It is not strange, then, that the discussion on co-operations (which were, a majority agreed, ought to improve the condition of the lower classes not only materially, but also morally and intellectually) two year later was accompanied with a certain distrust towards workers.[118] Written on the back of the convocation for this meeting, it said that it might be a better idea not to allow (factory) workers into the co-operations (including their arrangements) and let them exercise influence on the co-operations.[119] PC served itself with a proposed hierarchy, in the sense that they wished to be the ones to decide on societal affairs and 'good' education.

Moreover, the distrust towards workers signified a social conservatism, in the sense that they as intellectuals were supposed to educate and determine the education itself, while the lower classes were expected to be educated within the boundaries set by the higher classes. It thus not only presupposed a hierarchy, but also the assertion that this hierarchy ought to remain intact. It also signifies a different notion of 'education'. As we have seen, education was a means to civilization, which implicitly carries the notion of transcending an 'uncivilized' state. Values of moderation were important to a well-educated society. In a meeting on November 24, 1873, the attendants agreed that 'wealth as result of civilization, is a blessing for all classes of society', but that 'excesses [will] lead to the downfall of a nation'.[120] Transcending the 'uncivilized state' did not mean a change in the social realm in terms of class 'emancipation', but a conformation to it, strongly differing from the distrusted communist ideas which Karl Marx for example had put forward: 'philosophers have hitherto only *interpreted* the world in various ways; the point is to *change* it.'[121] Relating these thoughts to PC, we see that the distrust of certain politics also sheds light on their (implicit) interpretation and application of the concept of 'education' and the relations of hierarchy and conservatism.

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[116] J.G. Frederiks en F. Jos. van den Branden, 'Adriaan van den Ende', in: *Biographisch woordenboek der Noord- en Zuidnederlandsche letterkunde* (Amsterdam 1891) 234, 234.
[117] GA, APC, 14, Vergadering van 20 februari 1871.
[118] GA, APC, 14, Vergadering 15 december 1873.
[119] GA, APC, 23, Convocatie voor de vergadering van 15 december 1873.
[120] GA, APC, 14, Vergadering 24 november 1873.
[121] K. Marx, *1)* ad *Feuerbach* (Berlin 1845) thesis 11.

The teachers of society were preferably still male, as the case of women's schools illustrates. The education of 'female youth' was supposed to be 'entrusted to a female director, assisted by a scientific man as advisor'. Classes were also supposed to be 'primarily taught' by men, while the rest of the director functions were 'entrusted' to women.[122] Women were thus apparently incorporated in the education system, but different from men, they were to be 'entrusted' with duties, an extra amount of trust which men apparently did not need. Moreover, where women were active, they were to be assisted by men. We see how a place of education for women became a 'contested ground' in terms of gender hierarchy.

In the course of the 1860s, and more strongly in the 1870s, we have witnessed a change within the society in two ways: 'informalization' and the increasing influence of the 'outside world'. Isolation seemed to be abandoned increasingly for a more direct engagement with societal affairs, and (implicitly) replaced with a sense of impartiality: PC members, as bourgeois male educators, were the ones who were supposed to educate society, and who were 'moderate' enough to do so. The informal character which was at least expressed by most PC members did get accompanied by a focus on participation which needed to meet certain standards. Moreover, aspects of the informal society, like the wine and cigar, were to be treated in moderation. The influence of asceticism was thus still present, but nevertheless weakened in regard to earlier decades. It signalled a different conception of *gezelligheid*: it did not only mean a communal spirit and arduous working environment but also increasingly a cosy and convivial setting.

The broader historical context

The societal role the members of PC envisioned for themselves in the course of the 1860s and 1870s resembled the self-image of academic and literary intellectuals which became widespread during the *Fin de siècle*. Leonieke Vermeer describes that 'a new societal type arose which was both independent and engaged': while scientists utilized positivist knowledge in debates on society and development, literary writers utilized a 'prophetic view' which allowed them to look across specialisms in order to make the perceived then-fragmented world 'whole' again. As Vermeer ascertains, this was not a 'classical' or 'anti-modern' notion, but a highly modern one.[123] While the context of *Fin de siècle* conditions was different from the mid-nineteenth century ones, we see that despite being highly 'modern', the notions of 'prophetic views' and 'impartial engagement' touches on significant aspects of the self-image of PC, and thus had a longer history.

PC's activities and presentation also related strongly to ideals which influenced Dutch cultural, political, and scientific societies in the second half of the eighteenth century. Wijnand Mijnhardt asserts that

[122] GA, APC, 9, Vergadering 13 januari 1869.
[123] L.K. Vermeer, *Geestelijke lenigheid: de relatie tussen literatuur en natuurwetenschap in het werk van Frederik van Eeden en Felix Ortt, 1880-1930* (Groningen 2010) 230.

these values were firstly expressed in spectatorial magazines. It was contended that man could only gain knowledge and virtue in the close like-minded circles of the group of friends and the (cultural and scientific) society, expressing man's 'natural sociability'. In these places, one would learn to tame passions, be freed from prejudice, and exercise virtue to develop 'natural capacities' through 'civilizing' sciences. This inspired the belief within later formed societies that it was necessary to create an 'own world', critical of the lifestyle of the higher classes and (supposedly) without a specific social or political 'colour': it was not about seizing power for the bourgeois members of society, but about achieving happiness within a natural and harmonic social order.[124] Specifically freemason and literary societies on the other hand, tried to experiment with removing social borders, while creating their own closed-off world, kept intact by a set of rules and (monetary) sanctions. However, later in the eighteenth century, most of these societies focused specifically on the middle classes of society.[125] The education of the lower classes later became one of the important tasks of scientific societies.[126] PC thus very much resembled eighteenth-century societies in their supposed 'non-hierarchical' societal structure and their role as bourgeois educators.

Later in the eighteenth century, political societies formed, which aimed at ameliorating the political structure of the state, with an emphasis on 'civilization' and equality of all members which could also be found in scientific societies. This strongly related to the Dutch (enlightenment) revolution at the end of the eighteenth century.[127] The 'civilizing' political engagement found in PC later in the nineteenth century thus also related to a longer history of political activity in societies. Moreover, their stress on commitment to the 'fatherland' also was deeply embedded in eighteenth-century societal thought.[128]

Conclusion: persona within Prodesse Conamur

With the structural changes within PC, we have witnessed a change in the persona conceptions which at the same time accompanied changes in intellectual focus. From the 'reclusive ascetic thinker' which roamed the environment of PC, who in a communal setting focussed almost exclusively on the 'elevated' knowledge of the natural, and later specifically literary and historical sciences, we witnessed a change towards the 'impartial arduous debater' dealing mostly with socio-political issues. Impartiality signalled the implicit assertion that rather than reclusiveness, engagement with society was deemed as equally important as the pursuit of 'elevated' knowledge (an assertion we already found amongst mid-nineteenth-century historians). The virtue

[124] W.W. Mijnhardt, *Tot heil van 't menschdom: culturele genootschappen in Nederland, 1750-1815* (Amsterdam 1987) 94-95.
[125] Mijnhardt, *Tot heil van 't menschdom*, 99-100.
[126] Ibidem, 111.
[127] Ibidem, 111-112.
[128] Ibidem, 107-108.

of arduousness still encompassed aspects of asceticism, hard work and moderation in comfort, but allowed for a greater role of comfort, leisure, and informal social contact in contrast with an almost exclusively ascetic conception of a thinker. However, both arduousness and asceticism implied a form of sacrificing personal comfort and leisure to be able to engage in science: sacrificing aspects of self, or self-sacrifice, is a value we will encounter throughout this entire research. The change from 'thinker' to 'debater' underlined the desire to spread knowledge to the lower classes, and the preferred role of knowledge in society, more strongly.

The continuities of earlier traditions was, however, also present in the changes in persona. To put it in somewhat Hegelian terms, the later conception of impartiality still carried the notion of moderate and thus elevated and civilized knowledge which was also found in the 'isolated' sphere. Arduousness still required hard and dedicated work just like an 'ascetic', and the debater was still required to deliver precise, accurate and 'elevating' knowledge. As we have seen, these conceptions did not get rid of contradictions. The old and new persona did maintain its contradictions in terms of openness versus a specifically middle-class and male setting, impartiality versus engagement, conservative 'elevation' through moderation and civilization of the lower classes versus social and political emancipation, and the virtues associated with hard work versus leisure. The new persona reproduced older contradictions, and produced new ones. The 'social island' which PC tried to preserve had to engage with the 'waves' of political, socio-economical and gender relations hitting on its shores.

Despite the presence of contradictions, PC presented itself very confidently. It was, after all, in both the scientific society and the 'debating club', a meeting place specifically meant for middle-class men, 'preaching to their own choir' despite trying to connect with the female and lower-class choirs. We will now turn to another scientific society with a small academic audience, which struggled more clearly with (societal) recognition: DDA in Rotterdam.

4. *Disce Docendus Adhuc in Rotterdam*

Introduction

DDA was very specifically a medical 'expert's society'. In the earliest statutes from 1838, it was stated that only 'strangers' who belonged 'to the profession' could join the society's meetings.[129] 'Stranger' was thus a solely spatial concept, just like 'exceptional member', as it merely signified a normal member moving outside of Rotterdam.[130] DDA was thus not just an expert's society, but also a highly local society. To make the demarcation complete: women were virtually absent in the society and its sources (besides from being patients). It was a society of 'learned men'.[131] Their stark demarcations were clearly visible in the size of the society: when the statutes were accepted, the amount of signatures of members numbered only seven; in 1866, it was stated in the statutes that meetings were held at someone's home, with a maximum of fourteen participants.[132]

DDA was a society which struggled for recognition throughout its existence, while still expressing a 'professional' identity. In this chapter, we will analyse what this professional identity encompassed, and how it had to be preserved in opposition to those who were not professional or 'scientific', of which respective main examples are patients and surgeons. Secondly, we will see in which ways their practices and organizational forms started to become out of touch with professionalization processes within the medical profession, such as specialization. This is a question which will return in the next chapter, when we consider the GBNGH in Amsterdam, a society which did clearly relate to the changes in the medical profession. We will now turn to the first issue as described above: what were the aspects of the professional identity DDA expressed, and how did they relate to those who did not fit that identity?

The persona of the medical professional in DDA

During their existence, DDA had a rather consistent view on what a 'good' member of DDA ought to be. DDA was above all a serious professional society, where 'accurate communication [on] and reasoning of the

[129] Stadsarchief Rotterdam, 100: Archief van het Geneeskundig Genootschap onder de zinspreuk "Disce docendus adhuc enz." te Rotterdam (SR, DDA afterwards), 9, 'Wetten van het Medisch genootschap opgerigt onder de zinspreuk: Disce docendus adhuc, quae censet amiculus (1838)', art 4.
[130] SR, DDA, 10, Wetten van het genootschap, 1852 art 27. This remained the same in the statutes of 1866 (as can be seen in the printed version found in this inventory number).
[131] SR, DDA, 6, Brief aan het genootschap, 19 oktober 1861.
[132] SR, DDA, 9, Wetten van het Medisch genootschap opgerigt onder de zinspreuk: Disce docendus adhuc, quae censet amiculus (1838) ; SR, DDA, 9, Wetten van het genootschap, 1866, opgesteld in 1866, art 5.

operation[s] […]' was of high importance.[133] Reinforcing this belief in accurate correspondence was the assertion that presenting texts was supposed to happen in a 'slow and clear' fashion.[134] The exchange of information was static and hierarchical, implying a passive audience rather than an actively participating audience in a more dynamic setting: in the same sentence on the mode of speech, it was stated that interruptions were only allowed when one could not hear what was said. Participation was expected, and not showing up or arriving too late rested on fines of respectively 0,50 and 0,25 guilders. These measures were quite often also carried out.[135] Working for DDA was on some occasions discussed in terms of (self-) sacrifice: contributions to the society in 1851 were being described as bringing 'offers' to the blossoming of DDA.[136]

Moreover, work within the society was to be of good quality. Exemplary were the norms presented for a good notebook:

'A notebook is supposed to be: an inviolable repository of noted happenings and spoken or written words. The unmissable demands are: truth, clarity, conciseness. The first may not be sacrificed to the last, but contrarily, the last is subservient to the first two.'[137]

Despite the irony that the last rule was followed so well that conciseness did indeed get sacrificed in abundance (if we look at the sometimes endless notes), it does show the demand for careful and accurate consideration of various factors. What is also interesting is the great trust put in documents which we will also see amongst historians, especially in the HG in Utrecht.

Friendly intercourse was apparently important to mention on some meetings, for example on July 10, 1862, when it had to be mentioned that 'the evening continued in friendly conversation'.[138] But even *gezelligheid* was a serious matter within DDA. During the commemoration of one of the former members, Hendrik Lage, on the 8th meeting in 1866, the 'many [expressions of] friendship' were remembered, and the 'thankful memory' of him is attributed to his 'manifold virtues and selfless friendship' in combination with his 'feverous and meritorious' membership.[139] Even the friendly gestures of *gezelligheid* were meant to be selfless, self-sacrificing and showing serious support of the society.

The *gezellige*, friendly and self-sacrificial member was also a medical professional, whose authority was both exercised through and enabled by moderation. It was exercised through determining the 'normal'

[133] SR, DDA, 3, 5e vergadering 7 maart 1850.
[134] SR, DDA, 9, Wetten van het Medisch genootschap opgerigt onder de zinspreuk: Disce docendus adhuc, quae censet amiculus (1838), art 30.
[135] See for example: SR, DDA, 2, 11e vergadering, 6 november 1841.
[136] SR, DDA, 6, Verslag over 1851.
[137] SR, DDA, 4, Notulen. This was written on the front page of the notebook.
[138] SR, DDA, 5, 7e vergadering 10 juli 1862.
[139] SR, DDA, 5, 8e vergadering 1866.

and civilised in medical reports which were occasionally published under the society's name in the *Nederlandsch tijdschrift voor geneeskunde*. A 47-year old female 'idiot' was described as having a 'noteworthy' skull, and together with her other facial features this produced a 'truly hideous appearance'. Above all, her 'little developed cognitive capabilities' were characterized by an 'animal-like gluttony'. Her appearance thus made her abject as a human. Above all, her 'animal-like gluttony' would implicitly point to an immoral 'non-moderate' mode of behaviour, which was also visible in her urge to 'laugh at everything'.[140] Doctors determined normality through normal, thus moderate, behaviour, and distance themselves from these traits, turning the abject features into a 'non-human object'.[141]

The 'animal-like' also points to an interesting distinction between animals, domesticated animals and humans. In another published medical report, a 'less elevated' subject of 'the sick animals' was treated. However, the animal vivisections did relate to human health due to the commonalities in animals and humans, which made it 'useful' again. This existential hierarchy was elaborated by making a distinction between wild and tame animals, in which wild animals were described as the 'uncivilized animal world'.[142] Domestication thus meant civilization: it maneuvered an animal away from the natural realm into the civilized human world. The above mentioned imposition of moderation by the professional subject thus gained a deeper foothold here: the distinction between civilized man and uncivilized animal gave civilization a complicated foundation in (anti-)nature, where civilization was imposed as a transcendence of the 'natural' conditions, expressed in normal moderate behaviour. Uncivilised animals and their associated traits were, in that sense, also made to be 'not-civilized-human' and strictly distanced from the civilized human observer.

The possibility to gain a moderate standard of good civilised behaviour also relied on a good physical state of being. During one meeting, the 'moral aspects of the deaf-mute, his defects, capacities, urges and character' were questioned.[143] If one did not have a 'normal' functioning body, morals and character were immediately questioned. This again distanced these bodies from the body of the doctor. It presupposed that the observer was a healthy, civilized person with a good character and body, opposed to for example the 'hideous' body of the 'idiot' we saw earlier.

The persona arising from these descriptions can be summarized as the 'civilized careful observer'. Civilization was a presupposition which also shaped the observations of the doctors, as we have seen. Yet it also was not very clearly defined, apart from an implicit reference to moderate behaviour and a healthy body

[140] Disce Docendus Adhuc, 'Verslag van de werkzaamheden van het Genootschap: Disce Docendus Adhuc etc. te Rotterdam, 1856-1858', *Nederlands Tijdschrift voor Geneeskunde* 4 (1860) 459-469, 466.
[141] I do not mean to imply here that 'normality' and 'moderation' are interchangeable concepts, but rather that when discussing behaviour, the concepts 'normal behaviour' and 'moderate behaviour' can, on some occasions like this, be very closely aligned.
[142] Disce Docendus Adhuc, 'Verslag van de werkzaamheden van het Genootschap: Disce Docendus Adhuc etc. te Rotterdam 1859', *Nederlands Tijdschrift voor Geneeskunde* 5 (1861) 321-327, 322-323.
[143] SR, DDA, 3, 16e Vergadering 24 sept 1846.

which enabled being civilized. It points to an unspoken kind of self-sacrifice which we will also witness in the following paragraph: self-sacrifice in terms of self-erasing in research. Self-sacrifice, in that sense, becomes a guarantee of objectivity: an observation without an observer can give the impression of a high degree of objectivity. As Lorraine Daston and Peter Galison put it: 'first and foremost, objectivity is the suppression of some aspect of the self, the countering of subjectivity. Objectivity and subjectivity define each other […]. The emergence of objectivity must tally with the emergence of a certain kind of wilful self, one perceived as endangering scientific knowledge. The history of objectivity becomes, *ipso facto*, part of the history of the self.'[144]

The observer within DDA was not only careful in observing but also in behaviour. Aspects of both friendship and accuracy were to be carefully weighed: to be friendly also meant to be self-sacrificing, virtuous, and arduous; accuracy was a careful consideration of truth, clarity and conciseness. We interestingly see a second meaning of self-sacrifice here: being friendly meant to be self-sacrificing in the sense that one would not get too selfish in order not to spoil the prosperity of the society and the group of members in its entirety. The 'civilized careful observer' was defined by self-sacrifice in amicability within the social circles of DDA, and within research by employing self-sacrifice as self-erasing.

Professionalism ensured that the subject dictating the norms associated with normality, moderation and civilization also encompassed these norms enough to be able to create solid knowledge and 'transcend' the discussed objects: a professional medical subject was not an 'animal-like idiot', an uncivilized animal or a deaf-mute person. All of these bodies and characters in a sense thus signified an anti-persona. We will now deepen this perspective, as the 'civilized careful observer' knew more anti-personae which could even threaten his (not her) position.

Anti-personae: the non-professionals

The first anti-persona we will consider is the persona of the surgeon, or more generalized, the 'non-scientific medical practitioner'. The problems surrounding this anti-persona also clearly related to issues regarding the professionalization of medical science. In this instance, it meant the incorporation of a basis in natural science and chemistry amongst medical scientists.

During the fourteenth meeting of DDA in 1848, thirteen points as an advice for a new medical constitution in The Netherlands were agreed upon.[145] Judging from one of the reports by DDA members, the main problem was the status and hierarchy of the different medical disciplines, especially the question

[144] L. Daston and P. Galison, *Objectivity* (New York 2007) 36-37.
[145] SR, DDA, 3, 14e vergadering 10 augustus 1848.

whether surgeons were to be considered scientists or not (to which they implicitly replied negatively).[146] They most likely referred to the 'design for higher education' which was presented by the state-commission Ewijck a year later. Mart van Lieburg states that besides a desired removal of the gymnasium from the list of higher education (it was to be defined as preparatory education for higher education from that moment on), the new demands described under the 'mastery of medical science' were of integral importance to the medical profession. Besides medical exams, students were now also obliged to take exams in experimental physics and chemistry. It was an attempt to end the partition between natural and medical science which had been agreed upon at the beginning of the century.[147]

If this only concerned higher education, then why the concerns on the position of surgeons within DDA? Van Lieburg describes that the partition of the natural and medical sciences did not seem to be fully honoured by the surgeon's educational schools and military medical school in Utrecht. In their own degree, they already incorporated the natural sciences in their education to some or larger extent. Moreover, surgeon's schools only required applicants to be able to read and write.[148] With this context in mind, in combination with ending the partition between natural and medical science, it is understandable that the members of DDA felt the need to defend their autonomous position, an expertise demarcated from other sciences, as we shall also see amongst some members of the GBNGH. Van Lieburg also described the hesitance, especially amongst some university-schooled medical scientists, to give up the strict partitions between natural and medical science, and between university and more 'practical' medical schools (of which the surgeon and military schools were only two of the many examples) throughout the nineteenth century.[149]

Within academic education, practical education (for example laboratory work) became more popular in the course of the 1840s and 1850s amongst a growing group of doctors. Instead of it being regarded with contempt, it was increasingly seen as a 'training' for observational capacities.[150] This however spurred discussions on what kind of education 'practical' education was supposed to be. The main problems were expressed in the assertion that *many* observations did not imply *good* observations (in earlier criticism, the sole focus on many observations was attributed to too many influence of experimental physics on medicine). The eventual acceptance of the natural sciences and practical education within medicine thus had its problems: the transition from a mere classification of diseases to carefully following an individual disease's process was, however fruitfully influenced by a strong focus on clinical education and precise

[146] SR, DDA, 6, Rapport van Goddard over de geneeskundige staatsregeling (date unknown).
[147] M.J. van Lieburg, 'De natuurkundige staatsexamens voor medische studenten en de constructie van een natuurwetenschappelijke basis voor de artsenopleiding tussen 1865 en 1880', *Gewina* 18 (1995) 139-180, 144-146.
[148] Lieburg, 'De natuurkundige staatsexamens', 80-82.
[149] Ibidem, passim.
[150] J.C.M. Wachelder, *Universiteit tussen vorming en opleiding. De modernisering van de Nederlandse universiteiten in de negentiende eeuw* (Hilversum 1992) 96-104.

observation (qualitative observations accompanying the higher quantity of observations), not without hesitations.[151]

The Ewijck-commission of 1849 also proposed that higher education should prepare students for a specific societal function. Yet the educational laws of 1815 (then still active) were supposed to educate the youth of the upper class elite to become a class of learned (men), distinct from the (lower) middle class and working class, and not to become vocationally trained but to gain cultural capital to be able to govern. These beliefs proved to be persistent at least until the 1860s, when prime minister Thorbecke got new educational laws through parliament, describing more or less the viewpoints on the vocationally specific societal function of university education within the 1849 commission.[152] As Joseph Wachelder concludes, the change from an educational system specifically based on social rank, to the centralized organization of education based on learning processes (classified by age or achievements), was a process only concluded to a larger extent at the end of the nineteenth century.[153] The hesitance of some doctors to give up the mentioned strict distinctions between practical schools and universities was thus also influenced, either implicitly or explicitly, by older distinctions based on social rank.

Unfortunately, we have very little information on the viewpoints of DDA regarding the surgeon's profession. But taking the discussions on the new design for higher education in 1849 in account, it becomes clear that DDA was to some extent taking a conservative position aimed at keeping the 'scientific' and 'professional' position in the hands of university-schooled medical scientists. Theory made the medical scientist a scientific professional, not practice. All patient descriptions referred to below were, for example, introduced as 'observations', 'stories' or 'patient histories', not as treatments (although it did of course describe treatments). Both medical scientists and 'practitioners' thus engaged with practice, but medical scientists distinguished themselves through their theoretical foundations and approach. We will return to this issue in the following chapter.

