

## **WOMEN IN POWER: SEX DIFFERENCES IN SWEDISH LOCAL ELITE NETWORKS**

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**ABSTRACT**

Women occupy a small minority of elite positions in contemporary society. In addition, the minority of women who gain access to influential elite-positions are often assumed to have their actual influence circumscribed by mechanisms of marginalization. However, systematic evidence to support the latter view is relatively scarce. We apply social network analysis to study sex differences in local elite networks in Sweden, and show empirically that despite the fact that women are the minority group across all elite dimensions; female elites uphold the same “structural status” as male elites.

### *Sex differences in local elites*

It is a well-established fact in elite studies that women tend to be underrepresented in political and economic elites both at national levels and at local levels (Göransson 2006, Vianello and Moore 2004, Zweigenhaft and Domhoff 2006). This imbalance is of concern because it indicates that women are systematically excluded from power.<sup>1</sup> In addition to this numerical imbalance, some scholars have claimed that women meet a double exclusion from elites, since the few women who make it into elites tend to occupy peripheral positions. In other words, the claim is that women in the elite are disadvantaged in informal male-dominated social milieus, where on average they are less centrally placed than men, even if they formally hold high-level positions (e.g., Palgi & Moore 2004; Acker 1990; Miller 1975). This indicates that there might be systematic differences between formal power (i.e., holding the title) and actual power in political and economic elites and that these differences enhance the power of male and weaken the power of female elite actors. There are several reasons for why this should be the case, such as a combined effect of gender homophily and contact opportunities, which might both be a result of the relatively low number of women in these milieus (Epstein & Coser 1981; Epstein 1988; Moore & White 2000; cf. McPerson et al. 2001; Feld 1981; 2009; Blau 1977).

However, despite the popularity of the idea, both in scholarly and lay discourse, we find scant empirical support in earlier research for power imbalance between sexes within elites. In this study, which relies on data from local elites in four Swedish municipalities, we separate the numerical proportion of women in elites, the formal power of women in elite structures, and the position of women in elite networks. In the first case, our results correspond with earlier research. In our data women occupy

approximately 25 percent of the elite positions. In the second case, we apply a measure of the hierarchical position within the elite structure, which we argue tap into the formal power of elites. Here we find that men and women have fairly equal formal power. We observe relatively fewer women than men at the highest level of power, but at the second highest level the relationship is reversed and men are over-represented at the lowest level. These differences are not statistically significant.

Thirdly and most importantly, we look at network indicators of centrality and brokerage. Our results consistently show that women are not less centrally placed than men within the elite networks. This holds both for professional relations and private relations, and while controlling for factors such as education and elite sphere, and even formal position. We thus find good reasons to question the idea that women meet a double exclusion from elites. Our data offer support for the claim that the threshold for entering elites are higher for women than for men; however, once inside of the elite circles women do not occupy less centrally placed positions than men.

This is an important empirical finding that has significant methodological and theoretical implications, since it emphasizes the need to go beyond simply counting seats or looking at the sex distribution in formally defined hierarchical positions to assess the relative power of women in politics and economics. We demonstrate that in order to give a fuller picture of the sex imbalance of elite structures we need analyses that look beyond the distribution of seats and official hierarchical rank and consider actual network positions.

In this paper we loosely define the elite as a powerful minority that has a disproportionately large influence on social, economic, and political life. We are specifically concerned with so called local elites, that is, people who make decisions

in local governments and local business that have direct and indirect consequences for the people living within their jurisdiction or sphere of influence.<sup>2</sup> The larger population of elite actors was fixed, in so far as we have selected the sample of elite actors on basis of their formal positions in the elite. Our sample was slightly expanded based on information from interviews with local journalists and other experts on local affairs within these municipalities. However, it would be to fall into the fallacy of misplaced concreteness to view elites as static entities. Earlier research on community elite networks (Laumann and Marsden 1979; Laumann, Marsden, and Galaskiewicz 1977) found that elite networks tend to be centred around sets of separate issues that interest elites from different domains. This implies that elite figurations are likely to look very different depending on which specific issue it is centred upon, and that some issues are even likely to lead to factions and cleavages within the elite networks. In order to deal with the dynamic features of elite configurations, we have measured the elite networks in four different ways. Firstly we have asked a straightforward question with whom of the following persons on a list of names the ego had discussed professional affairs over the past twelve months. Secondly we repeated this procedure but asked respondents to indicate with whom they had personal relations. Thirdly and fourthly we asked questions about two specific political cases, which were both of large importance for the local community; one having to do with political economy and the other with environmental issues. We asked with whom on the list of names the respondent had discussed important matters connected to these two specific issues. The purpose of this was to complement the general professional network with two narrower and specific issue networks, and thus putting us in a position to validate the results. As the analyses will show, there were few significant differences between the

four different types of network structures when it comes to sex imbalance in potential power.

