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Social networks and the elite in North Brabant and Groningen 1780–1910

Maarten Duijvendak

Introduction

In the study of economic and social history, in contrast to their position in society, the elite were the last to be considered. No priority was given to them in the development of this branch of the historical sciences and they were regarded as belonging to traditional political history. Nevertheless, there are now a wide range of studies that do address questions derived from the political, social and economic spheres. In any integral history of a village, town or region, the position and actions of the elite should be considered. One of the interesting topics is what role the elite played as individual actors amidst social movements, structures and transitions.

Reconstructing the elite

A few points must be considered beforehand. The concept of the elite will be discussed as will several approaches to research of the elite. Social scientists have paid attention to the elite since Gaetano Mosca (1858-1941) and Vilfredo Pareto (1848-1923) added the concept of the elite as a category to their discipline. They did so because they felt the need for a category to describe the rich and powerful that was neutral in the Marxist concept of class, a category including the higher positions in society focusing on the political bases of power and which was not necessarily based on economic sources.[1] Pareto gave two definitions of the elite. Firstly, he defined this group in a general way as 'the best in any kind of hierarchy'. In his second definition, which was adapted to fit his sociological studies, he distinguished between a lower stratum and 'a higher stratum, the elite, which is divided into a governing elite and a non-governing elite'.[2] This concept of the elite is

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[1] General but different introductions include E. Carlton, *The few and the many. A typology of elites* (Aldershot 1996). This is the most recent but is not as good as G. Lowell Field and J. Higley, *Elitism* (London 1980); R.D. Putnam, *The comparative study of political elites* (Englewood Cliffs 1976) or T.B. Bottomore, *Elite and Society* (London 1964). For methods and problems see R. Perrucci and H.R. Potter, *Networks of power. Organizational actors at the national, corporate and community levels* (New York 1989) and G. Moyser and M. Wagstaffe (eds.), *Research methods for elite studies* (London 1987).
[2] V. Pareto, *The mind and Society* III (London 1935) 1422-1424.

useful but not completely clear. It led to some confusion and ambiguity because 'any kind of hierarchy' is rather general and different hierarchies are not always independent of each other. For instance, the political and economic hierarchies are often mingled or overlapping. Mosca wrote about the 'political class' as easily as he used the words 'ruling elite' which confused matters even more. Mosca and Pareto were rather poor researchers who used random examples without proper scrutiny. Their importance lies in the theoretical debate: Pareto for his definition and a thesis about the 'Circulation of elites' (the notion that the elite change, rise and fall over time) and Mosca for his concern about the composition of the elite in more or less democratic societies. Their writings stand at the beginning of a branch of research and in many areas require further testing against empirical evidence. From the 1960s onwards, the study of the elite attracted a lot of attention and research was carried out at the local level, particularly in the United States.[3] Three different research strategies emerged – a positional method, based on the identification of power positions in a community, a reputation method, using questionnaires about people's influence or other indicators of status and influence and a third method which became known as the decision method. This last method tried to analyse the issue strength of power position holders in certain important issues and against each other.

A general opinion emerged about the concept of the elite as being 'those who lead in any social category or social activity' and some central topics evolved.[4] Applied to nations, regions or communities these are:

1. The social composition of the elite. Who form the elite? What kind of resources do their positions depend on (e.g. economic, status, political, violence, formal (state) positions)? Is it a homogenous group?
2. How 'open' or 'closed' is this elite? How is the recruitment organized? What are the paths into this elite (educational system, social mobility, social movements, etc)?
3. How integrated is this elite? Are there strong social or intellectual ties that bind them together, how do they socialize, do they intermarry, do they have political disagreements, do they compete for resources?
4. What does the elite do with its position? What does the governing elite do when it governs? How is power concentrated or controlled in society?

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[3] Pareto inspired Marie Kolabinska to write *La circulation des élites en France: Etude historique depuis la fin du Xie siècle jusqu'à la Grande Révolution* (Lausanne 1912). The writings of Mosca inspired C. Wright Mills, *The power elite* (London 1956) and the following discussion by R. Dahl, *Who governs: Democracy and power in an American city* (New Haven 1961). A great many other local studies are listed in Moyser and Wagstaffe (eds.), *Research methods*.
[4] Important here is the essay by Antony Giddens in P. Stanworth and A. Giddens (eds.), *Elites and power in British society* (London 1974) 1-7.