The analysed and treated patients form the second group of 'anti-personas'. Patients were passive in the narrative of doctors, who were described and subject to the authority of the doctor. For example, one of the members 'communicated an important *observation* of a small [kidney] stone in the urethra of a two year old child', and only after many efforts could the stone be removed. Yet the fact that the child was helped was most important: 'the child which suffered much beforehand, recovered quickly'. In another example, a clamp for surgery on a woman was removed, 'because she could not take the pain any longer'.[154] The doctor

[151] Wachelder, *Universiteit tussen vorming en opleiding*, 106-109.
[152] J. Bank and M. van Buuren, *1900. Hoogtij van burgerlijke cultuur* (Den Haag 2000) 265.
[153] Wachelder, *Universiteit tussen vorming en opleiding*, 79-80.
[154] Disce Docendus Adhuc, 'Verslag van de werkzaamheden van het Genootschap 1859', passim. Italics are mine.

decided and had all agency, but that did not mean that the wellbeing and condition of the patient did not matter at all. The doctor was, albeit minimally, compassionate towards the patient, and this engagement drew up the boundaries of objectification.

This did not mean, however, that the authority of the doctor went unquestioned or unchallenged. In a patient report in 1861, on a severe but successful child-birth procedure, it was commented that 'the woman felt that she was so well again, that she was already sitting on the third day without me knowing it. On this I had let her know my strongest disapproval and sent her back to bed forthwith.'[155] This breach of authority did signify the agency of the doctor: at the moment the authority of the doctor was denied, a good doctor would thus immediately command the patient back into a subordinate role. Yet it shows that the authority of the professional was not a given: it had to be enforced and performed.

In short, the passive role of patients reinforced the identity of the medical scientist as active professional subject and wielder of knowledge. The doctor knew best, and the patient was also not allowed to act on his or her own, at least in the doctor's description. As the last example shows, despite the 'all-knowing' self-image of doctors in these descriptions, some patients did act on their own.

The last example of an anti-persona was the judicially schooled in regard to autopsy of (murder) victims. This was not necessarily a negative kind of 'anti-persona', but more of a boundary definition between two kinds of expertise: the medical and the judicial, rather an 'other-persona'. For example, two doctors were helping with the autopsy of a maimed corpse of a child, to be 'helpful as professionals at the judicial inspection', a professionality enforced by accurate observations.[156] Their expertise was the autopsy or medical part of a murder investigation, while the expertise of those involved in law enforcement was to be found in the judicial part.

On another autopsy, it is commented that the 'judicial-medical [scientist]' cannot always present results with full certainty, and is thus sometimes 'forced […] to come to a doubtful judgement'. That is why 'it cannot be other than pleasant' when at certain cases one can come to a short and definitive answer.[157] Expertise was, in this example, certified by openness (on the doubts during certain judgements) and accuracy (the short and definite answer now possible). Both openness and accuracy also stressed the needs of being a 'careful observer' in their own way: one was only allowed to be short and definite when the observation was precise enough, and one should not present certainty when it could not be fully guaranteed.

Our last 'anti-persona' did not serve as a reference point of 'negative traits' (such as passivity), but rather as another, non-medical expert to which the medical expert had to define and reassure its own expertise and an accompanying working field, the medical-judicial, where this expertise could be exercised.

[155] SR, DDA, 8, 'Verslag van werkzaamheden over het jaar 1861', 8.
[156] Disce Docendus Adhuc, 'Verslag van de werkzaamheden van het Genootschap 1856-1858', 459.
[157] Ibidem, 462.

Professionality on the subject matter, strengthened by accuracy and openness, reassured expertise and the assertion that the medical expert knew his place in the judicial process. In this way, the described 'division of labour' also guaranteed the moderation of the medical expert in the sense of knowing one's boundary of expertise when it met the expertise of the judicial expert on the one hand, and not forgetting one's own expertise on the other. Moreover, the fact that this article, like all other articles considered here, was published under the header of DDA shows that it was these kind of experts which the society saw as its legitimate members.

Together with the contention that the doctor ought to be considerate of the patient, the medical scientist as a 'non-judicial expert' expressed the carefulness of the observer active within DDA, and the aspect of self-sacrifice in terms of not letting your own aspiration override those of others. The earlier mentioned self-erasing aspect of self-sacrifice present within the persona of the 'civilized careful observer' is clearly expressed in the medical research done by DDA members: we only see 'experts' and 'professionals', no character traits or other personal features of the observer and practitioner. DDA members, at least in research, seemed to truly be observers instead of 'human beings'.

'Outdated' practices and the rise and decline of DDA

As was already described earlier, despite the professional self-image amongst individual members and the society itself, DDA got out of touch with professionalization processes which were present in the discipline. In this paragraph, we will consider what kind of practices were starting to get outdated in relation to the modern medical discipline. In the following chapter, as said, this analysis will continue when we consider the Amsterdam society GBNGH, a society which stood much closer to professionalization processes.

The first outdated practices we consider are the 'joint observations'. The statutes in 1866 prescribed that the goal of the society was to engage in the 'communal practicing of medical science'.[158] This seemed reminiscent of earlier practices from the 1840s, when the activities of DDA primarily encompassed discussing literature and medical reports mostly from The Netherlands, France and England, and discussing observations, medical reports and analyses, of members or joint medical observations. This joint medical observation meant that the members of DDA would look to either medical specimen (like hairs) or patient observations together, although the latter did not occur very often.[159] In 1866, medical observations (either individual or joint) were not explicitly mentioned in the description of the 'template' for discussions: the 'communal practice' was mostly reduced to discussing new medical books or each other's medical reports.[160]

[158] SR, DDA, 9, Wetten opgesteld in 1866, art 1.
[159] SR, DDA, 2, passim.
[160] SR, DDA, 2, Wetten opgesteld in 1866, art 8.

The by then rather outdated 'joint' observations of specimen or patient observations ceased, and DDA changed into a 'forum' of shared medical knowledge. It formed a stark contrast with the increasing medical specialization which we will see within GBNGH, and a very strong parallel with the image of 'natural sociability' which was asserted within the communal practices of the eighteenth-century Dutch scientific societies mentioned in the previous chapter.

Related to these 'joint' practices is the second by then outdated practice and value of 'speaking as one', the very strong emphasis on consensus within the entire society. As was explicated in the statutes of 1838, differences amongst colleagues had to be evaded in 'normal collegial relations' in order not to disrupt the goal of the society. If differences of opinion broke out during meetings, the 'dissidents' had to await and accept the judgement of the other members. If they did not, they could be evicted from DDA.[161] This strong notion of consensus ties in clearly with the 'passive' and non-discussing audience which was assumed within DDA during talks, as was stated earlier. Doing science jointly thus also meant a broad consensus on the proceedings. Consensus was seen as a condition to fulfil the goals of jointly practicing medicine. Moreover, anyone disagreeing with the consensus was a 'dissident' from the consensus of the society. Interestingly, conflict was not denied in its entirety but seen as something for the 'non-collegial' sphere: it asserts that medical scientists indeed are more than just academics, as the non-collegial, non-academic social spheres were implicitly seen as influencing the scientists within DDA, but they were to be kept out of DDA at all costs. A broad consensus thus had to be defended from any influences outside of the consensus.

The values of like-mindedness and friendliness are values which we already encountered in both PC and the Dutch eighteenth-century cultural and scientific societies described by Wijnand Mijnhardt. Interestingly, the focus on friendliness and like-mindedness gained such a strong emphasis within DDA that members could even get ousted for breaking the boundaries of the consensus. Moreover, the strict social rules were, just like in eighteenth-century scientific societies, accompanied by likewise strict fines. In a sense, DDA not only expressed eighteenth-century values, it even seemed to stress and almost enforce the values around 'consensus' more strongly than in the eighteenth century. As Mijnhardt contends, conflicts on for example prize questions could arise often within eighteenth-century societies.[162]

Outside of the outdated values and practices DDA tried to uphold, the position of DDA in the modern scientific field was rather insecure. Already in 1842, two meetings were dedicated to the question on how to gain more acquaintance within The Netherlands, which led to contacting the *Amsterdamsch genees- en heelkundig genootschap*, *Vis unia fortior* in Hoorn, the *Provinciaal Utrechts genootschap van kunsten*

[161] SR, DDA, 9, Wetten van het Medisch genootschap opgerigt onder de zinspreuk: Disce docendus adhuc, quae censet amiculus (1838), art 16.
[162] Mijnhardt, *Tot heil van 't menschdom*, 108.

en wetenschappen and the Royal Dutch institute for the sciences.[163] In 1849, there was contact with the *Nederlandsche maatschappij tot bevordering der geneeskunst* which intended to merge with DDA, or rather to make DDA a part of the larger organization. On the second meeting in 1849, it was decided that DDA wished to remain independent, with the remark that they did pursue the same goals.[164] It did however underline their uncertain position.

Despite this uncertain position, DDA did play an important role in the founding of the first school for deaf children in 1853, in accordance with the 'German method', meaning that the children were being taught to read lips and talk rather than (solely) using sign language.[165] In the *Rotterdamsche Courant* of February 3, 1853, it was remembered how DDA organized fruitful debates on the education of deaf children and the possibilities of organization of the school for deaf children, using the German method.[166] A year later, DDA was remembered for laying 'the first seed for everything that has happened in relation to this institute.'[167] Here, their status as a society of expertise seemed to be unquestioned within their city.

The minor research on carbonated water and the possibility of the presence of lead in carbonated water in 1867 (DDA let two chemists research carbonated water samples of various suppliers, and they could not find a trace of lead), signified the declining significance of DDA during the 1860s: the research was only published in the *Rotterdamsche Courant* after it was sent by Dr. H.J. Sleurs, then secretary of DDA.[168] On January 4, 1869, there was a discussion on the wish to cease activities. Due to decreased interest in the society and the too strong discrepancies between contemporary medicine and the methods of DDA, it was decided to cease activities.[169] Indeed, the book of copied letters had its last entry already in September 19, 1861.[170] Thus in multiple aspects, the societal significance of DDA declined strongly in the 1860s.

Conclusion

In DDA, we can see a form of scientific society which turned virtually obsolete within the field of medical science. Despite the assertion that medical experts were at work within DDA, their working methods could not keep up with the processes of professionalization. Either scientific societies turned into purely *gezellige* social environments or into societies which related themselves more explicitly to professionalized sciences,

[163] SR, DDA, 2, 6e vergadering 22 maart 1842 ; 12e vergadering 14 juni 1842.
[164] SR, DDA, 3, 2e vergadering 18 jan 1849.
[165] Onderwijserfgoed, 'Het begon met gebarentaal', http://www.onderwijserfgoed.nl/content/het-begon-met-gebarentaal-0 , publishing date unknown (May 9, 2017).
[166] Author unknown, 'Rotterdam, den 2 februarij', *Rotterdamsche courant* 3-02-1853, 2.
[167] Author unknown, 'Rotterdam, 22 julij', *Rotterdamsche courant* 23-07-1854, 1.
[168] Author unknown, '[ingezonden stuk door H.J. Sleurs]', *Nieuwe Rotterdamsche courant* 09-08-1867, 7.
[169] SR, DDA, 5, 10e vergadering 4 januari 1869.
[170] SR, DDA, 7, Copij boek der correspondentie, passim.

organizing themselves in specialized working groups. The 'joint' exercise of medical science, just like the 'shared knowledge forum', were obsolete methods of doing science reminiscent of eighteenth-century practices.

The members of DDA were nevertheless describing themselves as medical experts, in opposition to their mostly perceived passive or 'uncivilized' study objects, or in cooperation with other experts in for example the field of judicial medical research. They were 'civilized careful observers' expressing the idea of practicing science civilized and in friendly company. Accompanying the civilized character of DDA members is the assertion of 'normality' for the observing subject: bodily dysfunctions and 'animal-like' traits in their study 'objects' were the deviants from the biological 'normal' and virtuous 'moderate', which were results of a transcendence of 'natural' or biological, 'animal-like' boundaries which the observer seemed to have achieved. Yet different from PC, being civilized was presupposed in DDA: members of DDA were not trying to civilize themselves further; they were *being* civilized.

The presupposition, or 'un-outspokenness', of civilization signalled one aspect of self-sacrifice for science: self-erasing. The other aspect was being friendly or considerate: sacrificing a part of your own aspirations in order not to spoil those of others. Self-sacrifice was thus both a vital trait in the persona of the 'civilized careful observer' and a guarantee of expertise.

As we have seen, the expertise of the DDA members and their accompanying persona had to be 'defended' against 'anti-personae', patients and surgeons (the medical staff which stood lower in educational and societal rank), or more neutral 'other-personae' found in judicial experts, which were simply other experts against which the medical scientist had to define his field of expertise. Patients and surgeons, in their own respective ways, were potentially (and sometimes actually) able to breach the authority of the doctor, either by refusing advice or by 'invading' the discipline which was, in earlier decades of the nineteenth century, reserved for an intellectual and societal elite. In the field of judicial medical science, they had to exercise their expertise in a moderate manner which would assert their working field, expertise, and the boundary of their expertise when they met with the judicial experts.

In 1869, it turned out that the expression and exercise of these 'professional values' were not enough to keep DDA alive. The many eighteenth-century practices within DDA progressively let the organization grow out of the boundaries and practices of professionalized medical science, against their wishes to be an 'expert's society'. We will now look to the GBNGH, a medical society which eventually did incorporate itself adequately in the professionalized practices of modern medical science, providing some meaningful contrasts with the practices of DDA.

5. The *Genootschap ter bevordering van de natuur- genees en heelkunde* in Amsterdam

Introduction

The GBNGH was, like PC and DDA, a 'men's place'. Standard letters were printed with the header 'sir', and in the statutes of 1840, it was specifically stated that only men could be proposed as members.[171] These men were also supposed to be professionals in their medical field: only those who had published on medical science could become a member.[172]

As will be described in the chapter, GBNGH members also had their unique views on what it took to be a good society member, which in many cases also immediately meant being a good doctor or a good medical scientist. The personae which come forward in this description also had to take a certain social role, both positively (for example in conforming to Dutch nationalism) and negatively (by defining professionality in opposition to 'non-professionals'). First, we will discuss both of these aspects. Second, the GBNGH also engaged significantly with the professionalization of the medical sciences, which most importantly meant two things: professionalization in the sense of specialization, and the increasing incorporation of the natural sciences in medicine. This triggered issues regarding the 'division of labour' in medicine, as the incorporation of specialization and the natural sciences required the restructuring of the medical discipline. Restructuring medicine in accordance with specialization also meant that the widely educated 'poet-doctor' was becoming an obsolete persona. We will see that in these debates, the persona of the doctor within the GBNGH, as well as older hierarchies described in the previous chapter, played their significant role in reshaping medicine. We will now look at the persona of the society member and doctor within the GBNGH, and its role in Dutch society, before we will focus on the issues of professionalization more specifically.

The 'headstrong doctors' and the non-professional 'folks'

The doctors within the GBNGH were supposed to be headstrong, persistent and uncompromising in their exercise of professionality. D.J. Koster commented in 1856 that people should let doctors give patients chinine during fevers, even when a patient might react over-sensitively to chinine. A non-fearful doctor would give his patients this effective medicine rather than 'some kind of folk- or secret cure.' Those doctors

[171] Gemeente Amsterdam Stadsarchief, 819: Archief van het Genootschap ter Bevordering van de Genees-, Heel- en Natuurkunde (GAS, GBNGH afterwards), 15, gedrukte brieven, passim ; GAS, GBNGH, 135, Wetten van het genootschap ter bevordering der heelkunde te Amsterdam (1840) 6.
[172] GAS, GBNGH, 135, Wetten van het genootschap ter bevordering der heelkunde te Amsterdam (1840) 16.

who would nevertheless deny this course of action ought to 'ask themselves the question, if they have healthy reasons for their abstinence [of chinine-use].'[173] More than just showing a doctor had to be headstrong, it also shows how this character trait implied a certain distrust toward the patients and 'folks' who were not a medical professional. A doctor had to stand above these 'folks', which is also reflected in the observing, indirect language used in patient descriptions.[174]

Doctors within the GBNGH wrote about and interpreted their patients in an objectifying way, as was the case in DDA. Connecting to the headstrong doctor who stood above the non-professional 'folks' and patients, these objectifying ways of description solidified the doctor-patient hierarchy and the assertion that doctors truly were experts. One exemplary objectifying description was of patient Antje de Jong, who passed away after a painful deathbed, to which G.E.V. Schneevoogd commented that he gave a 'precise evaluation' of the symptoms to determine the cause of death, evaluating both symptoms and doctor's assumptions.[175] Only the precise and professional observations mattered. What reinforced the doctor-patient hierarchy in a less objectifying way was the creation of the image of the patient's dependency on the doctor. In 1856, the description of the treatment of 'sufferers' of broken bones through plaster bandage was accompanied by images depicting a man with a rather sad look on his face, showing clear signs of agony and a weakened physique (as he is drawn in a semi-huddled position, see image 1).[176] The image of the professional 'knowing best' as standing above the patient in need reinforced the idea that patients needed the help of professional doctors, and it gave the hierarchy, instead of merely a subject-object (doctor-patient) meaning, a 'subjective' meaning in the sense of a helper versus the patient in need of help. In combination with the assertion of professionality through objectifying patient descriptions, it implicitly justified the hierarchical stance of the patient. Yet this narrative and hierarchy also determined which points of view were privileged. For example, in a list of questions for a research on nutrition in a mental institute, it becomes clear that the questions were merely meant for the personnel, not for the ones receiving the food.[177] The doctor-patient thus had a twofold function: justifying hierarchies and determining fields of interest.

[173] GAS, GBNGH, 1096, D.J. Koster, Iets over de onthouding van het gebruik van chinine bij zoogenaamde gastritische toestanden, enz. (1856) 329-330.
[174] See for example the patient descriptions in: GAS, GBNGH, 5, passim.
[175] GAS, GBNGH, 169, G.E.V. Schneevoogd, Historia Morbi Diagnosis Sectio Cadaveris en Epicrisis Diagnostica Et Anatomico Pathologica van Antje de Jong (1845).
[176] GAS, GBNGH, 170, 'dr. Mathijsen', Waarnemingen van behandelde lijders met beenbreuken, gewrichtsziekten enz.: middels het gipsverband (February 1856).
[177] GAS, GBNGH, 177, Lijst met vragen voor te houden onderzoek aangaande voeding in een gesticht.

Image 1: one of dr. Mathijsen's patients, hand-drawn.

Yet an important explicit, second justification for the objectification of patients was that it kept the best interest of patients themselves in mind:

'[…] the topics which fall under [the reach of medical science], reach objects, living human beings, who make a claim on life's joy, and who come to us, to provide that joy as undisturbed and quick as possible, when it is hindered by physical causes. We also have to research, in order to arrive at truth. […] Every doubt is dangerous here, every insecurity threatens a human life.'[178]

The doctor thus had to deliver good research and medical work to ensure that human beings could enjoy the joys of life unhindered. In order to come to good research, one had to be headstrong, undoubting, and, as one rejecter of membership (who was of high age and suffered from physical ailments) reminds us, physically able.[179] Objectifying the patient implicitly had the function to make research and medical work on these patients more 'objective' (and thus more reliable). Moreover, it gives more substance to the 'subjective' relation between the helper and patients in need: in order to be able to assert that the patient received good help, it was supposed that the conditions of the patient had to be objectified to study the conditions more properly. It resembles the words of Galison and Daston mentioned earlier: subjectivity in the form of self, contrarily, would 'threaten' scientific knowledge. However, as becomes clear in one case, doctors did 'cherish hope' that their patients would be well soon and thus showed compassion with their

[178] GAS, GBNGH, 1096, Dr. C. Gobée, Redevoering, 27 september 1865.
[179] GAS, GBNGH, 1096, Brief ter bedanken lidmaatschap, 23 augustus 1848 Leiden.

patients.[180] As in DDA, the objectification and self-sacrifice in terms of self-erasing had its limits, and when it met the 'subjective' relation of the helper versus the patient in need, its multiple functions.

The self-sacrificial professional: ~~(s)~~he who gave himself to others

Being a member of GBNGH, and thus also a medical professional, meant being capable of self-sacrifice in another sense besides the aspect of self-erasing. In a short eulogy by C. Holst on C.W. Boeck in 1875, Boeck was praised for being a '[…] self-sacrificing and genial investigator in the service of science and humanity […].'[181] Even the supervisors of the society's book collection (in Leiden) reproduced the value of self-sacrifice when they asked rhetorically, underlining the usefulness of a book register: 'how dearly would one like to make a sacrifice, to repossess [a lost] book?'[182] Self-sacrifice thus also meant being serviceable to society, be it to 'humanity' or to the GBNGH in safeguarding the completeness of the book collection.

In the eulogy written for Carel Joseph van Gooth by C.B. Tilanus in 1847, we get a highly complete picture of the desired persona of a doctor, underlining the values already mentioned and adding to the 'list' of traits as well. Van Gooth was not just a medical professional, but also a friend and family man (friends and family also 'mourned his loss'). It reminds us of the point Vandendriessche made: the domestic sphere was mostly only visible during periods of mourning, as the family then understandably stood in closer contact with the medical society. The GBNGH united 'with them, not just for the highly esteemed friend, but also for the fellow worker in our field.' He was a victim 'of his arduous duty fulfilment', as he died of typhus.[183] We again, as in DDA, see a comparable mix of friendship and servient self-sacrifice, yet a form of friendship less closely tied to self-sacrifice.

What did friendship imply in regard of self-sacrifice? The end of the eulogy sheds some light on this issue. We see how Van Gooth's self-sacrifice is redefined: He had integrity, lived for others, and showed 'fulfilment in living, sworn to his calling, with the eye on a better future'. He had lived up to this calling by not ameliorating his own position at the cost of others and by 'sparing himself the least', doing this with a 'heart full of love'.[184] Love and friendship were thus enablers or inspirers of self-sacrificial behaviour, and hence more indirectly tied to self-sacrifice.

Some problematic relations regarding friendship arose as well, as a degree of impartiality was to be guaranteed through some effort when considering prize questions, while society members could also be

[180] GAS, GBNGH, 5, Gewone vergadering 20 oktober 1863.
[181] GAS, GBNGH, 62, C. Holst, Overlijdensbericht C.W. Boeck (probably 1875, as that was the year Boeck died).
[182] GAS, GBNGH, 132, Introduction to the book register.
[183] GAS, GBNGH, 672, Carel Joseph van Gooth, herdacht door C.B. Tilanus (1847) 3.
[184] GAS, GBNGH, 673, Carel Joseph van Gooth, herdacht door C.B. Tilanus (1847), 7.

considered friends. In 1853, it was asserted that sent-in answers on the questions were supposed to be signed with an 'L' of *lid* (member); board members were not allowed to participate.[185] In 1870, these anonymity methods changed: from that moment on, members were to send a sealed note with their contact details accompanying their answer to the prize question. When the answers were not picked, they were burned unopened.[186] These methods were an attempt to partition the person behind the answer from the more independent and collective identity of the society member. It signifies that any possible partiality in terms of social relations such as friendship influencing judgements of answers was to be evaded, which in turn underlines that the professionals were indeed more than just 'doing their jobs' within the society: other social engagements formed the professionals within the GBNGH as well, and these engagements were supposed to be separated from some spheres of academic work.