Our analysis builds upon one key underlying idea, namely that the opportunity for A to exercise power over B is contingent upon her social network position (e.g., Knoke 1990). Such a perspective follows quite naturally from the insight that power is a relational entity: for a power relation to arise there has to be at least two actors, and the more interrelated actors the more complex the power landscape. It seems intuitively clear to assume that the actor that is most centrally located in a social network also has the greatest potential to exercise power. Centrality in itself, however, is a non-trivial concept (Freeman 1979). The most straight forward assumption is that the more social connections an actor has the more central she is. The problem is of course that it matters also to whom and in what way you are connected, and therefore it is not only the quantity of connections but also the quality and constellations of connections that define an actor's centrality (see e.g., Burt 2005). A particularly important aspect is the idea of network brokerage, i.e., the "go-between" position that an actor can have in monitoring the indirect relationship between two other actors. In the present context, brokerage is important because previous research indicates that men are considerably more likely to broker between different elite spheres (i.e., between the political and the economic sphere) than are women (Moore & White 2000; Palgi & Moore 2004). In our analysis we distinguish between the "simple" form of brokerage where an actor has the tendency to occupy positions in between two other elite actors, and a more "complex" form of brokerage where an actor acts as a bridge between two elite spheres. Following Gould and Fernandez (1989) it is customary to distinguish between five types of brokerage depending on which

categories the actors belong to. We focus on those three that deal with between-group brokerage roles, representing brokerage between actors who belong to different groups (See Figure 1). The *representative* and the *gatekeeper* exert control and influence by mediating between in-group and out-groups, while the *liaison* is an intermediary between actors belonging to two different out-groups. In general we would expect that women, being part of the “new” and minor population, are less centrally positioned and less likely to be brokers than men.

[Figure 1 about here]

The ideas about centrality and brokerage are clearly connected to the study of power potential in an elite network, and thus we believe they are essential indicators if one is interested in sex differences in the distribution of power. However, one can envision an elite structure in which men and women would have equal access to potentially powerful positions but in which the network is completely partitioned into one male and one female partition. Such compartmentalization would not only be problematic from a democratic point of view, but it would also suggest a systematic (power) segregation within the elite. Sex homophily, i.e., the tendency for men to interact with men and women to interact with women, is therefore a third important dimension of the elite structure. Sex based homophily in elite networks is a likely explanation for why women tend to be excluded from powerful positions (Niklasson 2007): male dominated social networks are reproduced because men in power positions prefer to interact with other men. Homophily in social networks is a recurrent phenomenon also outside of elite circles, and have been observed in a large number of studies (see McPherson, Smith-Lovin and Cook 2001). We would expect that once in the elite,

women would have a weaker tendency towards homophily than men, firstly because they are simply more likely than men to find heterogeneous ties within a male dominated elite structure, and secondly because we believe that men are more likely to have been recruited by men.

Consistent with the overall problem of this paper, our analysis focus upon the following three hypotheses:

H1: Female elite actors are less centrally placed than men.

H2: Female elite actors are less likely to broker between different elite spheres.

H3: Women have less sex homophily in their relations than do men.

This paper is an empirical exploration of the differences in “structural status” between men and women in the local elite. It makes two important contributions to the literature on community elites. Firstly, it is a small but significant step for advancing the empirical study of gender and elites. To date there are very few studies of sex differences in elites that rely on relational network data (e.g., Moore 1988), and one core contribution of this study is that our data enables us to go beyond the mere “counting of seats” and describe in detail the structural realities of local elites. By studying a range of different measures of network centrality and brokerage we question the common idea that women meet a double exclusion from power positions. Secondly, we provide an empirical analysis of sex homophily among male and female elites, which has rarely been done in previous research.



The next section gives a brief background to our empirical case, Sweden. We briefly discuss what earlier research says about sex differences among political and economic elites, and also provide a background to local governance practice in Sweden. We then proceed to introduce our data and the network measurements that we use. The core of the paper is the results section, describing sex differences in local elite networks. We conclude with a discussion of the implications of our findings.

### ***The Swedish case***

Political decision making in Sweden is divided into three levels: the national, the regional and the local. The supreme political decision-making body is the national parliament while the regional level consists of 20 county councils<sup>3</sup>. Local political power lies with 290 municipal assemblies. The roles and responsibilities ascribed to sub-national levels of government are regulated through the Local Government Act.<sup>4</sup> According to this the main task of the county councils is to provide healthcare, while municipal authorities are basically responsible for all other matters that relate to their inhabitants and their immediate environment. This means, for instance, that Swedish municipalities are legally or contractually responsible for the provision of all social services, child-, and elderly care, as well as primary and secondary education. On more or less voluntary basis, they are furthermore responsible for providing housing, industrial and commercial services and leisure activities for their populations. Since each level of political decision-making has distinct areas of responsibilities and very far reaching self governing rights, no obvious hierarchical relationship exists between them. The local level of political decision-making is thus vitally important, even though issues of national interest are obviously handled by the National Government

and despite the fact that Parliamentary decisions may impinge limitations upon the municipality's self-governance.

Sweden's 290 municipalities vary in size between small, rural units, with less than 3,000 inhabitants and metropolitan areas like the city of Stockholm (800,000). Regardless of their size, municipalities are economically important actors in Sweden. Some 760,000 people are in their employment, which makes them one of the largest and most significant categories of employers in the country. Furthermore, almost one fourth of the country's GDP is made up of municipal expenditure and tax-financed public services are foremost produced and supplied by municipalities.

The municipality's most important political privilege is to levy taxes. This implies that Swedish municipal authorities are highly important economic actors with great relevance to local business-communities. This is, first of all, because of the numerous strong economic links that intertwine local business communities with municipal government. In some areas, for instance, the provision of various public services offered by the municipality are outsourced to private companies, effectively turning municipal authorities into important sources of income for local business. In other areas private business is often in direct competition with municipally owned service-providers, offering equal or similar services to the public. Secondly, municipal administrations and private business-interests often collaborate intensely on local and regional development projects. Representatives of business communities usually partner local government through different forums of collaboration. Hereby, the broad outlines of community development are usually established through and accompanied by reasonably deep mutual understanding between political, administrative and

economical actors. Finally, in times of severe economic hardship, for instance during economic crises and periods of major structural transformations, the institutional framework of municipal government act as lenders of last resorts of social responsibility, as well as intermediaries between the acute needs of local businesses and national government agencies. In such times local business relies heavily on the municipal administration's willingness and ability to assist, for instance through mitigating the impact of massive lay-offs.