How is this affected by institutional change? What is the issue strength of elites; what are the results when they make decisions on difficult issues?

For practical research these questions can be divided into sections, each with their own relevant literature lists, theories and hypotheses. Within historical science matters are naturally rather more complicated than with sociological research since the definitions and approaches have to suit ages with other institutional frameworks and other source materials. The more traditional political histories of the Ancient Regime often used a juridical definition of the elite. The elite was equated with the nobility, the aristocrats of society, with the elite being a hereditary group here. This created interesting questions about the social divisions within this group, differences in economic resources, marriage patterns, the integration of newcomers into the nobility (newly appointed nobles in nineteenth-century Netherlands or advances in the Table of Ranks in Russia). Questions arise about the domains or fields in which this elite was active – national, regional, local, politics, culture, economy – and what kind of role they played there. The ideal type of the noble elite member at the time of the Ancient Regime developed from this. His attributes were his noble birth, his landed interests, his education, his travels or 'grand tour', his taste for art, spices and other luxuries and his wide and vast network of equals that could extend over a large region, even over Europe as a whole. Continuation of the House and family honour were the most important values. These nobles were hardly involved in any decision–making, leaving this almost entirely to their advisers.

However, this picture of the juridical elite does not match all the elite that were active at the local or regional levels. In some regions these nobles had to compete or co-operate with other people who were not of the same juridical rank. This was the case in most of the Dutch towns in the fifteenth to nineteenth centuries, as well as in numerous other places. Ancient Europe was dotted with towns that were ruled by burghers and other commercial elite. As well as in the Low Countries this was manifest in the Rhineland and some other coastal areas.[5] There was often not such an enormous social distance between the elite and other members of society in these places. Bourgeois elites had strong social relationships with the social environment that they sprang from. These relationships varied from town to town and period to period and have been researched using the four questions stated above. However, in the seventeenth and eighteenth centuries they formed part of a process that detached them from their fellow citizens and made them

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[5] C. Tilly, *Coercion, capital and European states, AD 990-1992* (Cambridge 1990).

more of a closed oligarchy.[6] This process brought a shift in the social resources they drew on – away from commercial to more landed interests –, brought new issues into the political arena and helped in the end to shape the organization of the city and the state,[7] and led to the ideal type of a member of the burgher elite. Among his attributes were his commercial interests, his ties within the local society and the tension between civil duty and personal profit – his education, travels and luxury spending had to be 'useful'. 'Useful' as well was his social network, developed from his familial and trade contacts. Family and profit were probably the most important values to him. The dominant political culture was to speak in rhetorical terms of democracy, while decision-making was actually confined within a small circle.

There were cases where the local elite was as far removed from the ideal noble elite as it was from the burgher elite. This situation often existed in rural areas. There were three different types of elites in three different types of power relations in the enormous stretch of land that is Europe. Many villages were the property of or had strong ties with noble families. These families appointed the local authorities, the judge, the priest, the clerk and others. These functionaries were sometimes recruited from the most important local families but often they came from other centres where they had enjoyed some formal education, or at least had spent some time, and they formed a local elite.

It might be fruitful to make a distinction between the local elite composed of locals and the elite in which outsiders were appointed to fill the most respected and powerful positions. In the first case a local political culture with a high degree of participation would have developed, while in the second case input from outside, new ideas, new influences, new political debates, would have been able to penetrate such villages more easily. With regard to the Netherlands, a possible hypothesis is that this difference explains the spread of the more fierce debates and clashes in the 1780s between Patriots and Orangists. Here the ideal type of a member of the village elite emerges. Among them were the most important land-users, who could read and write and who had strong relations in the local society. Decision-making was open and public, but some local dignitaries were very influential and occupied a central position, such as the priest, the mayor or the judge.