Love and feelings of friendship towards others translated itself not only in the 'amicable meals' after meetings[187], but also in being active for Dutch society. Van Gooth was first of all remembered as the 'loved doctor of many, of the rich and poor'.[188] He was also remembered for dedicating himself to research on health risks present in the reclamation of the Haarlemmer lake for surrounding inhabitants.[189] Hence love did not remain an abstract feeling, but translated itself in being servient to society through research and healthcare, in a sense as expressions of 'loving thy neighbour'[190]. This tied in with many activities of the GBNGH. In 1857 and 1860, the GBNGH discussed the widely spread fever during autumn, and in 1866 they were discussing the amelioration of living standards, for example the high amount of child deaths 'where numerous of the poor are accumulated.'[191] The expression of love for others in societal activity thus also resulted in pointing to where the prosperity of society was (supposedly) threatened.

Especially the poor seemed to be a problematic group for the doctors of the GBNGH, especially when we consider their proposals for the treatment of cholera. In their 1853 advice, C.G. van der Post describes that despite poor living conditions, unhealthy and 'dirty' living habits of the poor, the poor are 'solely' catalysers of the disease, not the causes (the suspected cause is diarrhoea). Yet the poor get a tremendous amount of attention throughout the proposals (the cases of cholera under the better-off are being linked to bad diets). Through shortening working hours and charity gifts such as clean linens and clean-up of the living quarters, the poor would have to be aided during an epidemic to help stop the spread

[185] GAS, GBNGH, 135, Concept-wet voor 1853, art. 25.
[186] GAS, GBNGH, 1096, Voorgestelde redactie der wet van het genootschap ter bevordering van natuur- genees en heelkunde te Amsterdam (1870) art. 20.
[187] GAS, GBNGH, 15, Standaardbrief met uitnodiging tot de vergadering van 1 augustus 1850.
[188] GAS, GBNGH, 673, Carel Joseph van Gooth, herdacht door C.B. Tilanus (1847) 5.
[189] Ibidem, 5-6.
[190] Referring to the well-known biblical phrase derived from Mark 12:31.
[191] GAS, GBNGH, 16, Convocatie voor de vergadering (1857) ; Convocatie voor de vergadering (1860) ; Convocatie voor de vergadering (1866).

of cholera. [192] Their situation seems to matter most importantly in relation to the possibility of the spread of an epidemic.

However, in the introduction of the 1853 advice, we get the picture of a more compassionate yet 'rational' doctor. The question was put forward whether the Netherlands were prepared for a possible outbreak of cholera and if the 'evil [can be faced] with a calm conscience'. Moreover, the medical experts saw it as a duty to protect the Netherlands from another cholera epidemic, as they remembered the many deaths, worries and mourning families: 'it is a duty imposed on us by our emotion, but one that even with the coldest conscience and sole focus on the material interests of society, may not be neglected.' Yet their proposal to preventive measures was based on 'observation and reason'.[193] The doctor is being portrayed as both an emotional but foremost a rational subject, able to reason clearly under any circumstance. It strongly resembles the justification of patient objectification being for their own good and inspired by the doctor's wish to help patients. Despite emotional ties, we have seen that the reasoning on combatting cholera, especially regarding the poor, was solely pragmatic on a high level. The doctors expressed 'rational compassion': reason over emotion, with the specific interest of combatting the excesses of diseases in Dutch society.

The engagement in societal affairs as professionals signified the subtle influence of Dutch nationalism on the medical profession. For example, the section of obstetrics within the GBNGH specifically stated that its goal was to improve medicine and obstetrics amongst its practitioners in 'our fatherland'.[194] In the statutes of the GBNGH of 1840 and 1867, there was a partition between members and honorary members, who were Dutch, and 'correspondents', who were non-Dutch.[195] Also regarding medical history, 'Dutch-ness' mattered. On a history of the French *Academie royale de chirurgie*, it was commented that there were also 'two fellow countrymen' mentioned.[196] The members of GBNGH were thus not only trying to improve medicine, but specifically Dutch medicine, tacitly reproducing a Dutch nationalist frame.

Their engagement with nation-building was, however, not unproblematic. On the one hand, the GBNGH was asked for their help by other medical institutions. In 1848, the Commission for the observation of the common state of illness asked their 'national [healing] art-brothers' for help regarding

[192] GAS, GBNGH, 174, C.G. van der Post, Over maatregelen ter wering en vermindering der epidemische cholera in Nederland (1853) 4-11.
[193] GAS, GBNGH, 174, C.G. van der Post, Over maatregelen ter wering en vermindering der epidemische cholera in Nederland (1853) 2.
[194] GAS, GBNGH, 2, Reorganisatie van de sectie van heel- en verloskunde (possibly 1871).
[195] GAS, GBNGH, 135, Wetten van het genootschap ter bevordering der heelkunde te Amsterdam (1840) ; [Model voor de] wet van het genootschap ter bevordering der genees- en heelkunde te Amsterdam (1867).
[196] GAS, GBNGH, 4, Boekaankondiging over de geschiedenis van de "academie royale de chirurgie de 1750 a 1792 par A. Louis". Publishing date unknown, but it was found amongst notes in the period 1860-1869.

widening the scope of observations outside of Amsterdam.[197] To some extent, they were thus recognized as a nationally important institute for medicine. On the other hand, we can question how high the trust in medical experts was outside of the official institutions and medical professionals. On the ninth of May in 1866, several members expressed concern on the sale of an '[anti-]cholera beverage […] here in the city [of Amsterdam] by […] unauthorized persons'.[198] No further actions on this matter were discussed, but it does underline that by far, not everybody accepted the authority of medical scientists and doctors built up through their engagement in national healthcare institutions: the authority of the doctors was thus built up *within* national healthcare institutions, and it did not seem to stretch very far outside the reaches of those institutions. Many outside of the institutions (potential patients) apparently still preferred 'unauthorized' medicine like the anti-cholera beverages. It underlines the uncertainty which Huisman also attributes to the position of the medical 'professional' in Dutch society throughout the nineteenth century.[199]

Self-sacrifice did not merely express itself within the boundaries of the GBNGH. Inspired by friendship, and more importantly in this context, love for others, self-sacrifice was also visible in 'giving yourself' and your efforts to the benefit of society and the Dutch nation, while also safeguarding one's position by incorporating themselves in a national framework. Character building, however, also happened within research. This was for example already visible in the way the patient was objectified, and how it influenced the self-image of the doctor. We will now discuss multiple other norms doctors of the GBNGH expressed in their investigations. It will become clear that many of these norms reproduced and shaped ideas which were present throughout the debates on the restructuring and professionalization of medicine in the nineteenth century.

Un- and outspoken norms in research

Within the GBNGH, what was 'natural' was, albeit implicitly, closely associated with what was 'normal'. One example was the description of an 'unnatural anus' of a deceased baby. While it concerned a 'human miscarriage', the anus, which was external to the abdominal cavity, was 'unnatural'. Moreover, the 'skin fold, as indication of a scrotum', was a 'curious object'.[200] Firstly, we see how 'natural' is not a merely descriptive

[197] GAS, GBNGH, 35, Commissie tot waarneming der algemeene ziektegesteldheid, Aan de medeleden van het Genootschap tot bevordering der genees- en heelkunde te Amsterdam (January 1, 1848).
[198] GAS, GBNGH, 6, 'Gecombineerde vergadering van de 2e en 3e sectieën met de 5e sectie, 9 mei 1866'.
[199] Huisman, 'Expertise and Trust', 178-181.
[200] W. Vrolik and L. Lehman, 'Waarneming eener aangeboren hernia umbilicalis, gecompliceerd met tegennatuurlijken anus', in: Genootschap ter bevordering der genees- en heelkunde te Amsterdam (ed.), *Verhandelingen van het Genootschap ter bevordering der genees- en heelkunde te Amsterdam* (Amsterdam 1855) 159-166, 162-163. This article is found in the second part of the book.

but also a normative term. As the miscarriage was interpreted as being outside of 'normal' natural processes, it was considered 'unnatural'. Secondly, the assertion of the skin fold being a 'curious object' strengthened the distance between patient (object) and doctor (subject).

The conception of what was natural seemed problematic within the GBNGH. We already asserted that 'natural' implied a form of normality in natural processes. Its antithesis, 'artificial', underlined this notion of 'natural' as following 'normal' processes. For example, the creation and implantation of an artificial eye was also seen as an 'art', just like a caesarean section was seen as the 'most important obstetric *artificial* operation'.[201] In both cases, the act of the doctor involved a form of human intervention to return a body to a 'natural' order (having two eyes) from an 'unnatural' state (having one eye), and was thus considered an 'art'. Other than the normality we found in DDA, which was closely related to moderate behaviour, normality in this case was closely related to 'normal' natural processes and a 'natural' order of things. The doctor thus took a troublesome position between 'art' and 'science': it troubles the dual picture Daston and Galison refer to, of the artist who had to express 'personality' (and thus subjectivity) in painting, contrasted with the scientist who had to express 'objectivity' and supress subjectivity in research.[202] Although the terms used for a doctor's involvement in the natural processes subtly implied a 'subjectivity' in the sense of a doctor (subject) helping a body through its ailments, this minimal expression of 'subjectivity' stood in service of getting a body back to a state where it followed the 'normal' natural ('objective') processes. What a body was supposed to be in its 'natural state' justified the actions of the doctor.

Another unspoken norm, which we have encountered in other contexts many times, was moderation. In a paper on 'spermthorrea' by N.J.M. Landman, having a high amount of erections and ejaculations was problematized as being a medical condition. The high amount of activity of the male sexual organs was seen as a 'cachectic stimulation of genitalia', which could lead to being 'guilty' of masturbation. One of his patients could not differentiate properly 'between the inherent [sexual] drives of mankind and passions'. As remedies, lupine consumption or sleeping on horse hair or seaweed could supposedly help.[203] Hence the medicalization of 'excessive' sexual behaviour did not only imply a moderation of sexual drives, but it also implied a norm of maintaining rationality: even though mankind was inherently driven by sexual drives, one had to properly (thus rationally) distinguish them from ('excessive') feelings of passion, just like compassion was to be overruled by reason as we saw earlier.

[201] GAS, GBNGH, 165, Verslag werkzaamheden 1 juli 1844 ; GAS, GBNGH, 5, Vergadering 21 februari 1861 [van de verloskundige sectie]. Italics are mine.
[202] Daston and Galison, *Objectivity*, 37.
[203] GAS, GBNGH, 1096, Brief aan genootschap inclusief opstel over de werking van lupine bij 'spermathorrhoe', N.J.M. Landman. Date unknown, probably the first half of the 1850s.

A more or less outspoken norm was to be engaged in civilization. C.B. Tilanus told his audience in 1840, during the 50-years anniversary of the society, that when in the 1830s 'the art was subjected to handiwork and only maintained in a dignified way by a few', the GBNGH took its responsibility to achieve 'a revision and civilization [of medicine]'.[204] The uncivilized medical practitioners were likewise 'raised from the uncivilized class of society – brought up in the barber's shop – bloodletting, seasoning, anointing and preparing bandages was [their] prime occupation'.[205] We see many resemblances with the discussion of the hierarchy of the medical profession based on theoretical engagements mentioned in the previous chapter. 'Undignified handiwork' is implicitly contrasted with dignified, more thoroughly theoretical maintenance of the medical discipline. We will see that this hierarchy based on theoretical endeavours will return on more occasions in the GBNGH. Moreover, we see how the class and social perspective permeates assertions on being 'uncivilized' and 'undignified' by being concerned solely with handiwork.[206]

Having discussed the norms of normality, moderation and civilization, we will now see how the many character traits of the persona of the doctor within GBNGH we encountered functioned in the processes of specialization in medicine, closely related to the incorporation of the natural sciences in medicine. This also made an older persona of the doctor obsolete. The earlier revered and widely educated 'poet-doctor' disappeared as specialization exercised an increasing influence on medicine. We shall first discuss what the persona of the 'poet-doctor' encompassed.

The 'poet-doctor'

Judging from his eulogy in 1847, Van Gooth expressed the ideal-type of what we can call the 'poet-doctor', the medical scientist who was also sufficiently schooled in the humanities: '[…]seasoned by the study of Greek and Latin antiquity', he also valued historical knowledge 'highly'. However, '[…] reasonable research, with experiments as their foundation; he recognized them in unity with the first [historical knowledge], as the fundaments of the building of medical science, as science of nature, its building process only completed in our time after centuries.'[207] Van Gooth thus recognized the importance of being historically conscious, but also the contemporary need to view medical science as natural science, with its foundation in

[204] C.B. Tilanus, 'Rede gehouden bij de viering van het vijftigjarig bestaan des genootschaps den 2 september 1840', in: Genootschap ter bevordering der genees- en heelkunde te Amsterdam (ed.), *Verhandelingen van het Genootschap ter bevordering der genees- en heelkunde te Amsterdam* (Amsterdam 1847) 23-39, 33-34.
[205] Tilanus, 'rede gehouden bij de viering van het vijftigjarig bestaan', 25.
[206] Interestingly, there is a significant contrast with the much higher reputation of the surgeon in especially eighteenth-century France, but also in the eighteenth-century United Kingdom, where surgeons studied at the universities of Scotland and London, see: Bynum, *Science and the Practice of Medicine*, 4-7.
[207] GAS, GBNGH, 673, Carel Joseph van Gooth, herdacht door C.B. Tilanus (1847) 4.

experiments. The value of being '*gebildet*' or broadly schooled, seemed to be followed within the GBNGH at least up until the early 1860s: in a prize question of 1861, the board received answers in French, Greek, Latin and German.[208] Doctors thus not only knew their medical trade, but also their classical languages. In this sense, some of the GBNGH members remind us of the earlier mentioned comparable reverence of the 'physician-poet' amongst the Belgian medical elite trained in the early nineteenth century, who were likewise revered for their broad knowledge in both history and medicine.[209]

We also see in Van Gooth's eulogy what this broad education was supposed to lead to: '[…] forming students into self-reliant men, observing through thorough research, through individual thinking and envisioning'.[210] Individuality and originality were thus deemed highly important. These values also found their way within the society itself. In 1862, one answer to a prize question was considered a 'compilation' of already described phenomena, where some sections were 'just arranged differently', and could hence not deserve a price.[211]

The reverence of the 'poet-doctor' changed in the following decades. On the general assembly in 1874, J.W.R. Tilanus plead for an appreciation of medical history:

'In the past lies the present […]. Our working method is better than the earlier one, but knowledge of the older method makes one appreciate the present one more.' [212]

Rather than regarding history as one of the pillars of medical science, this is more of a call for appreciation. In this regard, it differs a lot from the plea of his father C.B. Tilanus in 1840, as father Tilanus stated that awe for previous generations was necessary, as they, just like contemporary members were ought to be doing, answered 'to the needs of [their] time', and lessons could be derived from those answers: '[…] changing times, changing needs'.[213] We thus witness a change from seeing the past as a teacher and associate of medicine, an image of history we already encountered amongst the Belgian doctors' national history of medicine, described by Vandendriessche, to seeing the past as a source of appreciation.

The decline in the reverence of the 'poet-doctor' happened more or less synchronic with the increasing specialization of the medical sciences. The broadly educated intellectual was incompatible with

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[208] GAS, GBNGH, 15, Uitnodiging voor vergadering, 11 september 1861.
[209] Vandendriessche, *Arbiters of science,* 274-285.
[210] GAS, GBNGH, 673, Carel Joseph van Gooth, herdacht door C.B. Tilanus (1847) 6.
[211] GAS, GBNGH, 1096, 'prae advies' voor de beoordeling van prijsvraagantwoorden (1862).
[212] Genootschap ter bevordering van natuur-, genees- en heelkunde, 'verslag der algemeene vergadering op 28 oktober 1874', in: Genootschap ter bevordering van natuur-, genees- en heelkunde (ed.), *Werken van het Genootschap ter bevordering van natuur-, genees- en heelkunde* IV, *1873-1875* (Amsterdam 1875) 1-21, 7-8.
[213] Tilanus, 'Rede gehouden bij de viering van het vijftigjarig bestaan des genootschaps den 2 september 1840', 23-24.

the specialized professional which could increasingly be found within the GBNGH from the 1850s onwards. In the following sections, we will discuss the problems regarding the professionalization and restructuring of medicine through specialization as it found its expression within the GBNGH. We shall see how a hierarchy based on engagement with theory shaped conceptions on the 'modern' structures in medicine, especially regarding the incorporation of the 'pure' natural sciences in medicine. Before we discuss the role of the natural sciences in medicine, we will look another important and interrelated aspect of the professionalization of medicine mentioned earlier: specialization.

Medicine, specialization and the division of labour

In the mid-nineteenth century, laboratories were merely beginning to influence medicine significantly. Especially in Germany, the incorporation of laboratory research, (new) technology like (improved) microscopes, physics and chemistry was a driving force behind the further development of the modernizing medical field. It also influenced the renewal of medical sub-disciplines like physiology, and the establishment of a more materialist philosophical paradigm opposed to more 'romantic' interpretations of science such as *Naturphilosophie*. This early form of 'big science' also made small-scale laboratories obsolete through the use of expensive technology. As Bynum however asserts, there were still many discussions on the epistemological implications of for example microscopes for medicine: the significance of the laboratory for medicine was still far from certain.[214] One of these discussions, on the epistemological implications of the microscope, was being held amongst GBNGH members in the following report.

The report, published by the GBNGH in the early 1850s, focussed on the discussion between 'microscopists' and clinicians on how to classify tumours. The presence of the subject in microscopic observations is being stressed in the report:

'Finally we wish to remember [the reader], that […] microscopic research [developments] […] should not lead us to false traces. One should not see this research for more objective than is actually the case. Here the subjectivity of the observer also does not play an insignificant role. Because one always sees life forms next to another and [because of] the impossibility to see the transition from one to [other life forms], a vast [amount of] occasion[s] which could lead to false conclusions are being offered.'[215]

The assertion that a subject is also present within observations and judgement on objects was a view stressed on multiple occasions and differing terms. For example, despite the objectification of the patient mentioned

[214] Bynum, *Science and the Practice of Medicine*, 92-103.
[215] GAS, GBNGH, 165, Rapport van de commissie der 1e sectie, onderzoek van de waarde van het microscopische onderzoek voor de diagnose der gezwellen, (somewhere in the period 1847-1855) 15.

earlier, there was undoubtedly a subjective element in those 'objective' endeavours in terms of compassion with the patient. Yet the explicit reference to the researcher's subjectivity here directly related to problems regarding specialization in medicine. It is no coincidence that subjectivity was emphasised more in this instance. Moreover, looking at the apparent certainty of certain 'traces' being unanimously 'false', preserving a minor role for subjectivity in observations was supposed to aid (or rather, stood in service to) a high degree of objectivity in observations, as keeping an eye out for false observations due to mistakes of the observer implicitly had the role of making observations 'not-false'. It is comparable to how the subjectivity in 'subjective' interventions in an 'unnatural' body was supposed aid objectivity in bringing a body back to a state of following '(objective) natural' laws as asserted earlier.

The report tried to refute the claim that microscopic observations would lead to more 'objective' research, which directly related to issues on the division of labour between clinicians and 'microscopists' or lab researchers. The claim of objectivity on the account of lab researchers was being countered by a clearly offended clinician:

'The microsopist does not see any etiquettes under his object-glass, only cells, cores, fibres and their arrangements […]. If he wants to know, how these relate to the rest of the organism, he may go to the hospital bed and observe it'.[216]

To each his own specialism: the lab researcher was an expert on the individual parts of the body, while it was the clinician's task to relate all parts to the entire body. It shows how stepping outside of the boundaries of your own specialization was being frowned upon: no one was allowed to say anything about the expertise of others based on an assumption of a 'higher' objectivity of his own expertise. Here we see how modesty permeates conceptions on the division of labour in medicine: everyone had its specialized task, each an indispensable aspect of the whole of medical science, and one should not cross boundaries and hinder other's expertise. As it was put in the same report: microscopy and the clinic were eventually supposed to 'get […] [into] unity': microscopy was meant for diagnosis, while the clinic was the place for prognosis.[217] New technologies in medicine thus also influenced the formation of new specializations.

The difference between diagnosis and prognosis was another crucial epistemological background of this debate. The contemporary situation differed from the situation of 'earlier times', when diagnosis was still dependent on the end result of, in this case, a tumour: a favourable result was non-cancerous, while an unfavourable result meant cancerous.[218] Now, the classification beforehand of damaging tumours happened

[216] GAS, GBNGH, 165, Rapport van de commissie der 1e sectie, onderzoek van de waarde van het microscopische onderzoek voor de diagnose der gezwellen, (somewhere in the period 1847-1855), 9.
[217] Ibidem, 16.
[218] Ibidem, 7.

through the use of microscopes, on which it was commented in the report that such classifications 'always rely on a subjective interpretation more or less, while the purely anatomical element is the only possible starting point for a scientific diagnosis'.[219] Further in the report, it was asserted that 'no less should one also keep the many combinations, which tissues of different tumours can enter into, in sight, as of course the clinical appearances can also be changed radically by this'.[220] The change from making a diagnosis subsequently to making a diagnosis prospectively was strongly intertwined with a new division of labour in medicine. Now, the work was supposed to be divided between those who were deemed capable of making a diagnosis beforehand (lab researchers), signifying the current state of a tumour, and those who could make a prognosis during the (expected) development of a tumour (clinicians).[221] This epistemological debate also directly related to the changes in university education, from disease classification to individual disease analysis, we discussed in the previous chapter.

Specialization was accompanied by the stress on the unity of medical science: all were doctors who strove for the good development of medical science and healthcare, but individual groups of doctors all had their function within the discipline and practice of medicine and healthcare. In 1867, it was stated in the statutes that 'the members of the Society have free access to the meetings of all sections', while under the same statutes it was stated that members of the obstetric section could invite those outside of the section to the meetings, 'if they are medical scientists', but these persons could not participate in the meetings.[222] The field of medicine was divided in many sections within the GBNGH ('anatomic-physiological', pathological, therapeutic and 'physical-experimental', surgical-obstetrical, and historical-state-medical)[223]. All were considered medical experts, yet all had their own expertise with respective borders which were not supposed to be crossed.