### *Sex differences in Swedish elites*

Obviously Sweden is not a representative case, but one of the most egalitarian countries in the world – also when concerning equality between the sexes (United Nations Development Programme 2005, Inglehart & Norris 2003). Some important reasons for Sweden's high level of gender-equality have been high labour market participation among women, comparatively small income differences between the sexes, and “women-friendly” welfare policies (Blau and Kahn 2003, Jaumotte 2003).

[Figure 2 about here]

In fact, even by Scandinavian standards, Sweden has a high level of female representation among the elite (Roustetsaari 2007). However, sex-based differences do exist in Sweden and they are most striking at the top layers of society, that is, among the elites. As shown in Figure 2 (Bohman et.al. 2010), the proportion of women is low among economic elites (Yaish and Stier 2009, SOU 2007), even if Sweden is among the countries with above average female representation on

corporate boards (Terjesen & Singh 2008), whereas the proportion of women is high among the national political elite.

During the past few years there has been a renewed academic interest in sex imbalances among the national elites in Sweden (Freidenvall, Dahlerup, and Skjeie 2006, SOU 2007). The general picture is that men are overrepresented among most elite strata and within most spheres of influence (SOU 1998:6, Göransson 2006, and SOU 2007:108). However, the overrepresentation of men does not capture the full complexity of gender-relations among Swedish national elites. For instance, when career-paths and subjective career-experiences of male and female national elites are compared, more similarities than dissimilarities emerge (Göransson 2006). In some instances, the female elite actors seem to advance their careers faster than male elite actors. Women also seem to have benefitted from strategically placed personal allies to the same extent as men (Jordansson 2006). This last point brings us to the question of personal networks, and here we lack previous analyses of the Swedish case.

Yet, we know from earlier studies that female national elite actors in Sweden think they have good access to informal personal networks, something that sets Sweden apart from other countries (Göransson 2006). In fact, Swedish female elites report a higher number of people they regard as “important network-contacts” than do their male counterparts (Djerf-Pierre 2007a). The same pattern emerges when the elites are asked about the intensity and importance of their connections with other elite actors within and outside their own fields or spheres of activity. Also here few sex differences are found. The only significant differences between male and female elite actors found in earlier research – aside from the important numerical difference – was

the fact that female elite actors tended to take on more household-responsibilities and to have fewer children, something which indicates that women in elite positions find it harder to strike a balance between professional and private responsibilities (Djerf-Pierre 2007b).

Female representation in the Swedish parliament is high above the Western European average (Wide 2006), and it is fairly well balanced between the sexes (SOU 2007:108). However, whether a high level of female representation translates into genuine political influence is a contested issue (Wägnerud 2009). Regional and local party organizations are strongly dominated by male party officials (SOU 2007). Despite the fact that female representation in municipal political assemblies in Sweden has grown steadily from about 10 percent in the late 1950s, to 42 percent after the 2006 general elections (Wide 2006; Szücs & Strömberg 2009), men still occupy up to three quarters of the top positions (SOU 2007:108). Although substantial changes has occurred, some researchers have claimed that informal patriarchal structures still persist at the local level and that a growing numerical representation of women not necessarily translates into growing political influence (Nilsson 2008).

We find a similar difference between national and sub-national levels of decision-making when looking at civil service and government administration. Although around 40 percent of high-ranking government administrative officials and decision-makers at the national level are women, only one quarter of such positions at the municipal level are held by women (SOU 2007:108).

We know of no other study that has used social network techniques to study sex differences in Swedish elite structures. This is somewhat surprising given the prevalence of claims that positive gains caused by increased numerical female representation is being counterbalanced by the persistence of “informal patriarchal structures” (e.g., Nilsson 2008), and given the fact that female elites, at least within the political sphere, conceive of network contacts as a key factor for reaching high positions as well as a major reason for the lower number of women in leading positions (Niklasson 2007). As we saw above, studies based on questionnaire data on national elites suggest that overall there are small differences between men and female regarding their supply to valuable network contacts, but so far this matter has not been explored with relational data.

### ***Data and method***

We collected social network data on local elites in four mid-sized municipalities, located in the Swedish region of Västra Götaland.<sup>5</sup> We confined the study to one particular region in order to hold constant some possible between-regional differences. The municipalities were chosen in order to vary along two dimensions: their political history and the current structure of their economies. On the first dimension we wanted municipalities with a history of Social Democratic dominance and those whose political history was characterized by frequent shifts in power. On the second dimension, we wanted municipalities that have a diversified local business and those who were dominated by one or a few big economic actors. In technical terms this is not a representative sample of Swedish municipalities, but we have no reason to believe that it is so specific as to deny some fairly general conclusions about conditions in Sweden. In the present paper we analyse the complete dataset consisting

of collapsed data from all four municipalities. The remainder of this section gives a brief description of the network samples and the network measures we use.