In some cases one of the members of the noble family lived nearby. When the village was near to his residence on his estate he could actively participate

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[6] M. Prak, 'Cities, bourgeoisies and states', in: W. Reinhard (ed.), *Power elites and state building* (Oxford 1996) or J. Gabriëls, 'Patrizier und Regenten: Städtische Eliten in den Nördlichen Niederlanden 1500-1850', in: H. Schilling and H. Diederiks (eds.), *Bürgerliche Eliten in den Niederlanden und in Nordwest-deutschland* (Köln 1985).
[7] H. Diederiks, P. Hohenberg and M. Wagenaar (eds.), *Economic policy in Europe since the late Middle Ages: the visible hand and the fortune of cities* (Leicester 1992).

in the local affairs, as the head of the local power pyramid. This situation approached the noble ideal type but was quite rare, and when it existed it was confined to the lower nobility, the landed elite.[8]

From the 1960s onward, Lawrence Stone and others have made progress in collecting all kinds of data about these people. Starting from the traditional national elites and their political activities, dress and general behaviour, Stone developed a more structuralist approach. He drew up a kind of collective biography, a systematic description of the social, cultural and economic back- grounds of these individuals, the prosopographic method.[9] But at the same time he warned about the limitations of this kind of collective biography. Some prosopographers concentrated on the elite alone and ignored the social envi- ronment, the nameless client masses, the ideologies and ideas at work and even the institutional framework. Stone put the case for more theory and statistics and declared that prosopography was a valuable tool in revealing the social back- ground and ties that bind a group together. When carefully applied to easily de- fined groups, Stone is positive about the method's usefulness. Prosopography suits a positional approach to the elite common to historical research and its strength lies in revealing the social patterns behind the names of those who governed. It has become a widely accepted method.

Reconstructing the elite in North Brabant and Groningen

It is not enough to point to the local mayors or members of the city council, although they were certainly powerful. The local or regional elite as a whole was not restricted to those people who had functions in the political arena, although they form an interesting part of it. As an alternative, names and other information about people who belonged to potentially relevant groups were collected, such as members of the local councils, judges, clergy, notaries, other professionals, major taxpayers and/or large landowners. Members of committees, clubs, societies and other organizations involved with the allocation of scarce resources or with ideological issues were also included. This last group of people could be termed a social elite. Together, this resulted in a political, an economic and a social elite in the manner described by Weber.[10] The term 'social elite' to describe the combination of these groups is preferred to 'societal elite'.

Together, all these people roughly form an elite because membership of the town council, court, club or committee on agricultural affairs was confined to a rather small section of society, but positions were not equally

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[8] H.M. Scott (ed.), *The European nobilities in the seventeenth and eighteenth centuries* (London 1995) vol. 1: Western Europe; vol. 2: Northern, Central and Eastern Europe.
[9] L. Stone, 'Prosopography', *Historical studies today; Daedalus: journal of the American Academy of Arts and Sciences,* 100 (1971) 46-79.
[10] One could think of adding a cultural elite based on what Bourdieu called bearers of cultural capital.

distributed among this group. There is the possibility that a small group occupied the most or the best positions. It can be hypothesized that these positions became spread among more people during the nineteenth and twentieth centuries in the Netherlands. This could have been the result of institutional change (the extension of the electorate), the result of economic development (the rise of a new industrial elite), or the result of a rise in the educational standard. Data about functionaries and taxpayers was analysed to test this hypothesis.

The taxpayers and landowners can easily be tabulated from low to high. They form a hierarchy that can be visualized using a cumulative frequency distribution or a Lorenz curve. It is possible to distinguish between the upper and lower parts of this taxpayers elite in several ways. These people and their positions in this hierarchy have to be compared with people in the political elite. This attention to the economic elite is not just an old Marxist relict because they were important in society for many reasons. They possessed the keys to all kinds of scarce resources and it is possible to analyse their relations with other elite groups. When both groups are compared over a period of time it is possible to see whether they became more apart or more alike. The latter can be seen as the development of a more closed and smaller elite. There are two explanations for this. On the one hand it can be interpreted as the emergence of a more open political setting in which the elite functions. At the same time it was affected by the rise of new people, newcomers among the local rich as a result of the economic boom in these regions. It could be expected that these new names would soon be found among the political elite.