The increasing specialization within the GBNGH was accompanied by an important change in regard to earlier decades. In 1840 the statutes still prescribed that '[the members] will unite, to contribute unanimously through essays and observations'.[224] In the mid-nineteenth century, the values of 'speaking as

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[219] Ibidem, 12-13.
[220] Ibidem, 15-16.
[221] In a short summary of the article, it is asserted that 'in the name cancer […] no determined anatomical concept [is] held', and that it is thus to be discouraged that anatomically discernible tumours would be labelled cancer, as this would state a diagnosis with a prognosis, while it will only become clear in the development of a tumour whether it is cancer or not. See: Genootschap ter bevordering van genees- en heelkunde, 'Corrolaria uit het rapport over de waarde van het mikroskopisch onderzoek voor de diagnose van gezwellen', in: Genootschap ter bevordering der genees- en heelkunde te Amsterdam (ed.), *Verhandelingen van het Genootschap ter bevordering der genees- en heelkunde te Amsterdam* (Amsterdam 1855) 171-172, passim.
[222] GAS, GBNGH, 135, Wet van het genootschap ter bevordering der genees- en heelkunde te Amsterdam (model voor wet, 1867) 8 ; GAS, GBNGH, 2, Reorganisatie van de sectie van heel- en verloskunde, probably 1871.
[223] GAS, GBNGH, 135, Wet van het genootschap ter bevordering der genees- en heelkunde te Amsterdam (model voor wet, 1867), 1-3.
[224] GAS, GBNGH, 135, Wetten van het genootschap ter bevordering der heelkunde te Amsterdam (1840) 4.

one' seemed to be still present within the society like in DDA. Also in 1853, during the debate mentioned above, it was stated during one meeting that articles were 'approved without *dissent*'.[225] Different opinions were thus still on some occasions defined as 'dissent' from the consensus. We can however see changes in these values from at least the 1860s onwards. On October 20, 1860, there was no objection to 'some discussions' after a contribution of one of the members.[226] During two meetings in 1871, both advocates and opponents of the use of chloroform as narcosis in obstetrics held their pleas.[227] Hence discussion became an established practice rather than a form of 'dissent'.

The establishment of discussion as accepted practice within the GBNGH seemed to follow changes in another social arena: Dutch politics. In a sense, minister of colonies in the 1860s, I.D. Fransen van de Putte (1822-1902), seemed to signal the fact that politics were opening up to new kinds of politicians, practices and interests. Van de Putte was young, not an academic jurist (like most members of parliament were), and had 'less refined entrepreneurial manners', contrasting those of his colleagues.[228]

In the 1870s, two major changes furthered the 'cracks' in the previously established liberal political system of politicians who were mostly part of the high intellectual elite, men who on many occasions even knew each other personally through for example debating and gentlemen's clubs. First, there was an increasing movement of left-liberalism in politics, comprised of politicians who criticised established politics of satisfying the needs of social elites too much (this merely signified a change in political scope, not in the actual demographic of politicians). Second, the formation of the first modern political party in the Netherlands, the orthodox-protestant Anti-Revolutionary Party (ARP, in the sense of being against the ideals of the French Revolution) in 1879, signified major changes in Dutch politics. The ARP no longer followed the older liberal political trend of calm conversation without raised voice, of keeping (most) political action within parliament, but instead followed a wholly different line of politics. Political practice was moved outside of parliament within the ARP: the focus was on the political organization and mobilization of the orthodox-protestant part of Dutch society through publishing newspapers with primarily anti-revolutionary content, building a nation-wide political organization based on a party program, organizing petitions, et cetera: the ARP became the first modern political party of the Netherlands.[229] In both politics and science, the established practices of calm conversation were replaced by a more dynamic atmosphere of discussion.

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[225] GAS, GBNGH, 3, Bijeenkomst van de vijfde sectie, 23 februari 1853. Italics are mine.
[226] GAS, GBNGH, 6, Vergadering 20 oktober 1860.
[227] GAS, GBNGH, 5, Vergadering 24 mei 1871 ; Gewone vergadering 22 november 1871.
[228] R. Aerts and H. de Liagre Böhl, *Land van kleine gebaren. een politieke geschiedenis van Nederland 1780-2012* (Meppel 2013) 130.
[229] Aerts and Liagre de Böhl, *Land van kleine gebaren*, 133-138.

The incorporation of the natural sciences in medicine

We will now turn to an aspect of the professionalization of medicine closely related to specialization, which also found its expression in the GBNGH: the increasing incorporation of the natural sciences in medicine. From the 1850s onwards, the GBNGH increasingly incorporated the natural sciences and their methods in the structures of the society. In a design for the increase of activities written in 1850, it was stated that its goal was to bring 'the direction of the society in accordance with the current position of science'.[230] The GBNGH foresaw that they would become unneeded when left unreformed. They posited that an incorporation of the 'physical method' was necessary, meaning the incorporation of the natural sciences and chemistry in medicine. In this way, they would remain 'useful' to science.[231] Already in the statutes of 1853, we see that these considerations found practical applications, as rules for the use of tools for chemical, microscopic and anatomical research needed to be written.[232] Not all medical scientists were happy with these developments, however. On September 10, 1852, one member, A.A. Sebastiaan, wrote that he could not agree with the new direction of the society and could thus not 'guarantee' good cooperation anymore. He then thanked for all the goodwill and friendship.[233]

In 1870, the society changed its name from the Society for the improvement of medicine and surgery to the Society for the improvement of *natural science*, medicine and surgery. As was stated in the first chapter, not all members understood that the natural sciences became the foundation for medicine and surgery, not just a 'helping hand'. It explains the confusion experienced by for example Dr. Callen Fels, who did not get why the new name started with 'natural science', since the main goal supposedly was to improve medicine and surgery.[234] A few days after his letter, on March 23 1870, physicists could also gain full membership and become active within the section for natural sciences.[235]

As the natural sciences got incorporated increasingly in medicine, the 'division of labour' between physicists, chemists and others within the medical community became strikingly clear in the publication of written works by the society in 1875. The incorporated monthly magazine for natural sciences, published by the GBNGH, contained articles which not always directly related to specific medical issues. Even if they did, it was in all respects a physicists' magazine. The magazine formed a content-wise contrast with the

[230] GAS, GBNGH, 15, Ontwerp ter uitbreiding en wijziging der werkzaamheden van het genootschap ter bevordering der genees- heelkunde te Amsterdam, 11 september 1850, 1.
[231] GAS, GBNGH, 15, Ontwerp ter uitbreiding en wijziging der werkzaamheden van het genootschap ter bevordering der genees- heelkunde te Amsterdam, 11 september 1850, 2-4.
[232] GAS, GBNGH, 135, Concept-wet voor 1853, Art. 7-8.
[233] GAS, GBNGH, 1096, A.A. Sebastiaan, opzegging directeurschap, 10 september 1852. No reason for the departure was given.
[234] GAS, GBNGH, 56, Dr. Callen Fels, brief aan het genootschap, Vlissingen 19 maart 1870.
[235] GAS, GBNGH, 56, Brief aan de leden, 23 maart 1870.

incorporated reports of the medical, obstetric and surgical sections. Here, we could still find elaborate patient descriptions about treatments and conditions of the patient's body, while the articles in the physics section mostly dealt with small research objects. Moreover, where in the physics section, mathematical formulae were omnipresent, in the other mentioned sections they were virtually absent.[236] Each different part of medicine thus started to form its own methods, modes of description, and favoured research fields. Despite the fact that they were all considered medical scientists, they were also experts in fields which were separated in multiple ways.

If we look closer to this bundle, the natural sciences even got the highest authority within the field of medicine, on the account of being the most theoretically founded. An elaborate description of this assertion was given by B.J. Stokvis on October 28 1874 during the general assembly:

'Why then presently the "numero, mensural, pondere deus fecit mundum" as battle cry, as banner put on the foreground! Why? Because it is good and necessary, to imagine the principles, to which one should stick during work, principles, which are sometimes moved to the background by the pressures of everyday work against our will, otherwise forgotten. […] Why? Because next to the men, who mainly concern themselves with practicing the pure natural sciences, […] others amongst the members of this society can be found who, as practitioners of more applied natural sciences […], have not yet been united under a strict framework, forced to put their hands to work, without having had the time, to determine measure, number and weight sufficiently.'[237]

Multiple aspects of this quote are interesting. First, the military terminology shows striking resemblances with the kind of terms used in the *Historisch Genootschap* in Utrecht, as we will see. Second, the portrayed image of the best kind of physicist shows some contrasts with the image of the ideal doctor we found earlier. The ideal physicist was portrayed as a theoretical man: a thinker rather than the 'headstrong' doctor who was not supposed to doubt too much when taking action.

Different values were needed for different specializations. Yet the image portrayed here interestingly reproduced the division between different 'ranks' of medical staff according to the amount of engagement with theory, as described earlier, in its own way. The theoretical doctor had a higher and more 'civilized' reputation within medicine than the medical staff performing the handiwork, while here, the medical physicist is deemed higher in rank within medicine than other medical scientists due to the amount of engagement with theory. The medical physicists were also in a sense deemed more close to *Scientia* and 'objectivity' than the doctors who, as we discussed, still had to put *Ars* and thus subjectivity in service of

[236] Genootschap ter bevordering van natuur-, genees- en heelkunde (ed.), *Werken van het Genootschap ter bevordering van natuur-, genees- en heelkunde* IV, *1873-1875* (Amsterdam 1875) passim.
[237] Genootschap ter bevordering van natuur-, genees- en heelkunde, 'verslag der algemeene vergadering op 28 oktober 1874', in: Genootschap ter bevordering van natuur-, genees- en heelkunde (ed.), *Werken van het Genootschap ter bevordering van natuur-, genees- en heelkunde* IV, *1873-1875* (Amsterdam 1875) 1-21, 2-3.

their objectivity when aiding a 'non-natural' or sick body. To some extent, the belief that the amount of engagement with 'pure', non-practical and 'objective' science would determine one's rank in medical science is also visible in the different modes of writing described earlier. Medical physicists proved to be much more inclined to use the 'exact language' of numbers and formulae in their papers than the medical scientists, mostly doctors, in other fields.

Last, the quote signifies a certain amount of self-sacrifice. Science was apparently supposed to be distanced from 'everyday' practices and work: the everyday business would even lead one astray from 'pure' science. To be fully committed to science, was to remove oneself from regular daily business and self.

Conclusion: personae within the Genootschap ter bevordering van de natuur- genees en heelkunde

The speech of Stokvis underlines what Bynum states on Louis Pasteur: 'it is indicative of the increasing importance of [natural] science for medicine that […] [Pasteur] was not even a doctor, but a chemistry and physics graduate.'[238] Besides emphasising the importance of the natural sciences for medicine, Pasteur's work also signified the rapid specialization within medicine fuelled by the incorporation of the natural sciences in medicine. Now, medicine was exercised by new specialized experts like physicians, physiologists, and chemists, besides the doctors. Specialization and 'scientification' were strongly intertwined processes.

The presence of physicists amongst the doctors of the GBNGH also formed a second persona next to the already established persona of the doctor. The favoured persona of medical physicists could be described as the 'detached thinker', attached to the 'work of the mind' (theory) and detached from the 'work of the body' (everyday practice). Medical physicists, as described above, were supposed to be the practitioners of a 'pure science', unhindered by the practices of everyday. The abstinence of everyday practices underlined their asceticism: they had to devote themselves fully to science in a self-sacrificial way. Yet the fact that they did have their separate section underlined another part of self-sacrifice more explicitly described in the persona of the doctor: one should not let his ambitions hinder those of others. In other words, medical experts were supposed to remain within their field of expertise and thus 'sacrifice' any of their over-abundant ambitions.

Self-sacrifice was thus a character trait both considered personae shared. Yet the doctors were expected to be less of a thinker and more of a doer. One could describe the desired persona of the doctor as a 'headstrong helper'. Doctors had to be headstrong and stand above those who were not a medical professional. Being headstrong in this sense both aimed to legitimize and establish a hierarchy regarding the field of medicine and healthcare: the doctor 'knew best' and had to a certain extent 'overrule' his patients.

[238] Bynum, *Science and the Practice of Medicine,* 107.

The trust in expertise was for example expressed in the conflation of 'normality' and 'natural': it was treated as a given that the doctor would be enough of an expert to distinguish what was natural and normal, unnatural, or artificial. In another mentioned example, doctors also stood above the 'sexual excesses' of their male patients. From the small detail of the cholera drinks, we can however define these expressions of expertise and hierarchy rather as an attempt of legitimation instead of an establishment of these hierarchies.

Doctors were, however, also helpers. Establishing the doctor-patient hierarchy was for example explained as being in the best interests of helping the patient. Doctors were supposed to help society forward and co-construct the Dutch nation. It was a form of help which involved self-sacrifice: helping society was explained as living for others instead of yourself. Self-sacrifice was thus a value both shaping the specialization of medicine and the expected social role of doctors.

The professionalization processes within medicine gave the medical professionals within the GBNGH two personas, one for the doctors and one for the physicists. This complicates the picture we described earlier, as in the decades before the 1870s, there was a hierarchy of different medical schools based on their relation to practice. In those earlier decades, the divide between 'practical' and 'theoretical-scientific' medical staff was, although still problematic, easier to make. The picture we get here adds another problematic relation within the supposed sphere of the 'theoretical-scientific' medical staff. Now, even scientists within medicine were hierarchically ordered on the basis of their relation with theory. The medical physicists had the highest reputation on account of being the most 'pure', thus theoretical, medical scientists. We see how the older distinction based on engagement with theory is being used to problematize relations within the professionalizing field of medicine even further.

We did not only encounter continuities, however. Under the influence of the increasing specialization of medicine, the persona of the broadly-educated 'poet-doctor' got outdated. Along with this persona going obsolete, the role of history in medicine also changed from being a necessary companion in medicine to being a source of appreciation of past doctors. Medical scientists were increasingly specialized experts, not the broadly '*gebildete*' poet-doctor. The rise in the acceptance of discussion over consensus seemed to follow socio-political tendencies. Thus specialization, like in DDA, meant that some practices and attitudes were simply becoming incompatible with the medical discipline.

So far, we have only discussed societies with a highly professional or 'learned' background. In the following chapter, we will discuss a scientific society with a somewhat larger audience which also consisted of 'enthusiasts': the HG in Utrecht. The HG, however, did still have a high amount of members who deemed themselves professionals in history, mostly with an academic background. They formed a 'middle-sized' crowd which can be interpreted to stand in between the 'small audiences' of the scientific societies we have

discussed until now, and the 'large crowds' which were gathered in the physical societies which we will discuss in later chapters.

Part three: a society of enthusiasts: a slightly bigger stage with an academic background

6. *The* Historisch Genootschap *in Utrecht*

Introduction

'Who looks through the thousands and thousands of pages with announcements, board vicissitudes and source publications, can hardly escape the impression that besides many useful works, many superfluous texts have been produced', Dorsman concludes on the period 1845-1876 for the HG.[239] Indeed, the main method of publication within the HG was the source publication with a short introduction, followed by lengthy sources or a text consisting mostly of extremely lengthy citations.[240] On many occasions, 'some inaccuracies' in historical texts of others were immediately set straight with long citations of many sources.[241] To say the least, the HG was an industrious society.

However, these texts did not merely represent industriousness resulting in superfluous amounts of texts. In this chapter, we shall see that the desired mode of publication within the HG was inescapably linked to epistemological considerations, and that both the form and style of publications can tell us a lot about the historians of the HG themselves. As many members of the HG were academically schooled, we will also see that these practices, methods and epistemologies were closely related to those which could be found amongst historians within the university (despite there being no strictly demarcated discipline of history yet) like Fruin.

This did not mean, however, that the HG became any kind of 'national' institute or 'the' historical institute within the Netherlands. We will first discuss the issue of a constantly narrowing intellectual scope, and how the HG did not (yet) become a widely recognized professional historical institute. Secondly, we will discuss another source of validation for the HG: engaging in nation-building in the form of writing national history. Then we will focus on the implied favoured subject in history: what kind of actors were favourably described in history, and who were criticised? It linked the subject of the historian directly to the research objects. This viewpoint will be elaborated in the following paragraphs. We will describe how a certain kind of history implied a certain kind of historian. Lastly, we will focus on hierarchies, desired by some HG members, between academics and 'enthusiasts' within the HG, and how some social groups were excluded from the historical practices of the HG.

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[239] Dorsman, *Anderhalve eeuw geschiedenis*, 21.
[240] See for example: Historisch Genootschap te Utrecht, *Berigten van het Historisch Genootschap te Utrecht* 5-1 (1853), passim.
[241] J.J. Dodt van Fl., 'Wetensch. mededeel. Jeremias Basting ', *Kronijk van het Historisch Genootschap, gevestigd te Utrecht* 2 (1846) 379-383, 379.

A narrowing scope and range

In the 1840s and early 1850s, the HG was still trying to embed itself in the entire scientific community. In the statutes of 1848, it was stated that all secretaries were supposed to maintain contacts with all scientific societies in the Netherlands.[242] There was also a commission for universities installed for the correspondence of academic messages.[243] In the *Kronijk* (a yearly published work by the HG) of 1846, there was for example much attention for both Dutch and non-Dutch scientific societies, and messages from the university, like a correspondence on visible comets, were mentioned often.[244] The scope of history was, however strongly oriented on Dutch history, rather wide, as articles in the *Berigten van het Historisch Genootschap* in 1846 dealt with humanities and scientific scholars, artists and military-political figures.[245] The attempt to be embedded in the entire scientific and academic field was accompanied by a likewise broad intellectual scope.

After the early 1850s, there was a decline in the amount of topics covered. In the statutes of 1851, the sentences on the broad scientific correspondence and contacts were removed. However, a new element in the organisation of HG was introduced: for members outside Utrecht, 'local commission[s]' were established, with assigned reporters who would inform the head of the HG of developments.[246] It underlined both the aspiration to become a nation-wide organization, and the forced locality of scientific societies at that time. For example, on February 6, 1866, the HG received a letter in which it became clear that the writer had to thank for the offer of membership due to the 'troublesome' communication between Amersfoort and Utrecht (a distance of only twenty kilometres), which would hinder attendance at meetings.[247] Moreover, only honorary members living in Utrecht could join the board of the HG.[248] Despite ambitions, practicalities forced most of the HG's action into a local context.

'Forced locality' did not completely 'paralyze' the national aspirations of the HG. In 1849 and 1850, there was a request from the HG to all its members to help in a nation-wide research on the state of archives, and if there were interesting and relevant sources which could be published. There were many reactions to this request, either that members did not have the time to conduct research, that there were archives which were in a good state, or complaints about incomplete archives and missing sources.[249]

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[242] Historisch Genootschap te Utrecht, *Reglement voor het Historisch Genootschap te Utrecht* (Utrecht 1848) 6.
[243] Historisch Genootschap te Utrecht, *Reglement,* 8.
[244] Historisch Genootschap te Utrecht, *Kronijk van het Historisch Genootschap, gevestigd te Utrecht* 2 (1846), passim. The message on comets can be found on page 37.
[245] Historisch Gezelschap te Utrecht, *Berigten van het Historisch Gezelschap te Utrecht* 1-1 (1846) passim.
[246] Historisch Genootschap te Utrecht, *Wet van het Historisch Genootschap gevestigd te Utrecht* (Utrecht 1851) 12.
[247] Het Utrechts Archief, 62: Historisch Genootschap te Utrecht (UA, HG afterwards), 7/31: brief ter bedanken van het lidmaatschap, 6 februari 1866.
[248] Historisch Genootschap te Utrecht, *Wet van het Historisch Genootschap*, 7.
[249] UA, HG, 255, passim.

Moreover, some local reporters were still active until at least 1856, and contacts with relevant societies were still being maintained.[250] In 1865, however, the statutes of the HG no longer mention the local commissions.[251] The international contacts with other humanities disciplines did remain: for example, in 1876, the HG received an invitation for a congress of 'orientalists' in St. Petersburg, and the HG maintained barter-agreements with international historical organizations like the Smithsonian Institute in Washington.[252] Yet the HG, throughout the period considered here, did not become the national institute it aspired to be. As Dorsman states, only in later years would the HG become significant for the historical profession 'in the making'.[253]

Besides the unachieved aspirations, we see how professionalization, in terms of specialization, was visible in the intellectual scope of the HG: the terrain of academia (besides many members being academics), and especially the other sciences, could not be incorporated in the HG after the 1840s. Another validation of their activities however, was to be engaged in Dutch national history. In the following paragraph, we will see what this national focus entailed.

The nation builders

The statutes of 1848 already stated that the history of 'the motherland and the colonies' was the main focus of the HG.[254] Reproducing the supposed civilizing and educating (here it was still a value of being broadly educated) value of national history, one letter to chairman Van Asch van Wijck in 1846 stated that 'nobody, who stakes a claim on civilization or scientific education' was supposed to be 'indifferent' to the history of the fatherland.[255] We again see how a pursuit of knowledge was defined in terms of civilizing the pursuer.

National history was, however, not only for the benefit of the pursuer, but also for the benefit of the nation. On many occasions, history and the value of historical documents were discussed in terms of being 'of use' to the 'fatherland'.[256] This allowed historians to put early medieval history in a (nineteenth-century) national framework, as B.J.L. de Geer interpreted the wars between the Franks and the Frisians

[250] Historisch Genootschap te Utrecht, 'Genootschappen', *Kronijk van het Historisch Genootschap, gevestigd te Utrecht* 12 (1856) 12, passim ; Historisch Genootschap te Utrecht, 'Rapporteurs', *Kronijk van het Historisch Genootschap, gevestigd te Utrecht* 12 (1856) 13, passim.
[251] Historisch Genootschap te Utrecht, *Wet van het Historisch Genootschap, gevestigd te Utrecht* (Utrecht 1865) passim.
[252] UA, HG, 9/1876-36, Uitnodiging voor het derde internationale congres van oriëntalisten te st. Petersburg, 15 febr. 1876 ; Huistra, *Bouwmeesters, zedenmeesters*, 76.
[253] Dorsman, *Anderhalve eeuw geschiedenis*, 21.
[254] Historisch Gezelschap Utrecht, *Reglement voor het Historisch Gezelschap*, 3.
[255] UA, HG, 167, Brief aan A. van Wijck, 15 oktober 1846.
[256] See for example: L.G. Visscher, 'Leidsche hoogeschool. Remonstrantie aan den graaf van Leicester', *Kronijk van het Historisch Genootschap, gevestigd te Utrecht* 2 (1846) 271-276, 271.

(600-793) as a battle of enemies on the 'soil of the fatherland'.[257] This national framework was often combined with a teleological and self-sacrificial tone. Lieutenant J.P. de Bordes for example wrote on the history of the year 1672 (when the Netherlands was attacked by a multitude of countries) that he brought homage to the protectors of 'our independent people's existence'.[258] Not only could this historical event apparently be directly related to the present almost two centuries later through nationalist ties, but this kind of framing also gives us the image of a historical actor who would do anything to protect the independence of The Netherlands. Engaging in national history fostered both a higher level of civilization and loyal service to the nation. Hence it was clear why De Bordes exclaimed that the goal of this text was to spread military history, to spread the realization that the form of governmental was the cause of a failing military defence in 1672, implying that the text was an advice for current political rule.[259]

The fact that both mentioned examples referred to a politico-military events is no coincidence. Already since the 1840s, the *Kronijk*, and later the *Berigten* as well, focussed almost solely on political and military history, the 'big names' in national history and ('hence') male historical actors. More specifically, besides a few exceptions, the historical focus was almost entirely on seventeenth-century 'Golden Age' history of the Netherlands, with an occasional focus on (late-) medieval history.[260] The strong focus on early modern history underlined the Protestant signature of a large part of the historical profession Peter Raeds asserts: by viewing the (early-)medieval past as largely unimportant and romantic (supposedly due to a distance between topic and historian), and viewing the past of the Protestant nation (late-medieval and early modern history) as important, many Dutch historians expressed their specific religious (and implicitly, political) background in their historical work. Early modern 'Protestant' history apparently stood closer to the self of the historian, while many Catholics argued that early medieval history was highly important due to the church fathers being so central to their religiosity.[261] Most historians thus engaged specifically in the Protestant history of the Netherlands.