The elite in each municipality was defined and identified according to a multistep strategy, in order to establish an agreeable boundary specification. For the first step we looked at formal positions in order to identify the potentially most influential actors in each municipality, and included in the sample all prominent local politicians, business representatives, civil servants, and representatives of other organizations (e.g. museums, sports associations, trade unions, health-care institutions, etc.). This positional sample (Higley et al. 1991, Knoke & Yang 2008, Scott 2000) was later validated through expert interviews with locally well-informed individuals that were not included in the sample at the time (e.g., local journalists). These interviews led to minor modifications and approximately 3 percent of the actors were added or removed on basis of these interviews. Sampling elite groups has its particular challenges, but this combination of positional and reputational sampling is in line with previous studies of elites (Alba & Moore 1978 , Higley et al. 1979, Higley and Moore 1981, Moore 1979). We saw no easy way to work around the slight reputational element that was in this way incorporated into our overall sampling strategy. By this method we identified 298 elite actors in the 4 communities as our main population, which were contacted by mail and telephone. In late 2007 and early 2008, we were able to interview 248 of these, corresponding to a response rate of 83 percent.<sup>6</sup>

Approximately 60 percent of the interviews were conducted in person, in the respondent's office, while the remaining interviews were done over the telephone. Interview length varied between 30 and 90 minutes, and questions were heavily

focused on the respondent's social networks. Given the fact that different types of network data may offer very different perspectives on the same underlying substantial questions, both self-reported ego-centred (e.g. Marsden 1990) and complete network (e.g. Knoke & Yang 2008) data were collected from the elite actors interviewed in person. A simplified interview, focusing on complete networks only, was conducted with those interviewed over telephone. In this paper we utilize the complete network data only.

In each of the four municipalities we interviewed between 69 and 77 respondents. The overall share of female respondents was roughly 23 percent. Respondents' age varied between 27 and 73 years, with a mean of 54 years for both men and women. The majority of our respondents are politicians (34 percent), or representatives of private companies (30 percent). Civil servants make up 15 percent of the sample and close to 5 percent represent public sector companies. The remaining respondents belong to a broad selection of primarily other locally important cultural institutions and civil society organizations.

The complete network data was collected with the use of network rosters, that is, complete lists of individuals included in our elite sample in each municipality.

Respondents were asked to indicate the names of those elite actors on the rosters with whom they have interacted professionally and/or privately during the past 12 months preceding the interview. Through this procedure, directed network data for two distinct types of relations, professional and private, was compiled for each municipality. Name-interpreters, i.e., follow up questions, were used to collect information on alters (Marsden 2003).



We assess the formal power of elite actors' by looking at hierarchical positions according to fairly straightforward principles. For instance, civil servants with considerable and overarching formal responsibilities are said to hold more formal power than civil servants with more specific and limited fields of responsibilities. According to a similar logic Chief Executive Officers of large companies with many employees are said to hold more influential positions than CEOs of smaller companies. On the basis of this reasoning, we constructed a discrete variable ranging from 1 (minimal power) to 4 (maximal power) to estimate the hierarchical power of a position within a given sphere.

The first step of our multivariate analyses is based on a straightforward comparison between men and women across two types of relations, professional and private ties. In a second step we look at working relationships in specific policy-cases, two in each municipality. Throughout we study the sum of incoming and outgoing nominations for each elite actor<sup>7</sup> and apply a select number of network measures to pursue the hypotheses about centrality, brokerage, and homophily (hypotheses H1-H3). The hypothesis that women are less centrally positioned than men is tested with the three centrality measures degree, closeness and betweenness (Freeman 1979). The hypothesis that women are less likely to broker (H2) between different cliques or spheres is tested with betweenness centrality and brokerage roles (Gould and Fernandez 1989). Hypotheses about sex homophily are tested with the index of qualitative variance (Agresi & Agresi 1977). A brief description of the network measures and the intuition behind them are provided in Table 1.

[Table 1 about here]

*Degree centrality* measures the number of ties that an actor has and is based on the straightforward assumption that more connections are better and makes an actor more central. *Closeness centrality* measures the distance from one actor to all other actors in the network. It is assumed that access to information and other network resources as well as visibility to other actors increases the shorter the distance is between yourself and others in the network. For instance, it is better for A if A is directly connected to C (distance 1), than if A is connected to B, and B is connected to C (distance 2). *Betweenness centrality* measures the tendency for an actor to be positioned on the shortest path connecting one actor to another (for instance like B in the last example). The rationale for looking at betweenness centrality is that an actor located between other actors or clusters of actors in a network may be structurally central even though she has a relatively low degree centrality because she has the power potential of a broker or gatekeeper. For these three measures we propose that the higher the score is the more powerful is the elite actor.

*Brokerage roles* indicate an actor's ability to broker in a triad. We distinguish between three types of brokerage between actors who belong to different groups: representative, gatekeeper, and liaison (see Figure 1, and Gould and Fernandez 1989). Calculations were done in Pajek (de Nooy et al. 2005) using all network ties and distinguishing between four spheres (political, civil servants, business, and other). This measure gives the number of broker positions for each actor. The *Index of qualitative variation* (IQV) measures the degree of homogeneity in an actor's personal network. Here we are interested in the balance between male and female

connections that an elite actor has. We assume that men should have a more skewed composition, being predominantly connected to other men, whereas women should have more balanced compositions. The measure compares the number of ties to persons of the same sex to the number of ties to persons of the opposite sex. A score of 1 indicates perfect heterogeneity and a score of 0 indicates perfect homogeneity.

In the following analyses we use sex to predict variation in the network measures. In addition, the analyses also take into account age, university education (yes/no), and formal power (measured as previously explained). Age and education capture human capital resources that are important in acquiring network prominence. Formal power is likely to be correlated with network prominence. We also hold constant municipality and elite sphere affiliation.

## ***Results***

Table 2 gives the numerical representation of men and women across the position in the formal local-power hierarchy. Overall, women in the local elite are outnumbered by men at a rate of one to three (58 women/190 men). As might have been expected, men are more likely to be found at the highest formal positions. Just short of 30 percent of the men are at the highest level of formal power compared to about 20 percent of the women. But there is no linear relationship between sex and formal power and the overall impression is that formal power is fairly equally distributed between the sexes. At the second highest level for instance, we find some 40 percent of the women compared to about 30 percent of the men. However, the differences in formal power between men and women are not statistically significant.