It is rather more difficult to select the most important people from among the social and political elites. With regard to the political elite, it would be possible to devise a kind of nomenclatur but network analysis is probably better. Network analysis has many advantages and some disadvantages.[11] One advantage is that a combination of network analysis and prosopography could solve the problems raised by Stone. It solves the problem of boundaries for those members of the elite who are not confined to a juridical category or the membership of one special council or board, e.g. a regional elite in modern times. Secondly, the analysis links the elite to the institutional framework in which it is functioning. It reveals the relations the elite maintains with clients and it considers the social resources they might possess in the regional political arena. Another advantage is the information the network structure provides on the integration of the regional elite. Application of this method in historical

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[11] Parts of the following sections have been published before: M. Duijvendak and M. Peterzon, 'Relations, friends and relatives. Comparing elite networks on structural properties in the Dutch provinces Groningen and North Brabant, 1830-1910', in: O. Boonstra, B. van Elderen and G. Collenteur (eds.), *Structures and contingencies in computerized historical research. Cahiers voor geschiedenis en informatica* 9 (Hilversum 1995) 84-94.

research is possible, although difficulties related to the reliability and complete-ness of the historical sources pose restrictions.[12] Besides this, there are problems of comparing data between networks over time. These points will be discussed below.

The basis of social network analysis is the relation that exists between two people who are members of a single unit simultaneously at a given point in time. This analysis is restricted to formal relations with other kinds of relations, such as family or financial ties, being considered afterwards. Network analysis makes it possible to describe the network structure, seen as the coherence and hierarchical order inside the elite, on a uniform scale. In this study the termi-nology and theoretical concepts of the graph theory will be used. The basics of graph theory have served as the foundations of many concepts in the analysis of social networks.[13]

A network consists of nodes (persons or organizations) and lines (member-ship or contacts). The basis of network analysis is the relation that exists between two people who are members of a single unit simultaneously at a given point in time, e.g. relations between the county board and a relevant selection of organi-zations in the region. The density of lines and the number and size of the components and clusters determine the coherence in a network. A hierarchical ranking is based on status and Rush indexes, which compute the centrality of points in the network. Application of this mathematical method in historical research is possible and not entirely new. The reconstruction of social networks of a regional elite results in large data sets. Most modern personal computers can analyse these data sets.[14]

In some sociological network studies the analysis is restricted to one network at a given point in time. When change between two networks is investigated, numerical change in the data set is avoided. In effect, these analyses are restricted to the stable nodes in the networks and only the change in their relations is investigated.[15] For a historian this is disappointing. In contrast to this, new nodes (organizations or people) were not omitted from the networks so that the net-works grew significantly in size, from 59 to 152 people in North Brabant and from 115 to 159 in Groningen.

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[12] M.G.J. Duijvendak and A.J.A. Felling, *Longitudinal network-analysis. Prosopography and narrative: The rise of a Roman Catholic elite in a Dutch region* [IER Research Memorandum 552] (Groningen 1993) and P.S. Bearman, *Relations into rhetorics: Local elite social structure in Norfolk, 1540-1640* (New Brunswick 1993).

[13] S. Wasserman and K.L.M. Faust, *Social network analysis: Methods and applications* (Cambridge 1994) is an excellent introduction to the techniques. See also the comments by B.H. Erickson, 'Social networks and history', *Historical Methods,* 30 (1997) 149-157. She discusses the concept of social network analysis and provides references to historical research.

[14] The UCINET program is very convenient. This software possesses all the standard techniques for social network analysis. A UCINET version for Windows has recently been published. S.P. Borgatti, M.G. Everett and L.C. Freeman, *UCINET 5.0 Version 1.00* (1999).

[15] J. Galaskiewicz and S. Wassermann, 'Change in a regional corporate network', *American Sociological Review,* 46 (1981) 475-484.