Nation-building, however, also connected other disciplines to history. For example, the members of the HG were invited for a commemoration of Anthonie Leeuwenhoek's discovery of bacteria in 1875 (interestingly, its committee consisted of physicists, medical scientists and the director of the Rotterdam zoo, not historians), which was being interpreted as a 'discovery important for all natural sciences'; a

[257] B.J.L. de Geer, 'De strijd der Friezen en Franken. Eene voorlezing', *Berigten van het Historisch Genootschap te Utrecht* 3-1 (1850) 1-43, 5.
[258] J.P. de Bordes, 'Bijdrage tot de geschiedenis van het jaar 1672', *Berigten van het Historisch Genootschap te Utrecht* 3-1 (1850) 187-229, 229.
[259] De Bordes 'Het jaar 1672', 187-188.
[260] For this analysis, I used the *Kronijk* issues of 1846, 1856, 1866 and 1876, and the *Berigten* issues 3-1 (1850), 3-2 (1851) 5-2 (1856), 7-1 (1859) and 7-2 (1862).
[261] P.G.J.M. Raedts, 'Het schuldenboek onzer vaderen. Thijm en de katholieke geschiedschrijving in de negentiende eeuw', *De negentiende eeuw* 19 (1995) 53-63, passim.

commemoration 'worthy' for the Dutch nation.[262] Interestingly, despite being a historical commemoration, the committee thus did not contain any historian or literary schooled academic. In a sense, it reproduced a hierarchy of disciplines and interests: the most important aspect of the commemoration was that the discovery mattered for the physical and medical sciences, not the historicity of the commemoration itself. The members of the HG were only invited, and not part of the organization. However, it does underline that all academic disciplines (literature (history did not have its own discipline yet), physics and medical science), to varying degrees, were interpreted in light of nation-building: As Anne-Marie Thiesse describes, nations have common features in their 'identity checklists', of which 'a series of heroes embodying national values' is one.[263] The scientifically innovative apparently belonged on this commemorative list, and historians, physicists and medical scientists were supposed to follow those examples.

The focus on nation-building has only offered us contours and demarcations so far. Yet the historian is as present in histories as the historical sources. Hence in the following paragraph, we will look to the specific values expressed in the national histories written by members of the HG. It will tell us more about the historian behind the written history. More specifically, the historian behind the written history was, within the HG, always male. In the following paragraphs, we will look at what kind of masculinity was expressed in the writings of the HG, which will also shed light on the desired persona of the historian within the HG.

The men of history, men of strength and moderation

In a book, published by the HG, on military campaigns in in fourteenth and fifteenth-century Friesland by Eelco Verwijs, we get an interesting view on the favoured kind of masculinity for historians:

'[A] young and powerful build, fiery and brave, almost recklessly so, happy and lively, he [count Willem van Oostervant] surely did not remain unnoticed […]. Consumed by a thirst for honour and military fame, through the desire to excel in real manly deeds, […] to fulfil the ideal of the most perfect knight. […] filled by [the] shining achievements [of Charlemagne and the] brave [adventures of Arthur].'[264]

Although strength, expressed through physical strength, liveliness and the engagement in the 'manly' deeds of war, was positively viewed by Verwijs in this passage, there was a hesitance in accepting the 'fierce warrior'

[262] UA, HG, 9/1875-49, Uitnodiging voor de herdenking van de ondekkingen van Antony van Leeuwenhoek, 15 april 1875.
[263] Thiesse, 'National identities', 124.
[264] E. Verwijs, *De oorlogen van Hertog Albrecht van Beieren met de Friezen in de laatste jaren der XIVe eeuw*. Werken van het Historisch genootschap, gevestigd te Utrecht 8 (Utrecht 1869) xiii.

as a good person. Verwijs pointed to 'almost' being reckless in bravery, and a 'thirst' for honour: one could live up to the 'manly' ideals of the 'fierce warrior', yet one had to control his passions, which could sometimes be hard, as seen from an (anonymous) annotation which enthusiastically exclaimed that a document 'sung praises of the brave deeds of the Orange Nassau [family]'.[265] Control over passions implied a certain mental strength, which J.P de Bordes reproduced in his text on the year 1672, when he stated that 'mental strength and courage' were replaced by 'divisiveness and betrayal'.[266] The ideal of being 'strong' thus had to express itself on both a mental and a physical level, and were closely related.

Being both engaged in civilization and being civilized were also praised character traits. In the earlier mentioned history the wars between the Frisians and the Franks, De Geer described that he praised the 'civilization' (christening) of the heathen Franks, the combatting of (religious) digressions, and the 'power of those men, whose battle and work is described to us [by] Gregory of Tours'.[267] He elaborated later by positively describing the values of immaculacy and devotion, while praising the Frisian's bravery earlier in the book.[268] Religiosity, civilization and bravery were thus values which were deemed positive in a certain balance: those who knew how to balance these character traits would receive the approval of the historian. Hence preacher Johannes Wtgenbogaert (1557-1644) was praised by H.C. Rogge for 'calming' the 'passions' of 'disputing' preachers.[269]

That the 'power of those men' could be described by Gregory of Tours directly, refers to a value we have encountered earlier, the 'reverence' of the historical document, asserting that the historical document would directly give the reader an insight in history itself. For example, the foreword and arrangement of the published *Codex Diplomaticus Neerlandicus*, a collection of historical political charters, was presented as something necessary despite the accuracy of the charters: the sources seemed to be speaking for themselves.[270] Historical documents themselves were sometimes praised for their accuracy as well. J.A. Grothe praised the 'great accuracy' and the 'capacity and clear view' of the governor Johan Gideon Loten.[271] Accuracy was presupposed as well as praised.

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[265] UA, HG, 253, Aantekening over 'hereta principis auraicae en Belgas', jaartal onbekend (Due to the inserted not from 1855 possibly from around that year) (author unknown).
[266] J.P. de Bordes, 'Bijdrage tot de geschiedenis van het jaar 1672', *Berigten van het Historisch Genootschap te Utrecht* 3-1 (1850) 187-229, 187.
[267] De Geer, 'De strijd der Friezen en Franken', 12.
[268] Ibidem, 5-6 ; Ibidem 16-17.
[269] J. Wtenbogaert and H.C. Rogge (ed.), *Brieven en onuitgegeven stukken van Johannes Wtenbogaert*. Werken van het Historisch Genootschap, gevestigd te Utrecht 11-1 (Utrecht 1868) V.
[270] Historisch Gezelschap te Utrecht (ed.), *Codex diplomaticus Neerlandicus: verzameling van oorkonden, betrekkelijk de vaderlandsche geschiedenis,* I (Utrecht 1848) III-IV.
[271] J.A. Grothe, 'Memorie van den gouverneur generaal Johan Gideon Loten, betreffende Makassar', *Berigten van het Historisch Genootschap te Utrecht* 5-1 (1853) 3-44, 4.

Grothe also described that he went through much efforts to obtain his source.[272] Other HG members also referred to their hard work. Verwijs stated that he 'collected the building blocks [of his book] with arduousness and pleasure'.[273] Members of the HG were thus hard workers, but also showed enthusiasm while conducting hard work. P.J. Vermeulen was for example pointed to the vacant position of secretary of the HG due to his 'warm interest' in the work of the HG.[274] Working on history was thus expected to be met with a certain enthusiasm. Combined with the implicit 'objectivity' gained through 'letting the sources speak', it shows strong similarities with the mix of detachment (in the sense of not letting yourself speak) and enthusiasm in the form of enjoyment we also encountered in the remembrance of PC member Staats Evers.[275] As Huistra comments, despite the ever-growing amount of sources to be published and protected, Dutch historians did not seem to mind that much due to the 'arduousness and pleasure' they had in their research.[276] Moreover, within historical societies, 'doing' history was more of a social activity than doing history in writing: historical societies were places where historians could meet face-to-face and socialize; as Huistra also states, due to the great social homogeneity (being all males of comparable social standing), the HG was, like many scientific societies, a place of man-to-man *gezelligheid*.[277] Working hard did not exclude having pleasure in one's work.

Lastly, members of the HG also reproduced the value of moderation in terms of modesty in multiple ways. L.G. Visscher was for example critical of the work of sixteenth-century poet Jan Baptist Howaert, as he stated that he revered 'great liveliness' in poetry, but that Howaert's works were 'swarming with stiff, far-fetched, unnatural expressions, and are over-laden with mongrel words, as appearance of his erudition, in a ridiculous way.'[278] One could have 'powerful sophisticated lecture[s]' like the *Provinciaal Utrechts Genootschap* was complimented on, but one should not overdo sophistication.[279] Like historians in their research, poets were expected to not stray too far from the matter at hand. Yet as we shall see, 'factory-like' forms of historical knowledge reproduction were not appreciated either. Also, the fact that these 'direct' conversations with historical actors were deemed possible, underlined the belief that sources were giving one an unproblematic insight in history.

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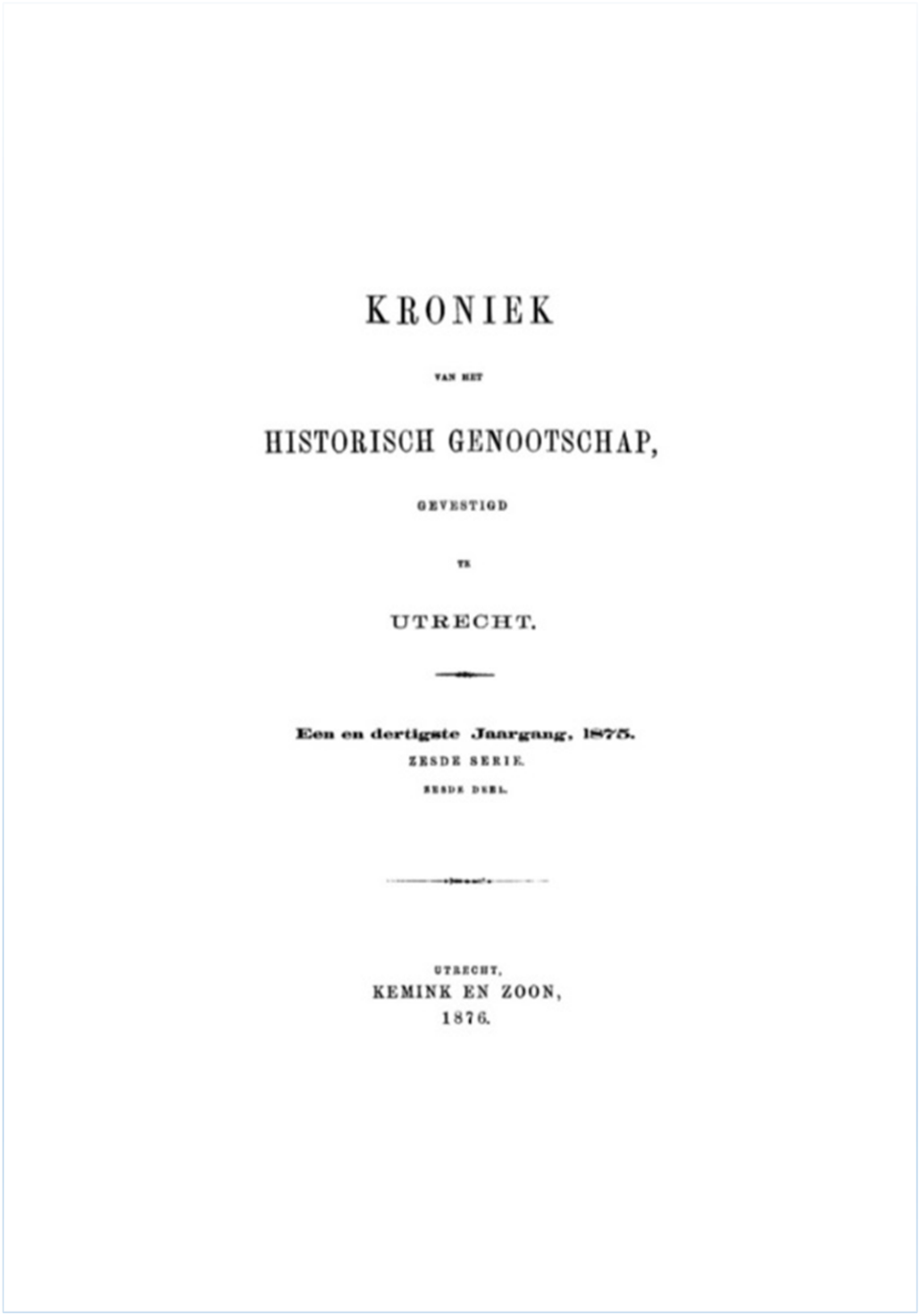
[272] Grothe, 'Memorie van den gouverneur generaal', 4.
[273] Verwijs, *De oorlogen van Hertog Albrecht van Beieren,* VI.
[274] UA, HG, 7-11, Aan den weledelen geest Dr. P.J. Vermeulen, 8 januarij 1866.
[275] A.G. Schulte, 'Mr. Jan Willem Staats Evers', 202.
[276] Huistra, *Bouwmeesters, zedenmeesters*, 183.
[277] Ibidem, 67 ; Ibidem, 75.
[278] L.G. Visscher, 'Joh. Bapt. Houwaert', *Berigten van het Historisch Gezelschap te Utrecht* 1-1 (1846) 35-50, 35-36.
[279] Historisch Gezelschap te Utrecht, 'Genootschappen', *Kronijk van het Historisch Gezelschap, gevestigd te Utrecht* 2 (1846), 50-53, 50.

In terms of the design of the historical works, one was expected not to engage in the adorning of publications too much. The front cover of the *Kroniek* of 1876 is exemplary, visible in image 2. The published work had to look well, but the work was only decorated by very small and almost unadorned lines under the blocks of text, with different fonts being the only extra aesthetic feature. Again, one was expected not to stray away from the source too much by decorating the historical work. As Herman Paul commented on church historian Johannes Acquoy: no excessive excitement and stir which could over-stimulate the reader, 'and no curls on the cover of a historical monograph', yet the text should be 'lively without unrest', like an 'elderly gentleman' writing in 'neat teacher's handwriting', thus a true 'gentleman historian'.[280]

The values of civilization, revering the historical source, being an enthusiastic and most of all hard worker, and modesty had a significant role in prescribing the way one had to 'do' history. In the following paragraph, we will engage with this issue more thoroughly. We will see that these values produced a certain kind of historian and a certain kind of history, and that the two are hard to separate.

[280] H. Paul, 'Een Leids ethos? De epistemische deugden van Fruin en Acquoy', *Leidschrift* 25-1 (2010) 95-114, 102.



KRONIEK

VAN HET

HISTORISCH GENOOTSCHAP,

GEVESTIGD

TE

UTRECHT.

Een en dertigste Jaargang. 1875.

ZESDE SERIE.

ZESDE DEEL.

UTRECHT,
KEMINK EN ZOON,
1876.

Image 2: the front cover of the Kroniek van het Historisch Genootschap, gevestigd te Utrecht *31 (1876). Most of the HG's publications had a similar, sober design.*

Scrupulous historians, detailed histories

As HG member J.J. de Geer described, history was about setting 'earlier deviations and misprints' straight.[281] Writing historical texts, or rather commentaries on and transcriptions of historical documents, were thus met with great caution and precision. As was commented in a text on Valerius Andreas in 1846:

'[…] How decent this article generally may be redacted, she is however not free of very essential shortcomings, shortcomings, which could partly be seen as misapprehensions of ancillary importance, which however, in our view, could cause enormous confusions, and hence may not be found in an essay on literary history of [this] kind.'[282]

The slightest mistake could thus prove to be catastrophic for the historical precision of an essay. Interestingly, this strong intellect was implicitly ascribed to a male historian, as the historical document was apparently a 'she'. When mistakes were however made, it could not be otherwise that the historian was simply misled, as a true historian would see his mistakes:

'See some of the shortcomings and mistakes, which struck us mostly in the article of mister Nève, and which we, with a certain regret, put on paper, however convinced, that the creditable writer, merely misled by Baillet, has mostly fell for these mistakes, and would have indemnified these mistakes if he saw the same [sources] with his own eyes.'[283]

When it turned out that a historian was deliberately being inaccurate with sources, other historians responded astounded. The board of the HG stated in 1846 that despite the zeal of their 'Germanic brothers', the historical works of the Germans lacked 'clarity'; J.H. Bohmer was named as an example, and he 'even' made it 'worse':

'They showed him charters through which Dodt van Flensburg retrieved three heavy books, but he carried no knowledge of it all. He only sees the drawers and archival files, he denies himself the time of looking at that treasure of registers and papers even just briefly, and now seeks to deceive his countrymen, that not one Dutchman is putting himself adequately to the historical sources.'[284]

Being accused of not paying enough attention to sources and thus being an inadequate researcher was a serious matter: an attack on the guarantee of a good historian (that one was an accurate researcher) had to

[281] J.J. de Geer, 'nalezingen op de proeve eener geschiedenis van het geslacht van Nyenrode', *Berigten van het Historisch Genootschap te Utrecht* 5-1 (1853) 138-226, 226.
[282] Dodt v. Fl., 'Valerius Andreas. Eene nalezing', *Berigten van het Historisch Gezelschap te Utrecht* 1-1 (1846) 27-34, 28.
[283] V. Fl., 'Valerius Andreas', 34.
[284] Historisch Gezelschap te Utrecht, 'Verscheidenheden. Joh. Fried. Böhmer , Nederland en de Nederlandsche geleerden', *Kronijk van het Historisch Gezelschap, gevestigd te Utrecht* 2 (1846), 13-15, 13-14.

be a legitimate claim. Also, when it was clear that this claim was illegitimate due to Bohmer himself not paying attention to sources enough, he crossed two lines at the same time.

HG members themselves also clearly emphasized that they brought accuracy to the front in their work. Rogge for example clearly emphasized that his wish to emphasize Wtgenbogaert's role in national history could not be fulfilled 'before his letter exchange and some unpublished sources are brought to light'.[285] In a collection of sources published by the HG, even small modifications like 'and following' changed from 'as follows we have' were explicated.[286] This mode of historical writing, precisely edited and commented source publication, was a guarantee of accuracy and thus good historical knowledge. For example, the first part of the source publication on bills of Hainaut, published between 1875 and 1878, held a small page saying that the introduction would be included in the last part.[287] The justification for the publication was implicitly deemed obvious (by the form and topic of the publication). Moreover, we see how the self of the historian was subtly removed from the historical narrative, and in Rogge's case, even supressed. The sources were what I would call the prime 'epistemological space', a space in the material sense, as the sources inhabited much room in the historian's text, and a space in the epistemological sense, as the source was the only room in which the historian was allowed to move (as there, he would 'reach' history). The historian's aspirations (Rogge's 'wish') were to be 'sacrificed' to an adequacy in source references.

This also meant that monographs were critically examined, as explicated in Verwijs's book: 'tougher demands need to be met when writing a monograph, compared to treating [the topic] in a more encompassing work', after which Fruin was immediately referred to.[288] Fruin's already mentioned 'historian's view', leaving behind one's own subjectivity through taking every historical actor into account, apparently needed a very precise focus on every source even remotely important: even the fact that the 150-page monograph was accompanied by a 600-page source publication, still made the monograph suspect to inadequacies.[289] The epistemological picture Daston paints based on German epistemological debates roughly at the time of Verwijs's publication, in combination with Verwijs's book, problematizes the until now rather harmonious picture within the HG of 'letting the sources speak'. On the one hand, Daston

[285] Wtenbogaert and Rogge, *Brieven en onuitgegeven stukken*, VI.
[286] J. van Wassenaar-Duivenvoorde and Historisch Genootschap te Utrecht (ed.), *Verbaal van de buitengewone Ambassade van Jacob van Wassenaar-Duivenvoorde, Arnout Citters en Everard van Weede van Dijkveld naar Engeland in 1685*. Werken uitgegeven door het Historisch Genootschap, gevestigd te Utrecht 2 (Utrecht 1863) 11.
[287] H.G. Hamaker, *De rekeningen van grafelijkheid van Holland onder het Henegouwsche huis*. Werken uitgegeven door het Historisch Genootschap, gevestigd te Utrecht 21 (1875). The note was inserted at the beginning of the book.
[288] Verwijs, *De oorlogen van Hertog Albrecht van Beieren,* V.
[289] Ibidem, passim.

describes that many historical thinkers like Leopold von Ranke derived their objectivity from their method. As Daston summarizes Gustav Droysen's view: sources had to be read 'against the grain' to interpret it in all angles to discern its historical, political or personal colours: those who interpreted sources as 'transparent windows' into history, as was very obviously the case within the HG, were deemed amateurs.[290] In a sense, Verwijs implicitly tried to express impartiality (closely aligned to objectivity)[291] in referring to Fruin and thus to accurate methodology. On the other hand, Verwijs's book expressed what was already an implicit assumption within the HG for many years: six hundred pages of source publication were necessary to make Verwijs's claim to adequacy credible. This also meant that when a historian could show that a lot of sources were precisely referred to, a historical work was apparently adequate: sources were implicitly still seen as transparent windows to the past. In Verwijs's book, we thus see an unspoken clash between two kinds of understandings of objectivity: objectivity through mere source-reference (deemed amateurish by Droysen) and objectivity through methodology.

Another, more explicit problematization of 'letting the sources speak', or more specifically, letting an excessive amount of sources speak, came from Willem Gerard Brill, who stated in the *Kronijk* in 1866 that pamphlets should not be overvalued, and at most tell something about societal life. He connected this overvaluation to the tendency to focus on the most 'puny' details to 'decorate' the greater story with.[292] Yet he seemed to be one of the few criticising the overt focus on historical detail: in a sense, Fruin's ideas were an offshoot of the longer established practice of 'letting the source speak' and guaranteeing this as much as possible (in a sense, Fruin tried to achieve impartiality and a high degree of objectivity through incorporating an objectivity through source-reference into (objective) methodology), and the practice was there to stay within the Dutch historical profession throughout the nineteenth century. When Fruin retired in 1894, the only one who did not follow his method in the 'farewell volume' of articles presented to him was Brill. According to Tollebeek ,the first significant open criticism on Fruin's method was by Albert Verwey, published in Fruin's retirement year.[293]

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[290] L. Daston, 'Objectivity and impartiality: epistemic virtues in the humanities', in: R. Bod, J. Maat and T. Weststeijn (eds.), *The Making of the Humanities* III: *The Making of the Modern Humanities* (Amsterdam 2014) 27-42, 32-33.