[Table 2 about here]

Figure 3 gives a visual impression of the elite structures that we are studying. Here we have plotted the work-related network of men and women in four municipalities.

Elites are ordered according to their (degree) centrality, so that the most central elite actors are found in the center of the graph. As can be seen, women (black nodes) are outnumbered by men, but other than that the figure clearly underscores what is our main finding, that there are no clear cut differences between men and women in these elite structures.

[Figure 3 about here]

Before proceeding with the multivariate analyses, we wish to make a couple of brief descriptive remarks on the data that are not evident from the tables below. In terms of sex composition, we note that while the sphere of privately owned businesses is clearly skewed towards male domination (86 percent men), municipally owned businesses on the other hand represent a fairly homogenous domain (Kanter 1977). However, even the elite spheres with the most equal sex composition are still far from being evenly distributed: 33 percent of politicians and 27 percent of civil servants are women, which means that no elite sphere in our sample can be regarded as balanced between the sexes. We also find that most elite actors have a higher education. In total, about 70 percent of the women and 50 percent of the men have a university degree. Distinguishing only between having a university degree or not, we note that in two of the central elite spheres women have more human capital than men. In the sphere of private business 80 percent of the women have a university degree, to be

compared with about 56 percent of the men. In the political sphere 67 percent of the women have a university degree, compared to 29 percent of the men. In the civil service sphere, around 80 percent of both men and women have a university degree, which is not surprising given that this is a highly professionalized sector of society.

All dependent variables with the exception of betweenness and brokerage (see Table 3) are continuous and reasonably well behaved and therefore, for each type of network, we apply ordinary least squares regression. The highly skewed brokerage measure was transformed using the natural logarithm<sup>8</sup> to regress each network variable on sex, age, education, formal power, elite sphere, and municipality. All independent variables are entered non-transformed. Because sex differences are what interest us here, we only display the estimates on sex differences in Tables 4 and 5 net of other independent variables. Overall, the explained variance in these models range from 3 to 42 percent, with a model average of 20 percent.<sup>9</sup> The general trend is that models of network position in work-related networks (job relationships, and the two case networks) have significantly better predictive power than the models of private network ties. In terms of statistically significant parameters, age and municipality affiliation are the most robust predictors.

[Table 3 about here]

As Table 4 suggests, sex differences are non-existent across the two core networks related to professional and private relations. In the professional network, we note that women tend to have a lower level of degree, closeness, and betweenness centrality than men, whereas the opposite is the case for the private network where women are

slightly more central. However, these differences are not only extremely small, not a single one of these estimates are statistically significant. Sex differences in brokerage positions are less consistent across networks and again, none of the estimates are statistically significant. Lastly it is interesting to note that the measure of sex heterogeneity, the index of qualitative variation, do suggest that women have somewhat more heterogonous contacts. However, this difference is not statistically significant, which is even more interesting. This means that the male elite on average have a substantial interaction with the female elite (and vice versa), which might suggest that old boy networks play a less significant role in the Swedish local elite.

[Table 4 about here]

The two networks on professional and private relations were collected in a rather universal context, asking only for contacts during the previous 12 months. In addition we asked for connections in relation to two recent, specific, and important decision-making process in the municipality having clear implications for local labour-market (economic development) or local natural resource management (environmental development). Exactly the same models as above where specified also for these relations, and the results are displayed in Table 5.

[Table 5 about here]

Again, this is a story of statistically non-significant sex differences. If we look at the signs of the estimates, there is a tendency for women to be somewhat less central and less important brokers than men. But differences are small, and standard errors are

large. In contrast to the general professional and private networks, the signs suggest that in these more specific issue networks, women have more homogenous connections than men.

For sure, women are numerically underrepresented in Swedish local elites, but the results suggests that those women who actually make it into these tight circles are not on average less prominent, influential or prestigious then their male counterparts. Based on these results, it is hard to escape the impression that if we disregard women's striking numerical inferiority, women are as well placed and uphold the same "structural status" as men.

### ***Discussion***

The gender structures of elites are important as they not only reflect but potentially also reproduce – or even reinforce - systematical gender differences in the distribution of power and other resources. Earlier research has demonstrated that elites tend to be skewed, with fewer women than men holding elite positions. In addition, it has been argued in earlier research that women also are excluded from the inner circles of elites, where the "old boy network" dominates; and that the relatively few women that make it into the elites predominantly occupy peripheral positions in both the formal hierarchy and in informal elite structures. Such a consequence does not follow directly from simply observing a skewed distribution, however, and we found scant support in earlier research to back it up.

Using data from four Swedish municipalities this paper offers an empirical test of the claim that women are doubly excluded. More specifically, by using social network

analyses we asked if female elite actors are less centrally placed than men; if female elite actors are less likely to broker between different elite spheres; and if women's networks are less homogeneous than men's. Our results consistently show that women are not significantly less centrally placed than men within the elite networks, nor less likely to occupy brokerage positions. This holds both for professional networks and private networks, while controlling for factors such as education and elite sphere, and even formal position. It also holds for specific issue-based networks (concerning the local labour market and local environmental issues). We thus find good reasons to question the idea that women meet a double exclusion from elites. Our data support the claim that the threshold for entering elites are higher for women than for men; however, once inside of the elite circles women do not occupy less centrally placed positions than men. When it comes to homophily, the measure of sex heterogeneity suggests that women have somewhat more heterogeneous contacts, but this difference is not statistically significant. This means that the male elite on average have a substantial interaction with the female elite (and vice versa), which suggests that there is no strong tendency for an old boys network within the Swedish local elite.