Figure 1 Organizational network 1835. Relations between the country-board and other sectors in North Brabant and Groningen
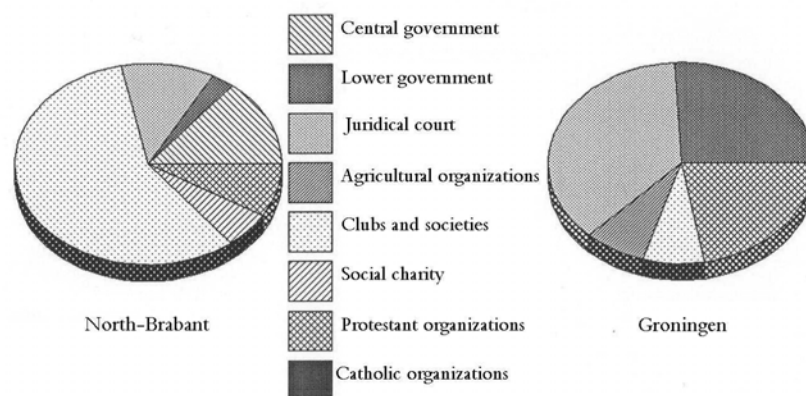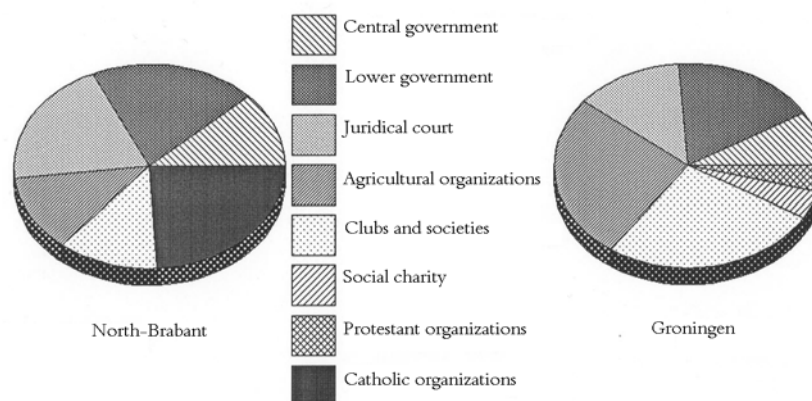

Figure 2 Organizational network 1910. Relations between the country-board and other sectors in North Brabant and Groningen

Standardization became very important as an effect. Simple indexes were not computed; instead, two different methods of standardization were followed. Problems concerning the organizational network arose because of the absence of many organizations in the first years. An enormous number of social and political organizations were formed in the Netherlands in the last decades of the nineteenth century. Organizational sectors (categories of a certain type of organizations) were defined and the absolute number of relations the organiza–tions had between themselves (outdegree) and the relations between those cate-

gorical sectors as the percentage of the total number of relations in this given network were both calculated. These percentages were used to discuss development in the organizational network (Figures 1 and 2).

Another aspect of standardization concerns the question of selecting the network core. This had to be done very carefully when the social homogeneity of these central members of the networks was being investigated. The three measures of centrality, the outdegree, the Hubbell status score and the Rush index, were used to complement each other, each having its own characteristics. The combination of these led to a group of people who could be identified as the network core.

Elite integration is reflected in the network structure.[16] With structure is meant the network density, the number and size of the components and clusters in the network and the pattern of relations between the network nodes (persons or organizations). This is a not a stable 'structure'. Within the institutional framework it is strongly connected with social and political development in the region. Changes in the balance of power in the region have important effects on the network structure. The rise of new and strong social movements in the region or shifts in importance between cities in the region causes visible changes in the network. The individuals involved come into the picture when the network of people is considered. Although the analysis provides a clear view of individual networks it is the combination with traditional prosopography that gives the best results. The position in the elite network was treated as social capital and therefore as a part of their social resources.

Some results from the networks

Both regions are agricultural regions. In North Brabant the textile industry provided important additional income, while in Groningen most industry was related to the agricultural sector. An interesting question, therefore, is whether this economic structure is represented in the elite networks.