[291] However, this remains an issue of debate. On the one hand, Fruin's impartiality could be seen as a very sophisticated form of a 'middle-of-the-road' fallacy, as the impartiality would often derive from taking a position 'in between' two conflicting parties, and that position would then be seen as the most impartial one. How this relates to the role of objectivity (whether impartiality would also imply a degree of objectivity, even though Fruin believed absolute objectivity was impossible) in Fruin's thought, and to what extent Fruin's semi-Hegelian position would be distanced from the 'objectivity-through-source-reference' idea, remains an issue outside the scope of this research.

[292] Historisch Genootschap te Utrecht, 'Waarde van historische pamfletten', *Kronijk van het Historisch Genootschap, gevestigd te Utrecht* 21 (1866) 278, passim.

[293] Tollebeek, *De toga van Fruin*, 57-58.

The scrupulous working methods of the members of HG, closely connected to academic trends, also produced a 'scrupulous' character trait. For example, in one letter to the HG, it was commented that 'it would […] be pleasurable to be informed of the possibility' to look into a source, and that his request was a 'humble' one.[294] Even in the research notes of 'Reger', it is stated one of the archives he had visited contained archive number 564 on which he noted: 'on that I will not comment anything', referring to the probably bad state of the archive.[295] Even in research notes, scrupulous manners were expressed.

Another favoured sentence by multiple members was the emphasis on 'limits' in one's (intellectual) strength. For example, in a letter in which membership of the HG was accepted, it was commented that the acceptance was 'not without restraint, convinced as I am of the genuine limitedness of my strengths', and he hoped not to 'disappoint' the trust of the board 'too much'.[296] It formed an interesting contrast with the reverence of the 'men of strength' in history, yet a stronger emphasis on the expected moderation of historical actors.

We have seen how the practices of 'doing' history and the kinds of histories they produced were undoubtedly connected to the practices of the historian in terms of the expressed character traits of 'scrupulousness', moderation, and, when engaged in research, self-sacrifice in terms of self-suppression. Another important aspect in both research and practice within HG was the perspective of social class. The social class of HG members was inescapably linked to certain historical fields of study.

The broadly knowledgeable elite

Huistra describes the social makeup of the board of the HG as 'upper class Utrecht citizens': in 1848, almost three out of ten members were of nobility, still being two out of ten in 1860. Despite some diversity in working fields (military officers, university staff, magistrates etc.), almost all members were part of a high social class in one way or another, as was common in other European countries as well. They were also supposed to be able to pay the significantly high yearly contribution of ten guilders.[297] The HG expressed its significant ties to the nobility through for example the study of genealogy of these upper-class families, as was studied by J.J. de Geer who lamented that he studied the 'still neglected [field of] genealogy'.[298] Dating as far back as at least the eighteenth century, writing family histories was not an uncommon practice amongst Dutch nobility.[299] In 1846, an article was published on mathematician Ludolf van Ceulen (1539-1610) who

[294] UA, HG, 4/5, 'aan het bestuur van het Historisch Genootschap te Utrecht, 25 september 1853'.
[295] UA, HG, 253, Aantekeningen over archiefstukken door 'Reger', jaar onbekend (periode 1848-1858).
[296] UA, HG, 170, Brief ter aanvaarding lidmaatschap, 28 maart 1850 Utrecht.
[297] Huistra, *Bouwmeesters, zedenmeesters*, 70-72.
[298] De Geer, 'nalezingen van het geslacht van Nyenrode', 139.
[299] Y. Kuiper, *Adel in Friesland 1780-1880* (Groningen 1993) 75.

was, as was emphasised in the title, also a master-fencer, a sport which, in later centuries, increasingly became a status symbol of the high elite.[300] Thus on multiple occasions, desired study fields expressed ties to the nobility through their presentation.

The strong focus on military and political history, in combination with a strong social background in the nobility, was no coincidence. As Yme Kuiper concludes on the Frisian nobility in the nineteenth century, up until 1850, Frisian nobles made up a large part of the Dutch parliament, and the amount of nobility in Dutch politics remained high until at least the 1880s.[301] Secondly, next to being engaged in politics and jurisdiction, many of the (Frisian) nobility held high positions in the Dutch army as military officers, in the eighteenth and throughout the nineteenth century. This, in combination with the fact that many of the nobility were academically schooled, especially in law with specific interests in state and legal history, is thus highly consonant with the focus and practices of the HG.[302] Moreover, especially after 1848, when the new Dutch liberal constitution was adopted, the nobility were more specifically expected to have a university degree to fulfil societal functions.[303] The HG thus started its activities at a time when the nobility was more specifically expected to be academically 'cultured'. In a sense, the HG foresaw in a need.

As tied to, in Veblen's terms, a 'leisure class', the 'bland, characterless and unimportant' exams of the state commission were deemed 'letter-servile and factory-wise'.[304] As Veblen stated: 'the men of the upper classes are not only exempt, by prescriptive custom they are debarred, from all industrial occupations' ; 'manual labour, industry, whatever has to do directly with the everyday work of getting a livelihood, is the exclusive occupation of the [lower] class'.[305] In a sense, a non-factory-wise and thus 'unique' work of history would then be the evidence of productive use of an intellectual occupation, implicitly defined as higher-class: 'the lasting evidence of productive labour is its material product'.[306] The leisure-ability of being able to enjoy an 'amicable meal' thus did not stand on its own.[307] The members of the HG seemed to enjoy their abstinence of (servile) factory work.

Having broad knowledge, often signifying a high social status as well as we have seen earlier, was a value implicitly reproduced in the expectations to be able to understand French as well as Latin (besides occasional other languages like German). For example in the *Berigten* 3-1 of 1850, a 53-page article was

[300] W.J.C. Rammelman Elsevier, 'Mr. Ludolf van Ceulen (Colen) als schermmeester en professor in de wiskunde te Leiden', *Kronijk van het Historisch Gezelschap, gevestigd te Utrecht* 2 (1846) 351-359, 351.
[301] Kuiper, *Adel in Friesland*, 308.
[302] Ibidem, 378-383.
[303] Ibidem, 378.
[304] Historisch Gezelschap te Utrecht, 'Hooge scholen', *Berigten van het Historisch Gezelschap, gevestigd te Utrecht* 1-1 (1846) 59-62, 61.
[305] Veblen, *The Theory of the Leisure Class*, 22.
[306] Ibidem, 46.
[307] Historisch gezelschap te Utrecht, 'Genootschappen', 53.

entirely published in French.[308] In the *Kronijk* of 1856, lengthy French and Latin citations could be found.[309] HG members were not only expected to know their history, but also their languages.

Being an organization for upper-class academics and 'enthusiasts' engaging in history included, but also excluded, many groups in and from the HG. Moreover, even if 'enthusiasts' were allowed to enter the HG, there were some members who wished to see a clear hierarchy where the academic historian stood above the enthusiast. In the following paragraphs, it will become clear that these were only some of the many demarcations of membership present within the HG.

Hierarchies and those excluded from the HG

The HG was the only scientific society considered in this research which included 'enthusiasts' into a sphere of knowledge creation. Huistra describes two main reasons for this. Firstly, chairman Van Asch van Wijck spent so much money on source publications that the HG needed much more money to survive, and its main source of income was from the contributions of HG members themselves. Secondly, Van Asch van Wijck wished to create a historical society which was also open to those who were not academically schooled or associated with other scientific societies. Not all members agreed with his view. Some members also argued that they wished to gain intellectual prestige with new members. This, however, was not an easy task, as the HG struggled to gain recognition amongst Dutch intellectuals. Especially frictions between the intellectuals of Leiden and The Hague on the one hand, and Utrecht on the other, and the dispute between Van Asch van Wijck and the Dutch society of Literature, caused many intellectuals to refuse the offer of membership. The few who gave a reason for their refusal expressed that they did not agree on the publication methods of the HG.[310] To complicate internal hierarchies desired or expressed by some HG members between academics and enthusiasts, members like Van Asch van Wijck did not seem to adhere to such a hierarchy, and many intellectuals seemed to deny the aspired academic status of the HG altogether. Yet the members which did express (and thus implicitly desired) these hierarchical relations within the HG give us an interesting insight in the aspirations of some historians to professionalize and 'academize' history as a discipline.

In 1846, 'enthusiast' and military officer W.J. Knoop sent a letter to accept membership, stating that he had written a small text on Dutch military history, a 'national cause'. Yet despite his research, he still

[308] Historisch Genootschap te Utrecht, 'Catalogue analytique de 670 document manusrits, relatifs à l'histoire politique et administrative du royaume de Hollande, conservés dans les diverses bibliothèques de Paris.' *Berigten van het Historisch Genootschap, gevestigd te Utrecht* 3-1 (1850) 133-186, passim.
[309] Historisch Genootschap te Utrecht, *Kronijk van het Historisch Genootschap, gevestigd te Utrecht* 12 (1856), see for example: 48-54, 67-71 and 73-76.
[310] Huistra, *Bouwmeesters, zedenmeesters*, 70-72.

deemed himself 'not qualified' enough to be a working member.[311] In another letter that same year, a membership request was thanked for, as the writer did not find himself suited enough to engage in history, as it had not been his 'main field of study'.[312] This pointed to the assertion that to be a 'scientific' historian was to devote all of your time to historical research. As Verwijs tried to justify that he could not devote all his time to research, he agreed that being a historian was something one could not do part-time: it was a science in which the (aspiring) historian was to put all his strength and time.[313] An understandable claim for someone whose academic work (in both literature studies, which included history, and linguistics) was his (well-paid) vocation. It resembles debates like the Heiligerlee debate described by Supèr. During that debate, Fruin, as professional historical specialist, and Groen van Prinsterer, as academically schooled jurist who had conducted historical research as well, criticised the Catholic doctor Willem Nuyens for engaging in a historical debate as a layman: he either had to give up his medical practice, or devote all his time to historical research.[314] Thus for some historians, 'professionals' had the highest standing in the historical field.

Besides hierarchies aspired by some members, many groups were excluded from the society as well. Firstly, women were virtually absent from the HG. The few times in which women were visible was in periods of mourning.[315] As was the case with medical societies, periods of mourning were the only occasions in which women briefly entered the 'scientific spheres' of the societies. Moreover, not only were sources on some occasions described in female terms, historians were, for example in one letter, described as 'the man' who engaged in scientific history, also standing above 'he', who wrote history as pastime.[316] Even the 'lower' historians (another plea for an academic-enthusiast hierarchy) in this letter were specifically men.

The specifically Protestant background of a large part of the historical profession found subtle expression in the HG, as was already visible in the historical scope of the HG. Prominent members like Brill, De Geer van Jutphaas and Van Asch van Wijck were all Protestants. Moreover, a prospectus for the publication of Protestant religious and church books could also be found in the archive of the HG.[317] The Protestant religion was, albeit implicitly, present.

Less implicit was the very negative description (and thus implicit exclusion) of other religions, especially Jews. In an answer to the earlier mentioned research on the state of archives in the Netherlands, it was commented on the archive of Elburg that besides missing documents, many papers were sold to 'a Jew'.[318] Suddenly, naming religion mattered: being Jewish was apparently a peculiarity. The same complaint

[311] UA, HG, 167, 10 november 1846, aanvaarding lidmaatschap M.J. Knoop.
[312] UA, HG, 167, Bedanken voor lidmaatschap, 23 nov 1846.
[313] Verwijs, *De oorlogen van Hertog Albrecht van Beieren,* VI-VII.
[314] Supèr, 'Het recht der historische kritiek', 250-251.
[315] See for example: UA, HG, 86, 29 oktober 1855, condoleancebericht.
[316] UA, HG, 255, Verslag over de stand van zaken vanuit Schiedam, 22 mei 1850.
[317] UA, HG, 7/1869-26, Prospectus voor de uitgave van godsdienstige en kerkelijke geschriften.
[318] UA, HG, 255, Antwoord op de rondvraag betreffende het archief in Elburg, 27 februari 1849.

was expressed in Enkhuizen, where many parts of the archives were cleared out and 'sold to the Jews and shop owners for packaging paper', 'sacrificed' to a 'reckless appetite for destruction'.[319] Not only was it apparent that these transactions were experienced as a severe breach of the value of handling sources carefully, lumping together Jews with shop owners in a rather negative tone referred to the stereotype of the 'mercenary Jew'. It was hence clear that they, like women, were not welcome within the HG.

Conclusion: persona within the Historisch Genootschap *in Utrecht*

Within the HG, we have seen how 'letting the source speak' had influenced the favoured kind of publication, the source transcription with minor comments, the research practices and explications of methods and errors, the humbling behavioural traits we have witnessed in correspondence, and how it related to ('academic') theories on the historical view. It inspired values of modesty, scrupulousness and moderation. In a sense, the values of modesty and moderation could also be found in the correction of overtly 'fierce' military men: it was expected that one could tame their passions. At the same time, religiosity in historical actors was revered as a good character trait. The military men had to act chivalrous: being 'noble' was the implicit value, or to translate a more accurate Dutch word, *Edelmoedig* ('nobly' brave). Noble in intentions and (bravery-correcting) behaviour, brave in standing up to challenges.

The research objects, the historical actors who were supposed to supress their overt passions, were inseparable from the careful, scrupulous and modest research subject who had to supress his subjectivity as much as possible. Despite the fact that Droysen would probably have deemed the practices and assertions of the HG as amateurish (probably like some Dutch academics did as well), the HG members did follow the suppression of subjectivity and temptations Daston ascribes to Droysen: 'the objective historian must not give in to the temptation to generalize prematurely or to edify or entertain at the expense of the hard-won facts that had been dug out of the archives'; subjectivity had to be 'straightened', yet the HG would have lacked the '*Quellenkritik*' Droysen cherished.[320] Although being a 'careful' person implied different suppressions for historical actors in contrast to the researching subject, both had to suppress certain human traits, or to speak in terms of self-sacrifice, sacrifice a part of their self in order to be adequately careful persons. However, as is already visible, this should not lead one to an overtly reductionist conclusion that the relation between historian's subject and historical object is a complete 'one-on-one' relation: there are significant situational, contextual, historical and personal discrepancies and differences between historical subject and object.

[319] UA, HG, 255, Verslag over de stand van zaken in Enkhuizen, 13 juli 1850.
[320] Daston, 'Objectivity and impartiality', 31-32.

We can summarize the persona of the HG member as the 'modest gentleman'. Rigorous claims were shunned as the antithesis of careful research, and gentlemanly behaviour, be it in the chivalrous warriors, the civilised christeners, the scrupulous manners in writing or the expectation of good intentions, was celebrated. Moreover, the term 'gentleman' also covers the class context: as we have seen, many research topics and their presentation, the disdain for industrial work and the fact that most 'enthusiasts' seemed to be high-ranking military officials, next to the many members who were part of the nobility, expressed how the HG was strongly tied to the higher classes of society.

The strong, almost sole focus on character in this chapter underlines that there were not many significant changes within the HG in relation to professionalization and persona. The period 1845-1876 proved to be a rather consistent period for the HG, and relations in regard to professionalization were far from clear-cut, as seen from the differing opinions on 'enthusiasts' within the society. The HG remained a historical society somewhat distanced from academia. Despite minor engagements with 'academic trends' like 'Fruinian' theory and professionalization by some HG members, the HG did not yet become a significant factor in shaping the then still professionalizing academic historical discipline, as Dorsman already concluded.

The HG did provide an interesting example of a society in between the 'fully professional' societies with small audiences, and the larger 'knowledge-spreading' societies where academic professionals spoke to an audience of non-professionals and students. It is the only society I have encountered where both enthusiasts and 'professionals' were part of a knowledge-creating institute, where in some member's understandings, 'enthusiast' seemed to be a unique category standing in between 'professional', 'layperson' or 'non-professional'. Thus in the following two chapters, we will focus on a kind of relation 'under one roof' which is wholly different from the ones we have encountered in the previous chapters: professional 'versus' non-professional, inhabiting the same space.

Part four: ‘to spread the word of science’: scientific societies, experts and large crowds

7. The Natuur- en scheikundig genootschap *in Deventer*

Introduction

The NSG in Deventer will be the first scientific society we consider with a large non-professional audience. The NSG was a society where physics and chemistry was discussed with a wide audience, 'to be useful to oneself and others', alongside the occasional talks on literature which were allowed twice a year from 1835 onwards.[321] The talks on literature saw a decline from the 1850s onwards and almost completely disappeared in the 1870s.[322] The increasing specialization of the sciences was also visible within the NSG.

Due to the low amount of source material, and the NSG showing traits comparable to the NG in Groningen, this chapter will be significantly shorter than the others. We will first discuss how the speakers within the NSG presented themselves and what kind of audience that implied, then we will discuss the wide audience, and lastly, the relatively significant role women had within the NSG, especially compared to the other scientific societies we have discussed so far.

The devout physicists

The NSG reproduced many values we have already encountered in earlier chapters. Firstly, good society members, like the president of the society in 1844, were remembered for the efforts for the NSG, and for doing this with 'accuracy, arduousness and fervour'.[323] The commitment derived from these values was strictly controlled: not meeting obligations (meant especially for working members, for example for speaking, writing and sending summaries of your talk within three days etc.) was met with fines.[324] The society was also a place of *gezelligheid* like other societies: one of the talks concerned Mennonite preacher J.H. Halbertsma's ideas 'on Paris and the Parisians, with whom [he] met personally'.[325] Next to the hard work which needed to be done, there was ample space for frivolous talks on one's vacations and meetings.

Despite the society being open to some lower-class people as well, as we will see, the NSG did reproduce values of the higher classes we have also encountered earlier. For example, in a letter to D.C.J. Mattheus in 1848, it was explicated that he would receive a silver cup for his 'amicable conviction' towards

[321] Historisch Centrum Overijssel (afdeling Deventer), 0972: Natuur- en scheikundig genootschap (HCOD, NSG afterwards) 4, Wetten van het Natuur- en scheikundig genootschap te Deventer (1817) passim.
[322] See: HCOD, NSG, 1, passim ; HCOD, NSG, 2, passim.
[323] HCOD, NSG, 1, Vergadering 10 oktober 1844.
[324] HCOD, NSG, 4, Wetten van het Natuur- en scheikundig genootschap te Deventer (1817) passim.
[325] HCOD, NSG, 1, Vergadering 13 februari 1845.

and concerns for the NSG.[326] As Veblen commented on taste: the 'leisure class' wished to 'live up to the accepted canons of decency in the kind, amount and grade of goods consumed'[327]: Mattheus's could have only earned the expensive silver cup through the efforts he conducted. Manners were also an important sign of 'leisure'-time well-spent[328]: professor M.J. Cop. accepted the agreed bond with the NSG 'graciously'.[329]

The working members of the NSG also expressed a desired hierarchy between them and the audience. Buying new instruments was solely entrusted to the board and the working members: they had the expertise to know what was needed and what was not.[330] One lecture in 1845 dealt with the 'glorious relation between all that is created, especially shown in the progress of science in recent years', which was deemed necessary as regarding this insight, 'there reigns a lot of confusion in the societal world, visible in for example in religion and politics'. The exercise of physics and chemistry was supposed to lead to the 'glorifying of the Creator [and] incitement', and also to the application of knowledge in order to make it 'more serviceable to the perfection of the whole'.[331] This brings together many aspects which described the desired speakers within the NSG. Speakers were supposed to be devout, their insights were supposed to 'stand above' all 'confusion' (thus reassuring a hierarchical relation between crowd and speaker), and their work should be serviceable to the world, already expressed before in the desire to be useful and work hard.

One expression of the desire to be useful to society was visible in October 1845, when a potato disease plagued The Netherlands and many European countries (especially Ireland) as well. The speaker first wished to begin with a 'clarification and explanation' on the physical and chemical makeup of the potato plant and the disease, but then also referred to the great problems of the potato disease 'which currently plagues so many countries including our fatherland', after which he regretted that the 'core and causes' of the disease remain largely unknown, unlike the effects.[332] The members of the NSG thus expressed a great desire to be useful and helpful to society.

If we consider the strong sense of 'loving thy neighbour' in the GBNGH in Amsterdam, and the high appreciation of 'God's creation' we see in the NSG, the desire to be helpful to society seemed to be strongly in accordance with the religious background of the NSG. During one meeting, there was a talk on the Reformed Protestant physicist Pieter Nieuwland (1764-1794) where he was being praised for his 'noble use of his privileges and talents, his piety and virtue'.[333] Not only did this tie the religiosity of the NSG directly to the protestant faith, but also a 'noble use' of talents to 'piety'. However, in a likewise religious

[326] HCOD, NSG, 1, brief aan D.C.J. Mattheus, 13 April 1848.
[327] Veblen, *The Theory of the Leisure Class,* 87.
[328] Ibidem, 48-49.
[329] HCOD, NSG, 1, Buitengewone vergadering, 12 maart 1846.
[330] HCOD, NSG, 5, herdruk van de wetten van het Natuur- en scheikundig genootschap te Deventer (1856) 9.
[331] HCOD, NSG, 1, Algemene vergadering 4 december 1845.
[332] HCOD, NSG, 1, Algemene vergadering 23 oktober 1845.
[333] HCOD, NSG, 2, Vergadering 22 december 1853

sense, the history of physics and chemistry was characterized in 1861 as a 'witness to the limitedness of human knowledge'.[334] Speakers and working members stood above their audience, but not above their humanity, implicitly referring to 'what was above humanity'.

The large audience

If we would look solely to the members of the NSG, we get the image of a somewhat wider audience than found in the previously discussed societies, but nevertheless a society for the upper classes and high middle class. The members who were accepted were, for example on September 5, 1840, a professor (Hoffmann), two (army) captains and three members without any further title.[335] If we look to the yearly mandatory contribution of six guilders, we can indeed conclude that despite a multitude of vocational backgrounds, many members had to make enough money (thus mostly being part of the higher (middle-)classes) to be able to afford membership.[336]

The NSG invited many non-members to their meetings, however. In 1843, it was decided that the professors of the gymnasiums were allowed to bring their students. Moreover, announcements of the activities of the society would be announced in the Deventer newspaper *Deventer Courant*.[337] However, as Aerts comments, until at least the 1870s, newspapers were spread in low quantities (a few thousands for the most popular newspapers) within The Netherlands and were mostly spaces for an educated (high-)middle-class, and only occasionally meant to 'educate' an 'uneducated' public.[338]

Despite this background, the NSG did try to have an audience wider than the higher classes in their meetings. Besides students being exempt from the required entry fee, soldiers 'and the like' were also exempt from paying a fee: the NSG thus did try to reach out to those who could otherwise not afford to attend meetings in a scientific society.[339] From 1874 onwards, assistant-teachers (probably 'non-university' schools were meant) both male and female could freely join the meetings as well.[340] That women could freely join society meetings signified an increasing involvement of women in the NSG.

[334] HCOD, NSG, 2, Vergadering 17 januari 1861.
[335] HCOD, NSG, 1, Vergadering 5 november 1840.
[336] HCOD, NSG, 1, Vergadering 6 november 1841.
[337] HCOD, NSG, 1, Buitengewone vergadering 9 oktober 1843.
[338] Aerts, 'Bevoegde autoriteiten', 85.
[339] HCOD, NSG, 5, herdruk van de wetten van het Natuur- en scheikundig genootschap te Deventer (1856) 5.
[340] HCOD, NSG, 2, Buitengewone vergadering, 15 oktober 1874.