Our findings show that once we look beyond the numerical skewness of the sex balance in the Swedish local elite, the actual distribution of potential structural influence and power is equally distributed. If the numerical representation truly is the challenge, then these results suggest that affirmative action based on gender could be an efficient policy to speed up equality between the sexes. However, it might be premature to draw such conclusions because the particular structures that we study here have emerged rather spontaneously without such policy interference. It would be interesting to study in detail if the same is true also for those systems that have been



under such pressure, such as Swedish higher education and the Swedish parliament. An interesting case in point is board representation in publicly traded firms. While Norway legislated a 60/40 balance in 2002, Sweden have so far only seen threats to legislate a quota (Bohman, Bygren & Edling 2010). But even a threat might be enough to change the structure and although still very modest, the number of female directors is increasing. We have only just recently started to study structural differences between men and women also in the interlocking directorates of Swedish big business (Koskinen & Edling 2010). This is in line with our claim here that the real, and only, imbalance between men and women in the elite lies in the aggregate numbers not in the actual positions that these individuals occupy.

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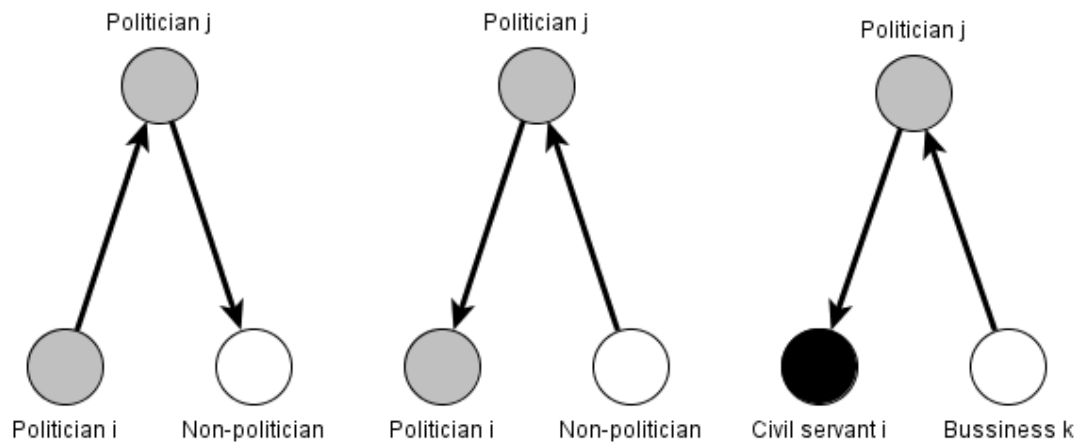
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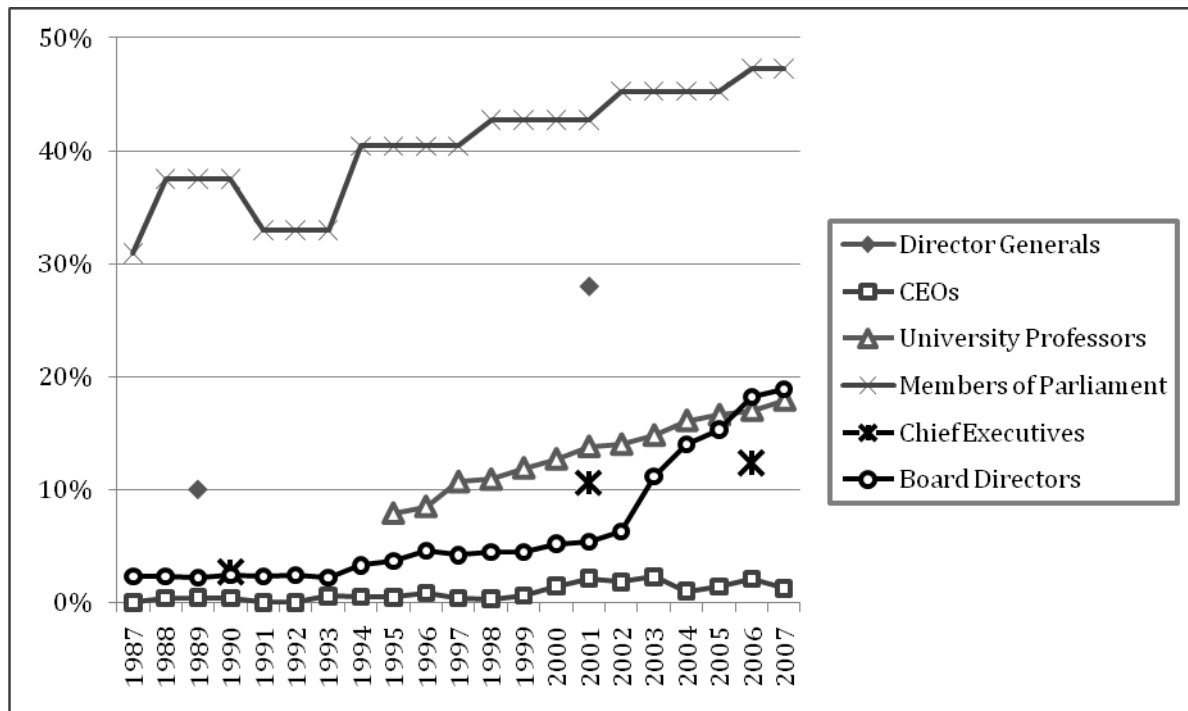
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**Figure 1. Between-group brokerage of an elite actor in the political sphere, illustrating (from left to right) the roles of representative, gatekeeper, and liason (after Gould and Fernandez 1989).**