During the nineteenth century the number of organizations increased as a consequence of social emancipation, the emergence of specialization among interest groups, the growth of wealth and denominational segregation. In 1835 the network of organizations in Brabant was small while the Groningen network was almost twice as large (see Tables 1 and 2). During the nineteenth century this difference decreased. An important difference between both provinces is seen in the character of their organizational patterns. In 1833/35 personal relations between the county board and central and local government were important but varied between the regions. In 1910 these relations were more equally distributed but remained important. A considerable number of

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[16] J. Higley, U. Hoffman-Lange, C. Kadushin and G. Moore, 'Elite integration in stable democracies: a reconsideration', *European Sociological Review,* 7 (1991) 35-53.

organizations were formed along confessional lines. In both provinces agricultural organizations emerged in the second half of the nineteenth century, but earlier in Groningen than in North Brabant. In the latter they were formed on a Roman Catholic basis. This is explained by the fact that the population of North Brabant was at least 95 percent Roman Catholic while in Groningen the Dutch Reformed Protestants were the largest denomination, although this decreased from 80 to 60 percent of the population during this period.

Table 1 Groningen network characteristics, 1833-1910

	1833	1875	1895	1910
Number of persons	115	130	159	148
Number of organizations	83	142	181	158
Number of strong components	5	6	8	4
Total number of clusters	6	8	16	10
Number of central clusters	1	1	4	3
Density $\dfrac{relations*100}{p(p-1)}$	19%	13%	11%	14%
Number of persons with direct access to 40% of the network	13	2	0	3
Gini-Index Rush	0.72	0.79	0.84	0.74

Table 2 North Brabant network characteristics, 1835-1910

	1835	1875	1895	1910
Number of persons	59	94	151	152
Number of organizations	55	78	124	139
Number of strong components	7	3	7	2
Total number of clusters	7	12	15	12
Number of central clusters	2	1	3	4
Density $\dfrac{relations*100}{p(p-1)}$	13%	8%	7%	8%
Number of people with direct access to 40% of the network	23	5	6	8
Gini-Index Rush	0.65	0.75	0.80	0.83

The information about the organizations has been arranged in fourteen sectors. Sectors have been defined for central, regional and local government, for judicial courts and the different interest groups. There are a changing number of components within the networks. The provincial government is the central organization within the biggest component with smaller components of local governments and local organizations being formed in addition. This structure of components in the four years selected does not show an obvious development. The Roman Catholic clergy played an important role in the province of North

Brabant, but this is not fully seen in the network centrality indexes. The Roman Catholic clergy held no formal positions in lay organisations until the turn of the century. This did not change much until 1900, when formal relations between the Catholic clergy and other organizations were established. This component can be seen as a 'counter elite'.

Relations between government and club life and between government and judicial courts remained numerous during the nineteenth century. From the second half of the century onwards agricultural interest groups became important, first in Groningen, causing a functional specialization in parts of the networks. In North Brabant, after 1895, the Catholic electoral organizations achieved a prominent position because of the relations they maintained with central and local government. In 1910 the relations the agricultural interest groups maintained were the most prominent. In North Brabant a new, Roman Catholic farmers' union, the NCB, developed important contacts at the local level and also maintained extensive relations with both the Catholic electorate and the regional government. In Groningen relations between the government, the juridical courts, agricultural interest groups and cultural clubs and societies remained important.

The personal networks in 1833/35 and 1875 can be characterized as monocentric and those in 1895 and 1910 as polycentric. Density and face-to-face contacts decreased between 1833/35 and 1875. The Gini index, computed from the Rush index, shows a growing unequal distribution in the networks which can be explained by the development of clusters in the network. In 1833 and 1835, in both Groningen and North Brabant, the networks were monocentric and rather dense. The core members had homogeneous social backgrounds. In both provinces Protestants were overrepresented in the networks. Both in North Brabant and Groningen most network members combined functions in government and the courts, with lawyers and administrators playing important parts in the social and cultural parts of the networks. In addition, all central actors belonged to the financial elite, the largest taxpayers in the regions.

During the nineteenth century these networks extended and in 1895 they were no longer monocentric. Density and accessibility dropped after 1833/35. The network in North Brabant in 1910 had a profoundly polycentric structure and density and accessibility had not dropped any further, compared to 1895. The network core held four clusters. The core cluster consisted of members of the older Catholic elite families from the regional capital, active in Electoral Associations, while members of the NCB farmers' union had a core cluster of their own. The network in Groningen in 1910 was also stable compared to 1895. Density had risen slightly and the number of components decreased. The network core held three clusters. Most prominent were clusters around provincial aldermen and lawyers of the city of Groningen, prominent members

of agricultural organizations and members of local government from the south-eastern parts of the province.