The role of women: a 'sudden appearance'?

Already since 1817, it was allowed to bring women to the last general meetings of each year.[341] In the 1870s however, women were incorporated as members of the society increasingly. In October 1870, it was already noted that the 'ladies' membership' (meaning: without the right to introduce new aspiring members) would be half of the men's contribution, a 'derivate'.[342] A few days later, it was decided that 'every member' was 'free to introduce a lady'.[343] As was the case in 1871, meetings were attended by members 'with their ladies'.[344] The hierarchies were clear, women were there under the auspices of the male members: the NSG was despite the presence of women a male-dominated sphere.

In October 1872, women were officially accepted as members without the right of introduction, with the contribution being two guilders per year. The 'normal' (male) contribution was now set to four guilders.[345] Interestingly, both contributions together make six guilders, just like the contribution for men was before this decision. Technically, the contribution remained the same, just like the male-female relations in the NSG: the male member simply brought 'his' wife or girlfriend along with him, with the only difference compared to the years before that being that women were now officially attending the meetings. Only a year later, women were called 'members' for the first time.[346] The difference between women and male members within the society remained, and was specifically mentioned. In the convocations for the general meetings in 1874, it was still commented that the meeting was 'also for ladies'.[347] Hence the incorporation of women into the NSG did by far not mean they were incorporated on an equal footing.

Moreover, we can question if the appearance of (higher (middle-)class) women was in any way 'sudden' or due to emancipatory beliefs. The NSG is the first scientific society we consider which was not a place of knowledge *creation*, but knowledge-*spreading* and *education*. Women were thus still mostly barred from places where science was done. It is hence no coincidence to find women in scientific societies like the NSG and the NG which we will discuss in the following chapter. Moreover, when we consider Maria Grever's biography of feminist and historian Johanna Naber (1859-1941), these kind of beliefs were highly common. Naber was part of a typical intellectual family, and her father, university teacher and later *rector magnificus* at the university of Amsterdam Samuel Naber, desired that his daughter would be culturally, intellectually and scientifically educated. Yet she was not allowed to enter university, not even for a few

[341] HCOD, NSG, 4, Wetten van het Natuur- en scheikundig genootschap te Deventer (1817) passim.
[342] HCOD, NSG, 3, Opmerking 10 oktober 1870.
[343] HCOD, NSG, 2, Vergadering 13 oktober 1870.
[344] HCOD, NSG, 2, Vergadering 9 februari 1871.
[345] HCOD, NSG, 2, Vergadering 10 oktober 1872.
[346] HCOD, NSG, 2, Buitengewone vergadering, 9 oktober 1873.
[347] HCOD, NSG, 2, bijgevoegde convocaties.

lectures, and not even when her father was *rector magnificus* of the university of Amsterdam in 1878 (while some women were already starting to attend classes).[348] Thus the assertion that (higher class) women ought to be grounded in many fields of knowledge did not lead to women's incorporation in the sciences. In a sense, they were only expected to express (the ability of the higher-class household to offer) cultured upbringing.

Conclusion: persona within the Natuur- en scheikundig genootschap *in Deventer*

We can shortly describe the persona of the NSG (working) member as the 'devout gentleman'. A devout of course preached his religion, in the case of the NSG, to an audience which was supposed to listen to the 'scientific sermons'. In that regard, the devout aspect also covers the implicit hierarchy between speaker (along with other working members) and the wider audience. Moreover, the devout within the NSG was also a religiously inspired hard worker. The 'gentleman' aspect covers both the class-aspect we discussed and the fact that the NSG was despite its female members, a predominantly male-led sphere.

Despite the higher-class background of the speakers and (many) members, it was attempted to have an audience wider than the members, as we have seen. The NG to which we will now turn, however, did not seem to attempt to have such a 'broad audience' in class terms. Despite the many commonalities in being religiously devout, having a visible but subordinate role for women in their society, aspects which will be elaborated further in the next chapter, we will see a more exclusively higher-class intellectual society in Groningen.

[348] M. Grever, *Strijd tegen de stilte. Johanna Naber (1859-1941) en de vrouwenstem in de geschiedenis* (Hilversum 1994) 47-51.

8. *The* Natuurkundig Genootschap *in Groningen*

Introduction

The documentation of temperature and rainfall during the years 1844-1853 was one of the few scientific research projects in name of the NG, with the expected hope that the 'extraordinary precision' of the observer has led to knowledge of 'some scientific use'.[349] Until at least the first half of the 1870s, the NG was an educational society to spread scientific knowledge to be 'useful' to its members 'and others'.[350] As we shall see however, who were considered to be part of those 'others' is a question which already poses the implicit question of who were not: especially lower-class people seemed to be virtually non-existent within the NG, except for forming an 'anti-identity'. And although women were incorporated in the 'others', they definitely did not enjoy the same position as men within the NG. As far as the sources tell, there had been no discussion of allowing women as members as there was in Deventer.

First, we shall consider the relation between the (largely non-professional) public and the professional speakers. The issue of class in defining the audience of the NG will be an issue addressed on multiple occasions in this chapter. Second, we will focus on the specific desired identity of the speakers, and how religion and emotionality was a highly important part of the speaker's identity and of the NG as a whole. Lastly, we will focus on the subordinate position women had within the NG compared to men.

The audience of the NG: burgerlijke *people learning in equality*

Anyone who could pay 5,25 guilders contribution a year, would be a member of the NG, 'regardless of social rank or position', as was commented in 1847.[351] Yet as we have seen, this amount of contribution was generally only affordable for someone with at least a higher-middle-class background. As was stated in 1876, during the 75th anniversary of the NG, the audience was considered to be the 'awaken, decent citizenry'.[352] Despite this fact, they did try to present themselves as the experts who were trying to spread science in the whole of 'society': during the anniversary, W.A. Enschedé stated that they were an organization which did not consist of 'capable and experienced men [who] jointly busy themselves with natural science, or who

[349] Natuurkundig genootschap te Groningen, *Uitkomsten der waarnemingen van thermometer en regenmeter, gedurende de jaren 1844-1853 gedaan te Groningen, onder toezigt van prof. W.A. Enschede* (Groningen 1853) 4.
[350] Groninger Archieven, 1454: Natuurkundig Genootschap te Groningen, 1801 – 1934 (GA, NG afterwards), 28, Wetten van het Natuurkundig genootschap te Groningen (1840) 3.
[351] GA, NG, 28, Wetten van het Natuurkundig genootschap te Groningen (1847) passim.
[352] Natuurkundig genootschap te Groningen, *Het 75-jarig bestaan van het Natuurkundig genootschap te Groningen feestelijk herdacht* (Groningen 1876) 26.

unite themselves to build up and develop […] natural science […]', but of those 'exercisers of various natural sciences' who tried to 'spread the light of truth outside of the circle of scientists' into a society, 'where only a few can dedicate themselves to the study of nature', but many wish to learn about science. They exclaimed that they were willing to share their knowledge with anyone who was interested, even the 'illiterate', with whom they would come to knowledge 'together'.[353]

Their self-image reveals two interesting aspects. First, their reference to very few people engaging in natural science refers to the facts we discussed earlier: not many people studied physics in the Netherlands, and the job perspective for physicists was rather bleak until well into the nineteenth century. Secondly, there seemed to be an unspoken tension between coming to knowledge 'together' and presenting themselves as the lucky few experts who had the knowledge to 'enlighten' their public. If we consider the words of J. Baart de la Faille and H.C. van Hall (on different occasions), we get the image of intellectuals emphasising their high education and importance of their knowledge: De la Faille wished to point out that the medical scientists had changed 'completely through the physical sciences', while Van Hall wished to emphasise that the university was the 'focal point of [their] knowledge'.[354] There was thus a clear demarcation between experts and laypeople. Indeed: 'the light is not equally accessible in all sciences, and not equally alluring for the uninitiated'.[355] The 'uninitiated' needed a guiding light.

All the more reason to praise their audience for their support of improving 'knowledge and civilization' and the 'warm interest [in] what elevates and dignifies the spirit!'.[356] Everyone who participated in the NG was thus engaging in being illuminated by knowledge, and through gaining this knowledge, became civilized. As they emphasised themselves, this made all members 'eminent' people.[357] Hence in this regard, as all members engaged in civilization, they were equals. These values are highly comparable to those found in eighteenth-century scientific societies in the Netherlands. As Mijnhardt states: citizens could 'exercise their virtues' through exercising '"civilizing" and most of all "useful" sciences' in an environment of congeniality.[358] Through science, they did not only desire to learn but also to develop themselves.

The NG also tried very hard to keep the meetings as attractive as possible, as the 'men' of the NG wished to 'meet the curiosity [of the audience]'[359]. For example, many kinds of practical measures were met to make sure that as many people as possible could join the meetings. In 1860, it was decided that

[353] Natuurkundig genootschap te Groningen, *Het 75-jarig bestaan*, 18.
[354] Ibidem, 37 ; GA, NG, 64, Afscheid van H.C. van Hall (22 februari 1871) 8.
[355] Natuurkundig genootschap te Groningen, *Het 75-jarig bestaan*, 24.
[356] Ibidem, 24.
[357] Ibidem, 18.
[358] Mijnhardt, *Tot heil van 't menschdom*, 95.
[359] Natuurkundig genootschap te Groningen, *Het 75-jarig bestaan*, 28.

experiments started half an hour later to better accommodate to the 'performance of everyday lives'.[360] In 1866, the amount of lectures was reduced to one per meeting in order to end all sessions at eight o' clock, and in 1869, the society underlined that they did not shun any 'popular' treatment of science.[361] The atmosphere thus had to be as accessible as possible.

This however, also related to rather practical reasons. Already in 1857, they paid 50 cents rent per (meeting) day extra 'because it always runs late'.[362] In 1865, they expressed their concerns on declining numbers of visitors to lectures, after which it was decided that the topics of the lectures would then be published in the Groningen newspaper.[363] Still in 1869, the board had to comment the following:

'We believe we can rightly claim, that our society provides for a real need, and based on that we request the continuous cooperation of all, to […] not only uphold the society, but also to develop it.'[364]

Being a member of NG, regardless of being a working member and speaker or not, demanded effort and engagement. One could not work on oneself through science without hard work. Especially the speakers themselves were important actors in portraying these ideals. Yet we will also see how religiosity and being conscious of 'beauty' in nature besides the 'mere useful knowledge' were intertwined ideas important to the NG. To appreciate God's creation in all its aspects, thus not only its usefulness, was an idea which shaped both the conception of science and of the speakers themselves.

The devout speakers

Progress in science throughout history was directly related to societal and spiritual progress. As J. Baart de la Faille commented, 'in previous centuries, the human spirit was enclosed in a limited circle [of] superstition, prejudice, ignorance and fear', eventually being 'freed of state- and church-shackles', and ridding 'the science of nature of every mask of secretiveness and philosophical systems'.[365] In their day and age, God seemed to be generous enough to grant a direct insight in nature, as was sang on the 50th

[360] Natuurkundig Genootschap te Groningen, *59e verslag van de werkzaamheden en den staat van het Natuur- en Scheikundig Genootschap te Groningen* (Groningen 1860) 3.
[361] Natuurkundig genootschap te Groningen, *65e verslag van de werkzaamheden en den staat van het Natuur- en Scheikundig Genootschap te Groningen* (Groningen 1866) 3 ; Natuurkundig genootschap te Groningen, *68e verslag van de werkzaamheden en den staat van het Natuur- en Scheikundig Genootschap te Groningen* (Groningen 1869) 4.
[362] GA, NG, 84, Rekening naar aanleiding van de resolutie 10 juni 1857.
[363] Natuurkundig genootschap te Groningen, *64e verslag van de werkzaamheden en den staat van het Natuur- en Scheikundig Genootschap te Groningen* (Groningen 1865) 3-4.
[364] Natuurkundig genootschap te Groningen, *68e verslag*, 3.
[365] Natuurkundig genootschap te Groningen, *Het 75-jarig bestaan*, 38-39.

anniversary: 'prejudice retreats, digressions fade, enlightenment shines, if [God] wills it!'.[366] The progress of science, and the 'clear' insights in nature it supposedly gave, was still thanks to God. As NG member Claas Mulder put it: 'God ordinated all things', and 'who doubts [that], let him refer to the balance [of creation], let him revisit the memorial books of the natural sciences, what they manifest'.[367]

Thus it was not strange that the members of the NG were devout physicists who did not only learn and spread the 'useful' knowledge of nature, but also gathered knowledge on the 'beautiful' to 'ameliorate' the 'material, spiritual and moral wellbeing'.[368] This attempt to have a harmonious relation with God's creation resembled the eighteenth-century societies Mijnhardt describes, who were trying to achieve 'happiness on the place in a natural and harmonious cosmic order given by God'.[369] Baart de la Faille for example gave a lecture on how studying physics 'would not be detrimental to exercising poetry'.[370] Theodoor van Swinderen also described the arts as an addition to the sciences and humanities.[371] H.C. van Hall, like other NG members, even wrote a poem on this topic, as he saw poetry as a means to bring words to life which were otherwise 'lifeless'; this poem was an ode to the appreciation of nature as an exalted activity, a realization that all that happened was 'led by God's hand':[372]

'Secret powers float
In order and consistency
And separate and unify
And adorn the appearance
[…]
But, what lives or lived,
What is, or was
One holds Nature's laws
The highest, unmeasurable Spirit!
And which changes
Thou sees on earth or in heaven
From the beginning of all things
Not one speck of dust disappeared into naught'[373]

[366] GA, NG, 59, Lijstje gezangen (voor het 50-jarig jubileum).
[367] GA, NG, 63, Toespraak gehouden in de buitengewone vergadering, 27 sept 1850 door Claas Mulder, 13.
[368] Natuurkundig genootschap te Groningen, *72e verslag van de werkzaamheden en den staat van het Natuur- en Scheikundig Genootschap te Groningen* (Groningen 1873) 3.
[369] Mijnhardt, *Tot heil van 't menschdom*, 95.
[370] GA, NG, 4, Openlijke vergadering, 24 februari 1864.
[371] GA, NG, 59, Redevoering van mr. Theodoor van Swinderen, 26-27.
[372] GA, NG, 64, Afscheid van H.C. van Hall (22 februari 1871) 8 ; Ibidem, 3.
[373] Ibidem, 6.

The power to adorn the appearance of Creation, in this instance, through poetry, is clearly referred to in the first four sentences. Yet it is a secret power, as unmeasurable as the 'Spirit', one of the parts of the Holy Trinity. One could know nature, but not God, as we also saw in the NSG in Deventer. The last four sentences assure the reader (and listener) that the world we live in now is still the creation of God. From all these expressions of religious devotion, we get a highly determinist interpretation of God's presence in creation: God was the creator of natural laws, and was present in Creation through exercising his will when he 'chose' the moment prejudices would disappear. These explicit references to religious creeds reminds us that religion mattered; it mattered strongly within the NG and the NSG.

Religiosity, science and the appreciation of beauty in nature through the arts was a mix of beliefs and attitudes which Van Swinderen, one of the founders of the NG, already cherished in his time as a student in Groningen. As Marleen Brock concludes on published travel stories of Van Swinderen and his fellow students around 1800, the concept of the 'sublime' played an important role in their conception of nature. It meant that the human mind could transcend 'wild' nature, and that one could see the 'elevated' aspects of God's plan in and design of nature, relating to fysico-theology: the viewpoint that learning about nature was the best way of knowing God and his creation, an idea highly popular in the Netherlands at the time. Moreover, the concept of the 'exalted' in nature influenced the idealising literary writing style of Van Swinderen and his companions, with an important focus on classicism and the romantic historical experience of the Middle Ages.[374] The assertions that the medieval period was a romantic historical period (distanced from the protestant subject as we already encountered in the HG) and that one could learn to know God through studying nature, already had their influence in Groningen at least since the beginning of the nineteenth century.

The idea of 'enlivening' nature through poetry and appreciating nature's beauty was also central to the experience of nature Van Swinderen and his student friends described at the beginning of the nineteenth century. The 'romantic' and most of all 'picturesque' conception of landscapes signified that literary, poetical and aesthetic descriptions were expected to express the emotions of the viewers best. Moreover, there was supposed to be a diversity in landscapes present in both the journeys they made and in the resulting collections of landscape descriptions: the value of *Bildung* lay in the assertion that through this diversity the emotional receptivity of the viewer was enlarged.[375] However, these emotional and aesthetic descriptions did not point to a 'mystical' romanticism as it did in German romanticism, as Brock asserts.[376] Despite the influence of sentimentalism, in the sense that Van Swinderen and his companions openly described the

[374] M. Brock, 'Groningse studenten op reis : natuur- en landschapsbeleving rond 1800', *De achttiende eeuw : documentatieblad van de Werkgroep Achttiende Eeuw* 43-2 (2011) 231-260, 248-253.
[375] Brock, 'Groningse studenten op reis', 236-238.
[376] Ibidem, 254-255.

feeling that transitioning emotions into words accurately was nearly impossible, the landscape description had to be an expression of the idea that the observer recognized the art in nature: the poetic picture of the landscape 'painted' by words brought this artistic side of nature to the foreground. The well-founded aesthetic description of nature thus required an elite mind strongly trained in the arts and sciences.[377] Comparable to the certainty of their knowledge of nature by the benevolence of God, the artistic, romantic picture of nature was thus the description of an aspect of material nature of which one seemingly could be sure, instead of a 'mysterious' force. God did not seem to mislead those seeking him in his creation in Groningen.

Gaining the adequate insights in creation through learning the natural sciences, and the more 'artistic' appreciation of nature, did not come overnight. As Van Swinderen noted in his anniversary speech, the long history of the NG was described as 'blossoming', with (eventual) 'fruits' of knowledge and civilization.[378] The implication of tradition was also explicated on the anniversary 25 years later, as the feast hall had been decorated with portraits of the founders Van Swinderen and Stratingh.[379] To become cultured and civilized required patience.

In Van Swinderen's opinion, civilization meant a refined taste, kindness, modesty, self-control and 'kind-hearted wisdom'.[380] These values first implied a sense of emotional openness we will witness in the following paragraph. Second, we have already encountered the value of 'refined taste' on other occasions, tying one specifically to a 'leisurely' and higher-class context. Last, modesty and self-control imply an ability of self-sacrifice of an NG member, a value also explicated in another context in 1870: 'never was an appeal on [J.W. Ermerins] in vain, he was always prepared to listen to it, without even thinking about the amount of time and effort the completion [of the appeal] would take'.[381] Self-sacrifice was thus also explicated in a rather literal sense, as NG members were praised if they sacrificed their time to help members of the NG.

Despite self-control, members were allowed to enjoy leisurely activity, employing 'refined taste', within the NG as well, as it was happily explicated on the 75th anniversary that there was a 'common joyfulness' during the feast which gave 'excellent spiritual pleasure' to the dinner guests.[382] However, the bewilderment was great when the borders of self-control were crossed. On February 11, 1866, there was a complaint by one NG member on the man hiring the 'Concerthouse' to the NG ('De Graaf'). The NG member was lured to the building by a gathering of youth in front of the building. Amongst closer

[377] Ibidem, 236-241.
[378] GA, NG, 59, Redevoering van mr. Theodoor van Swinderen, 6.
[379] GA, NG, 60, Herdenking van het 75-jarig bestaan, samenvatting van 28 februarij [1876].
[380] GA, NG, 59, Redevoering van mr. Theodoor van Swinderen, 31-32.
[381] Natuurkundig genootschap te Groningen, *69e verslag van de werkzaamheden en den staat van het Natuur- en Scheikundig Genootschap te Groningen* (Groningen 1870) 11-12.
[382] Natuurkundig genootschap te Groningen, *Het 75-jarig bestaan,* 9.

inspection, clearly not amused, he came to the observation: 'in the room downstairs was a company of drunken students; the doors to the main stairs were open; many bottles on the table and three or four musicians were playing music in a busy way.' De Graaf apparently answered that this was a part of the chess club. After further 'questioning' it turned out to be a goodbye-party of Oldenhuis Gratama, who would leave to Leiden. What made it 'worse' was that a 'drunkard's company' was allowed, while the upper room was being used by 'a society of ladies and gentlemen', which deserved 'order and decency'. The marginal note read that De Graaf could not be trusted with spreading this message, as he already lied.[383]

Multiple borders were transgressed: morality, order, trust and modesty, mostly highly important values to NG members. There were thus clear boundaries which became even more clear when they were crossed. As we will see in the following paragraph, the values of emotionality and openness on emotions also had their boundaries, albeit rather in a class-perspective.

Emotionality, openness and its boundaries

As we have seen, sentimentalism was already embraced by Van Swinderen in the early nineteenth century. Besides the romantic and harmonious pictures of nature we have witnessed, the often boring and arid heathland put the young Van Swinderen and his companions in a sombre and melancholic mood.[384] Emotionality already formed one of the main founders of the NG in his younger years, and as we shall see, Van Swinderen's embrace of open emotionality had left its lasting influence on the NG, at least until the 1870s.

Emotionality was tied to the values of 'kindness' and 'kind-hearted wisdom' we encountered earlier. For example, Van Swinderen was remembered to have a 'warm […], fatherly love' for the NG.[385] He 'thirsted for knowledge', but was also 'sensitive [and] filled with philanthropy, accompanied by the need to be charitable'.[386] NG members would thus be praised when being a kind person.

This kindness also created an atmosphere where compassion and open displays of emotions were allowed. When Stratingh was commemorated in 1841, just after his death, Van Swinderen was not sure if he could give a worthy eulogy of his friend as due to the loss of his friend: his 'powers' were 'weak'.[387] He also asked for the support of his audience: 'Support me, audience! With your participating and benevolent

[383] GA, NG, 84, Klacht over de verhuring van de beneden-voorkamer voor een afscheidsfeest, 11 februari 1866.
[384] Brock, 'Groningse studenten op reis', 236.
[385] Natuurkundig genootschap te Groningen, *Het 75-jarig bestaan*, 14-15.
[386] Ibidem, 23.
[387] Th. van Swinderen, *De nagedachtenis van S. Stratingh Ez. gevierd in het Genootschap: Ter bevordering der natuurkundige wetenschappen, te Groningen 1841* (Groningen 1841) 6.

attention. I need your forgiving benevolence now more than ever.'[388] The formalities of referring to 'weak powers' and 'benevolent' attention were used as references to very personal emotions, an honesty creating an environment of vulnerability. Yet Van Swinderen also referred to his 'calm temper' later in his speech: even in hard times, self-control (of emotions) was important.[389]

Stratingh was a man which the NG liked to see: he possessed 'the art' of science 'on a high level', made 'the pleasant useful and science amiable', and expressed arduousness, kind-heartedness and friendly contact.[390] Even ten years later, he was 'wished back' amongst the members in order to be praised for his efforts.[391] But also when Van Swinderen was commemorated that meeting, the NG was very open about their emotions: 'we brought [Van Swinderen] to the grave weeping and we shall remember him in love and acknowledgement'.[392] They seemed to express feelings of love in an open fashion in periods of mourning, also in sending condolences. The NG sent to Mrs. Brouwer-Cats in 1856 that they were 'deeply struck' and that they thus expressed their 'grief and heartfelt condolence', 'while we wish you the strength, necessary to carry the blow, which struck you'.[393] I did not find elaborate condolences like this very often in other scientific societies.