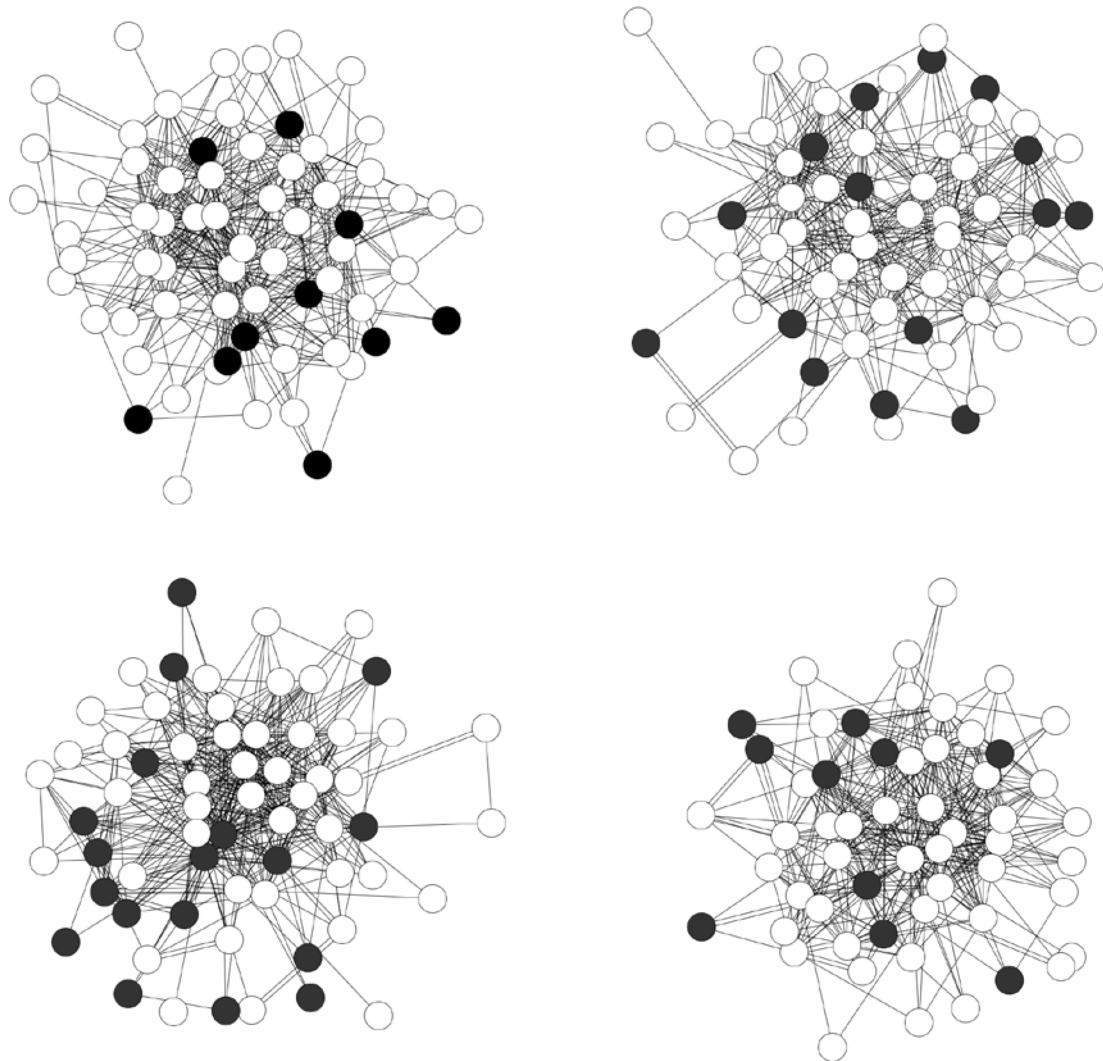


**Figure 2. The share of women in some influential positions in Swedish society.**



Note: The three private sector percentages (chief exec., CEOs, boards) pertain to firms traded on the Stockholm stock exchange. Adapted from Bohman, Bygren & Edling (2010).

**Figure 3. Work-related networks of local elites in four Swedish municipalities.**



Nodes represent individual actors and are plotted according to centrality. White nodes represent male and black nodes represent female actors. Networks rendered in Visone (Baur 2008).

**Table 1. Network measures and their power dimensions**

Measure	Intuition	Network power dimension
Actor Degree Centrality (standardized)	The number of connections (degree) that ego has, relative to the total numbers of alters. A value of 1 means ego is connected to all alters.	An actor that has many connections relative to others in the same community is more central and has the potential to influence many.
Actor Closeness Centrality (standardized)	The distance between ego and all alters to which she is connected relative to the total number of alters. A value of 1 means ego is adjacent to all alters.	An actor that is a short distance from the other actors has a better over-view, can quickly access information, and is also “visible” to the other actors.
Actor Betweenness Centrality (standardized)	An actor, $i$ , is dependent upon another actor, $j$ , if $i$ has to go via $j$ to reach actor $k$ . The more others are dependent upon an actor, the higher the actor betweenness, relative to the number of actors. A value of 1 means all alters are dependent upon ego.	An actor that is positioned in between two other actors can play the role of a mediator, broker or gatekeeper.
Brokerage Role	If $i$ is connected to $j$ and $j$ is connected to $k$ , and $i$ and $k$ are not connected, then $j$ is a broker between $i$ and $k$ . Actor $j$ plays one of five different brokerage roles depending on the	A broker is a facilitator supplying access and/or trust between two other actors. We study the role of a gatekeeper, a representative, or a liaison.

	group affiliations of <i>i</i> , <i>j</i> , and <i>k</i> .	
Index of Qualitative Variation	<p>The degree of homogeneity in an actor's adjacent connections.</p> <p>Compares the number of ties to persons of the same sex to the number of ties to persons of the opposite sex.</p> <p>A score of 1 indicates perfect heterogeneity and a score of 0 indicates perfect homogeneity</p>	<p>We are interested in the balance between male and female connections that an elite actor has. We assume that men should have a more skewed composition, being predominantly connected to other men, whereas women should have a more balanced composition.</p>

Note: For methodological discussion see Agresi & Agresi (1977), Freeman (1979),

Gould and Fernandez (1989), and Krackhardt and Stern (1988), and Wasserman and

Faust (1994).