Around 1900 the social backgrounds of the members of the network core were no longer homogeneous. However, in both provinces the lawyers, farmers and industrialists prevailed in the network. The different clusters had different social characteristics. Only a few central network members belonged to the group of the largest taxpayers, the financial elite in the area. The share of the nobility in both networks decreased, only a few aristocrats without a university degree could maintain their positions. In Groningen a third of the network still had university degrees, but this was much less common among the aristocrats. In North Brabant less then 20% of the network had university degrees and nobility with university degrees accounted for almost half. Although this difference seems to be explained by the existence of the University of Groningen, there is another important fact: Protestant ministers received their education at University while Roman Catholic priests did not. This, in combination with the number of ministers in all kinds of social organizations and the absence of priests in them, forms the real explanation.

In North Brabant the network of 1910 was more coherent because of the prominent position of the NCB and the Catholic political associations. They dominated the region in political, social and ideological matters and this was reflected in the network structure. In North Brabant the position of the Den Bosch-based regional elite weakened further, challenged by elites from other towns such as Tilburg, Eindhoven and Helmond. The position of the city of Groningen was not threatened. Only Appingedam and some mayors from the south-eastern parts of the provinces could aspire to core positions in the network. The former succeeded through political and juridical relations, the latter with their positions in and relations with the farmers' movement.

Conclusion and outlook

This analysis enabled the ties that bound the elites in the regions to each other and to the state as a whole to be traced. Integration among these elites changed between 1830 and 1910, while their social composition differentiated. The people with central places within these networks were the most powerful in their regions. They dominated not only the county boards but also most organizations. In 1833/35 and 1875 these relations cumulated in one or two, socially uniform, clusters in the network core in both regions, but in 1895 and in 1910 this was no longer the case. In these later years the distinct clusters in the network cores showed a social differentiation. While functional specialization and social emancipation in the central clusters and different organizational sectors became apparent, the networks became more polycentric.

With the rise of this more pluriform regional elite the social resources were less cumulated. In 1875 and earlier the organizational and financial elite were united. After 1875, when the number of organizations rose, organizational resources became more self-reliant and separate from other resources. This was seen in the political arena, where the rise of the electoral associations and political parties made politics based on personal charisma impossible. Network analysis proved helpful in establishing the boundaries of the regional elites and provided a base for prosopography, which was necessary in order to be able to distinguish between different sections of a regional elite. The additional value of network analysis for historical research lies in the information it provides about the structure of relations between members of the considered elite. Here it allowed the study of the changes in the network structure between the selected years and the comparison of two regions to be made on an equal basis. The decline in prominence of some members of the elite in North Brabant, the delicate position of the traditional elite of the regional capital in Groningen and the rise of new groups, particularly agricultural pressure groups, became clearly visible. This caused a `regionalization' in the network as shown by the polycentric structure.

Network analysis answers the problem of selecting the most prominent members of a social elite. However, it should be used with care and in combination with other methods and questions can be asked about the kind of information these analyses provide. Ideally, these analyses should be combined with other methods and other data, e.g. the hierarchies made up of the econo-mic/financial elite and an analysis of the decision-making process. These results have been presented elsewhere.[17]

In future it might be possible to incorporate a more cultural elite, that of the professionals, the teachers, clergy, and the members of some of the clubs and societies as well. If this group is treated separately, their network position can be researched and used to test the hypothesis that the members of this cultural elite were important because they introduced some of the new ideas that accompanied transitions and were the agents of cultural and political change.

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[17] Duijvendak and Felling, *Longitudinal network-analysis*; M.G.J. Duijvendak and M.D. Peterzon, 'Ontwikkeling van Nederlandse elites in de negentiende eeuw. Een vergelijking van netwerken rond het provinciaal bestuur in Groningen en oostelijk Noord-Brabant', *Mens en Maatschappij,* 70 (1995) 3-22.