Showing emotions and kind-heartedness did not only relate to mourning. For example, during the 75th anniversary, it was told that 'at commencement one could hear simple odes and songs of gratitude, sung by orphans, […] and one had to be insensitive, in order not to be seized with emotion upon hearing those unpolished children's voices'.[394] Moreover, the NG seemed more friendly towards not being able to meet the promise to lecture, as it was possible to let it know in time and take care of a replacement.[395] The emotionality and kind-heartedness of the NG did have its borders, however. Regarding the lower personnel of the NG, the NG's courier, we see a much less friendly and lenient NG arise. In the courier's contract, it was stated that the courier would receive 'orders' and that he had to 'execute them punctually'. The 'ordered tasks' had to be done accurately, with 'fervour' and 'modesty'. He was not allowed to leave the city without permission of the board, and during leave or illness he had to arrange everything regarding services and replacement, with the permission of the board.[396]

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[388] Van Swinderen, *De nagedachtenis van S. Stratingh*, 7.
[389] Ibidem, 34.
[390] Ibidem, 60.
[391] GA, NG, 59, Het vijftigjarig bestaan van het genootschap ter bevordering der Natuurkundige wetenschappen te Groningen (1851), Toespraak aan Theodoor van Swinderen door W.J. Meurs-Wichers, 40.
[392] GA, NG, 59, Het vijftigjarig bestaan van het genootschap ter bevordering der Natuukundige wetenschappen te Groningen (1851). The quote can be found on the first pages of the book, prior to the actual text.
[393] GA, NG, 10, Aan mevr. Brouwer-Cats te Leeuwarden 27 augustus 1856.
[394] Natuurkundig genootschap te Groningen, *Het 75-jarig bestaan,* 14.
[395] GA, NG, 10, Ongedateerde standaardbrief tussen brieven uit 18 februari 1859 en 15 maart 1859.
[396] GA, NG, 32, Instructie voor de bode van het Natuurkundig genootschap te Groningen.

The almost servant-like image we get of the courier was also reproduced by NG members as a negative social position. J. Suringa complained in 1851, after the commemoration, that the singing parts were only suitable for those who were appropriately educated in music, and felt like he had let himself get 'treated like a wage-earning servant' when he was criticised on his singing.[397] The lower classes were thus not met with much kindness in the HG.

A group which was met with kindness were women. Yet women still had subordinate positions within the NG in comparison to men. At least up until 1876, women *accompanied* the 'entering men' within the NG as 'wives, daughters and girlfriends', and did not seem to be allowed to go to meetings of the NG on their own initiative.[398] Lectures were also given specifically 'by men', as was stated in the statutes of 1840.[399] Moreover, we again see how women were thus accepted to join meetings of an educational institute, but not expected to participate fully and on an equal footing with men. Some courses (one on water) were for example 'organized rather for ladies'.[400] At least up until the 1860s, women were only allowed to be present only at a few meetings.[401] Women were expected to become 'civilized' through the participation in the NG just like men, as Van Swinderen commented just before his death in 1851.[402] Yet as was the case with Johanna Naber, they were not allowed to (fully) engage in science, and in the 'educational' NG, not even allowed to attend all meetings.

Conclusion: persona within the Natuurkundig Genootschap *in Groningen*

We can describe the persona of the NG member as the 'devout court-poet' in the 'court' of God, fulfilling that function to all 'exalted' members of the court who wished to witness it: they sang praises of him in exercising natural science as well as the arts. As court-poets, they clearly stood below their lord. Of course, one did not become a court-poet if one did not have the talents to translate God's will: members of the NG asserted themselves as professionals who would, despite engaging in knowledge together with their audiences, reassure their status.

Their audience formed the 'exalted' members of a high court, clearly distanced from the lower classes. The court had an assigned role for women as well: women were implicitly put in a more passive role.

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[397] GA, NG, 59, Klachtenbrief betreffende de viering, J. Suringa, 8 maart 1851.
[398] Natuurkundig genootschap te Groningen, *Het 75-jarig bestaan,* 13.
[399] GA, NG, 28, Wetten van het Natuurkundig genootschap te Groningen (1840) 8.
[400] Natuurkundig genootschap te Groningen, *74e verslag van de werkzaamheden en den staat van het Natuur- en Scheikundig Genootschap te Groningen* (Groningen 1875) 4.
[401] GA, NG, 28, Wetten van het Natuurkundig genootschap te Groningen (1862) 9.
[402] GA, NG, 59, Het vijftigjarig bestaan van het genootschap ter bevordering der Natuurkundige wetenschappen te Groningen (1851), Redevoering van mr. Theodoor van Swinderen, 34.

They were only expected to become 'civilized' like the laymen, yet some men were also deemed capable enough to become one of the court-poets as well.

What did the poets tell their listeners? They firstly told of the 'good' virtues associated with civilization we mentioned earlier. As poets however, they also had to be open to emotions, as no poet can write poems without a sufficient, appropriate amount of emotion: all sentiments were to be kept under control. They needed to be sure to be 'good' poets, as they wanted their words to be heard by as many members of the court as possible. Also, the praising of and kind words to God and its creation, and openness to emotions were expected to be translated into being a kind-hearted person yourself, at least towards the members of your court. As Brock concludes on the experience of nature by Van Swinderen and his fellow students around 1800: 'the concept of "nature" […] was not just a reference to the flora and fauna outside the city gates. It also referred a conception of art, a societal utopia or a balanced way of life […].'[403] The NG clearly reproduced this wide conception of nature throughout the nineteenth century.

As this was the last scientific society to be considered, we will now turn to the conclusion of this research. We will reflect on the considered practices of the scientific societies, the relation to scientific professionalization, and what kind of (new) persona the scientific societies implied. Moreover, we shall also return to the present issues mentioned in the introduction, and how the concept of persona can be helpful in addressing these (and other) issues.

[403] Brock, 'Groningse studenten op reis', 255.

Part five: epilogue

9. Conclusions

In this research we have encountered many different kinds of persona, but an interesting question is: can we get to a single persona to which all, in one way or another, could be linked? I think we can. The persona of a 'civilized arduous scholar' is one in which we can incorporate the many ideas and attitudes we have found in the six scientific societies.

All societies were in their own way engaging in civilization: they were either civilizing themselves, as was the case in the HG, *being* civilized (which was more strongly represented in DDA, and, aided by 'normality' and the 'natural', more implicitly present in the GBNGH), or civilizing both oneself and others, like the physical societies and PC did. Interestingly, these distinctions seemed to run along disciplinary borders, if we would exclude PC. The sizes of the audiences also largely corresponded with the different disciplines. The sizes of the audience pointed to both the different roles the scientific societies took (medical and historical societies were knowledge-producers, physical societies were knowledge-spreaders) or to discipline-specific job opportunities (physicists were still largely teachers). To some extent, we can also hint towards the relation between attitudes regarding civilization, different sizes of audiences and different positions of the respective sciences the societies were engaged in. For the physicists of the NSG and NG, civilizing a larger audience was a logical practice in relation to the fact that physicists were still mostly teachers of an academically firmly established discipline. For the literary scholars and historians of the HG and PC, it was no coincidence that they were solely civilizing themselves: they were knowledge-producing societies not meant for a laypeople's audience, but for smaller audiences comprised of either academics or academics and enthusiasts together: 'smaller', as the historical 'discipline' was still in the making, possibly explaining, besides monetary reasons, why especially the HG was still open to enthusiasts (at least intellectually speaking). The small, professional audiences of the medical societies were mostly *being* civilized rather than civilizing. One possible explanation could be that medicine was already a well-established discipline within academia compared to history, in combination of having to prove themselves in Dutch society (hence the stress on *being* civilized). However, the exact relations between academic disciplines and their influence on scientific societies were mostly not in reach of the extent of this research, and remain, as stated in the beginning of this research, hints towards interesting areas for further research.

In all societies, we found the value of arduousness, and its closely related ally, self-sacrifice. Arduousness meant working hard for science, and thus giving up personal pleasures, contact and comfort to be able to work hard for science. Yet it also meant that after and besides hard work, one was also allowed comfort and pleasure. It was however accompanied by a form of consumption which had to be appropriate:

what and how to consume was regulated by norms which would lead to 'refined taste' and properly learned modes of moderate consumption.

The value of self-sacrifice also brings us to the aspect of the scholar. A scholarly person was not only expected to be highly educated (either broad or specialized), but he was expected to live for the attainment of knowledge for various reasons. The person seemed to matter less than the knowledge itself on many occasions. We have seen many cases of self-sacrifice in terms of self-erasing behaviour especially in the knowledge-producing societies, as knowledge itself seemed to matter more than the subject attaining it. It also gave the impression of research being 'objective', as it only dealt with the knowledge itself, which in its turn ascertained the professionality of the scholar. The scholars we have encountered clearly knew best, better than the various anti personae we have found in for example patients, quacks and the poor. Moreover, some scholars seemed to know more than others: we have witnessed on various occasions what we have called 'physics envy' earlier, especially in naming historical seminars 'laboratories' and considering medical physicists as those engaging in the 'purest' science of medicine. Anti-personae, the patient being the perfect case in point, were described as persons inadequate to comprehend (medical) science and the character necessary to be a doctor or scientist, due to their passive and subservient role in described in patient descriptions, their overt sexuality, their bodily or mental disabilities, et cetera. They were not only patients, they were 'non-doctors'. Ascertaining professionality immediately implied a hierarchy inside scientific societies, specific disciplines, academia as a whole (with physicists clearly on top) and between academic professionals and various 'non-professionals'.

The established elite of scholars within the societies also excluded various groups more structurally. The lower classes, women, Catholics and Jews (at least in history) were not welcomed in the spaces of knowledge-production. Science was a practice done by the middle and higher classes, and in many cases, by Protestant men. In medicine, the 'new', professionalized scientists were also clearing their own 'ranks': outdated, non-specialized practices as found within DDA and the persona of the broadly educated 'poet-doctor' still revered within the GBNGH in the mid-nineteenth century, were being ousted from the ranks of modern professional science, and also from the GBNGH itself. Within the GBNGH, we even saw the rise of two different kinds of persona for different medical specialists. Professionalization meant the redefinition of roles in science, appropriate to specialized knowledge. Yet we have seen various different interpretations of what this specialized scientist was supposed to be: was it supposed to be a subject solely dedicated to the pursuit of knowledge, like the medical physicist in the GBNGH, or was the specialized view on a single field of study supposed to be as broad and enriched as possible, as was the case within the NG? The question of how to be a 'good' scholar and professional scientist could thus have various different

answers, some even relating to ideas dating back to at least the eighteenth century, as was the case in the NG.

What, then, is the relation between the character traits we have found within scientific societies on the one hand, and scientific professionalization on the other? First, in all scientific societies, university staff was present. Moreover, especially in regard to the scholarly self expressed in the scientific societies, in regard to both 'scholarliness' and 'arduousness', we have found expressions and reproductions of the various aspects of professionalization: specialization, expertise and resulting authority, three factors which were supposed to lead to an actual profession eventually. Despite being places relatively autonomous from the university, we see various roles for scientific societies in the professionalization process; some stood very close to this process. The GBNGH was for example a rather strong agent within the (troublesome) professionalization of medicine, offering criticisms on problems regarding specialization (when we consider the criticism on microscopy for example). They also had various specialized research and debate groups containing experts of the medical field. Most societies we have considered, the HG, PC, NG and the NSG, at most reproduced aspects of professionalization. They were more distanced from the places where professionalization increasingly took place (mostly universities), maintaining their own sphere of scientific knowledge(-spreading) to a large extent. DDA was an interesting case where despite their aspirations to be a professional medical society, they maintained practices which were highly discordant with the values of professionalized knowledge, especially in light of specialization. Here we see how certain practices could even form their interesting 'anti-thesis' to professionalization. In short, we can, in various ways, detect the professionalization of the sciences in scientific societies, but we cannot ascribe all scientific societies to an identical role in that process, and we certainly cannot reduce scientific societies to having a relation with scientific professionalization.

Another interesting question is: how strictly modern are the values we have associated with a 'professional' scholar? In her book on the role of self-sacrifice in late-nineteenth and early-twentieth century American science, Rebecca Herzig gives an interesting insight in the history of self-sacrifice. Self-sacrifice, as it was a deliberate and consensual choice for those engaging in science, signified a privilege to be able to do so, to be abstinent of riches mostly already in reach for the many wealthy people engaging in American science. The choice for science itself was deliberate, but engaging in self-sacrifice was not. Masochism or enduring suffering for expected profit was not the kind of pain found in scientific self-sacrifice: it was an uncalculatable presupposition that one simply had to suffer for the knowledge science could bring. Self-sacrifice as a value was nothing new, however. It had regulated for example religious experiences for centuries and medieval understandings of attaining knowledge. What was new was the highly modern, and late-nineteenth-century incorporation of self-sacrifice in science as a prerequisite for scientific knowledge. This

modern notion of self-sacrifice was, as Herzig ascertains, inescapably linked to liberal philosophies on the social contract and the rise and firm establishment of liberal capitalism and its presuppositions on economic relations expressed in the belief of the 'free' transactions of labour.[404]

Self-sacrifice thus related both to values and contexts which we have also encountered in the earlier nineteenth century in the Netherlands, and to ideas already established for centuries. The self-sacrifice we have encountered was less physical, but it surely involved sacrificing personal comfort and even the self itself. Moreover, we can also conclude that science in the Netherlands, even within the more 'open' scientific societies like the NSG and NG, was mostly for the economically well-off and the higher social classes, comparable to the situation in the United States.

Another interesting link Herzig makes is the relation between beliefs concerning the consensual self-sacrificial scientist and ideas within liberal capitalism. Max Weber's explanation of the 'Protestant ethic' of modern capitalism offers us an interesting elaboration on this point. Weber stated that this ethic found its strongest expression in the 'down-to-earth' middle-class citizen, who held the values of punctuality (in payment dues), arduousness, sobriety and, closely connected, thrift dear. All these values stood in the service of accumulating as much capital as possible, for the sake of acquiring capital itself: it no longer concerned making money for merely satisfying needs. Those who were not 'productive' in that sense, who did not enjoy an education of self-control, could not compete in the capitalist economy.[405] Leaving possible discussions on the one-sided ascription of the ethic of capitalism to Protestantism and his proposed relation between ideas and economy aside, the commonalities between Weber's described capitalist ethic and the desired character traits for scientists we encountered are striking. Indeed, many spaces of science seemed to be Protestant-dominated, punctuality and accuracy are closely aligned values; arduousness and sobriety are values we have encountered many times. The relation between ethics expressed in scientific personae and Weber's Protestant ethic is one which could prove highly interesting to explore further.

The material sobriety desired in both science and the liberal capitalist economy stood in stark contrast to the elaborateness expected in civilization, in manners, attitudes and education, and sobriety stood in stark contrast with the actual material wealth of many of those who engaged in science. Interestingly, it implicitly pointed to a division of mind and body, an idea which has been around for centuries. Especially when related to Christian ideas on the 'sins of the flesh', in contrast to the superiority of the spirit or soul over the bodily sins, this idea, although almost tacitly, influenced scientists in the nineteenth century, and still influences our thinking today, which we for example witnessed in Daston's 'rational' understanding of

[404] Rebecca M. Herzig, *Suffering for science : reason and sacrifice in modern America* (London 2005) Passim.
[405] M. Weber, *De protestantse ethiek en de geest van het kapitalisme* (1905), transl. M. Wildschut (Amsterdam, 2012) 37-59.

persona mentioned in the beginning of this research. A most clear example was the expectation in PC that material sobriety, or at least moderation, was appropriate next to being elaborately and broadly educated, especially until the 1840s.

From these conclusions, we can derive various uses of the concept of persona. The persona concept has proven to be highly useful to research inclusion and exclusion in science. What was considered an 'ideal type' implied what could not fit in this identity at the same time. Persona is also useful in considering object-subject relations, and how both are inescapably linked. The example we mentioned is the consumption of leisure and leisurely goods in direct relation to the assertion of an appropriate amount of 'civilization' in an individual due to moderate consumption. But we could also think of the way objects of scientific study relate to the researcher: the doctor needed the patient to assert his identity; the historian needed his texts to not only gain knowledge but to train his personality (learning to 'erase himself' from the text, influencing the scrupulous behaviour we witnessed in the HG for example), through which the texts immediately gained a specific meaning attributed to them. Persona also ties the self of the scientist to concrete historical contexts in terms of societal ties, practices and collective identities. Here we can first remind ourselves of the merit of Sen's multiple identity theory, that a person can have multiple identities, like the scientist who was also a middle- or higher-class member, a devout Protestant and a poet (in the NG) at the same time, with an emphasis on different identities in differing situations. Yet second, we can also recall the flaw of Sen's theory: his overt focus on the individual undervalues the persistence and strength of certain group identities which certainly has come forward in this research. Scientists were above all else male members of the Dutch scientific community and the civilized middle- and higher classes.

Science has needed and still needs scientists, and implicitly, a desired kind of 'scientist'. In this regard, persona can be a useful concept for studying both past and present science. As Herman Paul has stated recently: 'a history of scholarly personae can never be an antiquarian pursuit: there is a sense in which our own academic identity is at stake […].'[406] Problematizing specialization due to increasing demands of interdisciplinarity, and the (perceived) legitimation crisis amongst both scientific and political elites are all dilemmas which have been faced before as we have seen, albeit in completely different circumstances. In this regard, the historical context of these problems can prove to be useful in thinking of ways of addressing these issues. After all, I have only interpreted these problems in a historical context; the point is to change their current situation.

[406] H. Paul, 'Introduction: Scholarly Personae: Repertoires and performances of Academic Identity', *BMGN – Low Counries Historical Review* 131-4 (2016) 3-7, 7.

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819: Archief van het Genootschap ter Bevordering van de Genees-, Heel- en Natuurkunde

2: Jaarvergaderingsverslagen en/of overzichten van het jaar der verschillende secties. 1806 – 1895.

3: Notulen der 5de sectie. 1852 – 1860.

4: Notulen der 5de sectie. 1860 – 1869.

5: Verslagen van waarnemingen op vergaderingen. 1857 – 1858.

6: Notulen van de sectie heel- en verloskunde met bijlagen. 1859 – 1877.

15: Oproepen voor buitengewone en algemene vergaderingen en programma's der sectievergaderingen. 1839 – 1941.

16: Agenda's v.d. sectievergaderingen. 1857-1941.

35: Ingekomen en uitgaande stukken. 1799 – 1943: 1848.

56: Ingekomen en uitgaande stukken. 1799 – 1943: 1870.

62: Ingekomen en uitgaande stukken. 1799 – 1943: 1876.

132: Dagregister uitgeleende boeken. 1858 – 1878.

135: Wetten en reglementen. 1801 – 1929.

165: Rapport v. Commissie Boissonneau en rapport v.d. 1e sectie betreffende mikroscoop en gezwellen. 1844-?.

169: Verslagen van waarnemingen van ziektes, 1818-1856.

170: Stukken betreffende gipsverband, uitgevonden door Dr. Mathijsen. 1856.

174: Verhandeling over maatregelen tegen de cholera (1853). Verslag over cholera (1866).

177: Lijst met vragen voor te houden onderzoek aangaande voeding in gesticht. 1 Bijlage. z.j.

672: Herdenkingsrede op vergadering van Genootschap betreffende Joseph van Gooth. 1847.

673: Herdenkingsrede op vergadering van Genootschap betreffende Joseph van Gooth. 1847.

1.096: Diverse stukken betreffende vergaderingen. 1830 – 1890.

UA: Utrecht, Het Utrechts Archief

62: Historisch Genootschap te Utrecht

4: Bijlagen bij de notulen van de bestuursvergaderingen, 1853-1892: 1853 nov. – 1857.

7: Bijlagen bij de notulen van de bestuursvergaderingen, 1853-1892: 1866-1869.

9: Bijlagen bij de notulen van de bestuursvergaderingen, 1853-1892: 1874-1877.

86: Kladnotulen van bestuursvergaderingen, 1848-1857.

167: Stukken betreffende de benoeming van leden, 1846-1968: 1846.

170: Stukken betreffende de benoeming van leden, 1846-1968: 1849/1850.

253: Wetenschappelijke aantekeningen, manuscripten, afschriften van bronnen die niet tot een publicatie hebben geleid, met bijbehorende correspondentie, 1848-1858, 1926, 1946.

255: Ingekomen antwoorden van beheerders op een circulaire van het bestuur van het Historisch Genootschap over de toestand en toegankelijkheid van provinciale en gemeentelijke archieven, 1849-1850.

HCOD: Deventer, Historisch Centrum Overijssel (afdeling Deventer)

0972: Natuur- en scheikundig genootschap

1: Notulen van de gewone (algemene) en buitengewone vergaderingen: 1817 – 1853 maart.

2: Notulen van de gewone (algemene) en buitengewone vergaderingen: 1853 oktober – 1908.

3: Extracten uit de notulen, 1819 – 1872.

4: Reglementen, gedrukt: 1817.

5: Reglementen, gedrukt: 1851.

GA: Groningen, Groninger Archieven

1454: Natuurkundig Genootschap te Groningen, 1801 – 1934

4: Handelingen van het Natuurkundig Genootschap te Groningen. Net-notulen der Algemene Vergaderingen, 1863-1902: 7 januari 1863 – 27 december 1877.

10: Register van uitgaande missiven. 23 maart 1831 – 14 november 1884. Uitgaande missiven verzonden door Th. Van Swinderen als secretaris van het genootschap ter bevordering der Natuurkundige Wetenschappen te Groningen, begonnen 28 maart 1831.

28: Statuten van het Natuurkundig Genootschap (gedrukt).

32: Instructie voor de bode van het Natuurkundig Genootschap te Groningen, 24 mei 1860.

59: Stukken betreffende de herdenking van het 50-jarig bestaan, 1851.

60: Stukken betreffende de herdenking van het 75-jarig bestaan, 1876.

63: Verslagen van de herdenkingen van het 25, 50, 75 en 100-jarig bestaan. Feestredes, gedichten, programma's, menu's, etc. 1826 – 1901.

64: Herdenkingsredes 25, 75, 100 en 125-jarig bestaan en afscheidsrede.

84: Ingekomen en uitgaande stukken betreffende de exploitatie van het Concerthuis, 1850 – 1886.

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Illustrations

Front cover: Portrait of J.M. de Kempenaer (1793-1870), member of *Prodesse Conamur*. The portrait can be found on the website of *Parlement & Politiek*, http://www.parlement.com/id/vg09ll26jcqc/j_m_de_kempenaer .

Image 1 (page 53): one of dr. Mathijsen's patients, hand-drawn. The image can be found in: GAS, GBNGH, 170, 'dr. Mathijsen', Waarnemingen van behandelde lijders met beenbreuken, gewrichtsziekten enz.: middels het gipsverband (February 1856).

Image 2 (page 79): front cover of the *Kroniek van het Historisch Genootschap, gevestigd te Utrecht* 31 *(1876).*