**Table 2. Sex differences in estimated degree of power**

	Degree of power				Total %	n
	1 (min)	2	3	4 (max)		
Women	12	26	43	19	100	58
Men	19	22	31	28	100	190
Total	17	23	34	26	100	248

chi2(3)=4.99

p=0.172

**Table 3. Descriptive statistics across four types of relationships, Mean and (Standard deviation)**

	Professional	Private	Economic	Environment
Degree centrality	.39 (.20)	.13 (.09)	.11 (.11)	.08 (.09)
Closeness centrality	.60 (.10)	.48 (.10)	.35 (.16)	.30 (.16)
Betweenness	.009 (.016)	.015 (.022)	.009 (.019)	.008 (.019)
Representative	47.44 (61.46)	8.6 (17.19)	8.25 (18.81)	4.29 (16.25)
Gatekeeper	46.92 (63.11)	9.25 (17.29)	8.04 (18.83)	5.46 (18.27)
Liaison	64.61 (10.52)	11.71 (21.51)	7.60 (22.51)	4.14 (16.17)
IQV	.84 (.14)	.76 (.23)	.60 (.31)	.54 (.34)
Sex (women)	.23			
Age	52.9 (9.3)			
Formal power (1-4)	2.69 (1.04)			
Higher ed. dummy (=1)	.58			

**Table 4. Sex differences across network dimensions in professional and private relations. Unstandardized regression coefficients and standard error net of control variables**

Network dimension	Professional		Private		n
	b	SE	b	SE	
Degree centrality	-.014	.027	.004	.016	228
Closeness centrality	-.019	.014	.012	.016	228
Betweenness (log)	-.015	.264	.149	.331	228
Representative (log)	-.077	.237	.022	.219	228
Gatekeeper (log)	-.213	.235	.049	.224	228
Liaison (log)	-.202	.262	-.010	.240	228
IQV	-.042	.023	.006	.036	228/225

Note: Results from Ordinary Least Squares regression models with control for age, education, elite sphere, positional power, and municipality.

**Table 5. Sex differences across networks related to economic and environmental development, respectively. Unstandardized regression coefficients net of control variables**

Network dimension	Economic development		Environmental development		n
	b	SE	b	SE	
Degree centrality	-.020	.015	-.016	.013	228
Closeness centrality	-.021	.021	-.028	.021	228
Betweenness (log)	-.433	.369	-.521	.444	228
Representative (log)	-.428	.203	-.295	.168	228
Gatekeeper (log)	-.201	.204	-.119	.186	228
Liaison (log)	-.351	.201	-.105	.168	228
IQV	-.106	.050	-.110	.060	204/189



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<sup>1</sup>. Power is one of the most central and contested relational concepts in sociology (Lukes 2005). For the present discussion we adapt Dahl's (1957) intuitive idea that "A has power over B to the extent that he can get B to do something that B would not otherwise do (202-203)." Power can take on many forms, ranging from persuasion to coercion (see Knoke 1990: 1-7). In this paper we study local elites that by definition have power to some extent, but our focus is on intra-elite power, i.e., the pecking-order of power within the elite.

<sup>2</sup>. What we have in mind is the jurisdiction of local politics, briefly discussed further on, and business role in local labour markets and regional economic growth.

<sup>3</sup>. There are actually 18 county councils and 2 regions. We will refer to county councils and regions simply as county councils.

<sup>4</sup>. The current Local Government Act of 1991 came into force in 1992 (available online at <http://www.sweden.gov.se/sb/d/574/a/29535>). The first LGA dates back to 1862, and came into force in January 1863.

<sup>5</sup>. Västra Götaland is one of 20 county councils and regions and consists of 49 municipalities. The region is dominated culturally, economically, and politically by Gothenburg. However, we selected municipalities that are on the geographical outer rim of Gothenburg in order to minimize the city's influence.

<sup>6</sup>. Analyses of non-response reveal that we primarily fail to include actors that are weakly attached to the rest of the elite. We know from studying the incoming nominations of all actors in the dataset that there is one important actor missing. Analysis on complete network data is critically sensitive even to low levels of non-response and there is no easy way to estimate the substantial impact of non-responses among highly connected actors. However, because we focus primarily on individual positions, the analyses reported in this paper are less sensitive to non-response. There is no systematic non-response relative to sex.

<sup>7</sup>. In and out degree are highly correlated. We have also done analyses for reciprocated ties, to investigate if tie strength (Marsden & Campbell 1984) influence the results. This significantly reduced the density of the networks, but no substantial differences arose from that analysis.

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<sup>8</sup>. These variables contain many zeros, which is important information that the elite actor has no brokerage position. We decided to retain these as zeros also after the transformation.

<sup>9</sup>. The lowest adjusted R-square, .027 percent, is found in the model regressing betweenness centrality in private networks is 0.027 percent. The model regressing closeness centrality in job networks produce the highest R-square, 41.7 percent.