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The Power Grid

The Social Network of the Hungarian Elite in the Socialist Era Based on Hunting Habits

Abstract: Hunting played a prominent role in the life of the political elite of the Kádár era; besides recreation, it also provided an excellent opportunity for relationship building. In our study we set out to identify certain features of power dynamics, as well as structural characteristics of the system based on the trophy presentation lists of one of the most remarkable hunting associations of the era, Egyetértés, founded exclusively for the members of the political elite.

The results confirmed our initial hypotheses suggesting that a reflection of the slow decomposition of the system could be observed through the hunting customs. Over time the leading political members of the hunting association Egyetértés hunted less and less together, with the network of joint hunting collaterally losing its density, showing a diminished clustering coefficient and sabotage tolerance. Signs of the decay of the system were clearly reflected by hunting customs and the hunting network.

Nevertheless, the data demonstrate more than that: they mark the actors' informal position within the power structure, while at the same time outlining the path of power dynamics of the given figures.

Key Words: elite studies, Hungary, socialist era, hunting habits

Introduction

Regarding hunting, the socialist system that emerged after 1945 is in continuity with earlier eras. Hunting as an expensive pastime of the privileged few became a part of

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the political elite's lifestyle just as much as it had been before 1945, despite the fact that the communist state and its leaders presented a puritanical image of themselves in keeping with the central ideology and the low standard of living in society at large. The conditions for the party and state leaders' hunting trips were ensured by highest level government agencies, and the issue of hunting was even on the agenda of the Magyar Szocialista Munkáspárt/Hungarian Socialist Workers' Party's (HSWP) most important decision-making body, the Politburo (PB).

In this essay we would like to take a closer look at the structural features of the social network of the Hungarian political elite prior to the change of regime through an analysis of the development of relationships on hunting trips. For this purpose we used the trophy shooting reports[2] of the Egyetértés ('Concordance') hunting association as raw data. Before the transition of 1989–90 the political elite had two representative hunting organizations. One was the Egyetértés, and the other was the hunting association of the Ministry of Defense. It was the PB that made a decision about the founding of Egyetértés in 1963; the list of the 18 founding members in 1964 contains names all from among the highest political elite: Antal Apró, András Benkei, Béla Biszku, Lajos Czinege, Lajos Fehér, Jenő Fock, Sándor Gáspár, János Kádár, Pál Losonczi, Károly Németh and János Pap. Naturally, entry into these hunting organizations was possible by invitation alone, and only those at the top of the political hierarchy could participate in the organized hunting events. For retired politicians with lesser influence, after their membership in Egyetértés had expired, another hunting association, a "hospice for elderly hunters" called Barátság ('Friend-ship') was founded at the beginning of the 1980's.[3]

Thus, hunting played a significant role in the life of the Hungarian political elite in the socialist era (as well). Strict hierarchical rules regulated what game one could hunt and with whom. On organizing the events, choosing the people and deciding on the frequency of the invitations were carefully considered, while professional hunters supervised who could shoot which game. The fact of hunting together as well as the scores and the evaluation of the collected trophies thus serve as important additional data for political history, allowing us to observe the structure of the political elite.

In the first part of our study we will attempt to sketch the political structure of the Kádár era. In the second part we will analyze the trophy reports of the Egyeté-rtés hunting association, and present the main participants on the basis of descriptive data and the primary information that could be extracted from these data. Subsequently, we will try to plot the hunting network of the elite based on co-hunting coincidences. Our study is divided into three sections, reflecting the time scope of the examined era as well as the turning points of political history. The analysis of a given period will also give insight into the power dynamics of various characters: how central certain figures were in the social network and when. This, in our view,

adds more detail to the dynamics of the ascent and descent in the careers of certain actors of the elite. We will also examine the extent of change in structural parameters of the network during a particular period. We will compare the structural parameters of the graph with those of simulated nets as well. In addition to the standard methodology of social network analysis, we will also test the stability of the network against random and non-random perturbations in the three given periods. According to our preliminary hypothesis, by the end of the era both sabotage tolerance and stability against random perturbations will have decreased, projecting, as it were, the developing problems of the socialist political elite in the positions of power.

Despite the fact that the methodology of network analysis is not completely unknown in historical research, few works have applied it thus far. The perspective of social network theory allows diverse research fields to approach certain questions from the same angle, which greatly increases the possibility for interdisciplinary analyses. From its very beginnings, network analysis has been present in the discussion of historical problems.[4] An outstanding example of such an application might be the research regarding the Medici family's ascent, which by now has become one of the most cited examples in network analysis handbooks.[5]

Network analysis has hardly been used by Hungarian historians to date,[6] it has been far more common for sociologists to consider issues on the fringes of historical studies applying network analysis.[7] Hungarian sociologists first began to consider the possibility of investigating social questions from the point of view of networks at the beginning of the 1990s. Initially, the network approach appeared in sociological analyses, mainly in relation with theories about social capital. The importance of network features in this field has practically become crucial over the last decades.[8] According to one of the Hungarian pioneers in this area, Róbert Tardos, the use of this method "might help bridge the gap rigidly separating micro- and macro-level analyses in sociology"[9]. Beyond interpreting individual actions the network approach allows for a deeper understanding of several structural processes. Since 2000 sociologists have continued to maintain dominance in humanities using network-based analyses, presumably largely due to the strong mathematical nature of the method (it is much more widespread among physicists and other scientists). Presenting a relevant example of applying this method in historical research we also hope to put forward a sound argument for further exploiting the possibilities of network analysis.

The Political Structure of the Party-state

By 1949 the Soviet-type political system had been completely established in Hungary. As a symbolic gesture of the institutionalization of the proletarian dictatorship, the Constitution (Act XX) was adopted in August 1949, which was a slavish copy of Stalin's Basic Law of the Soviet Union and which, in an essentially unaltered form, was to define the framework of the political system until the end of Communism in Hungary in 1989–1990. Although democratic institutions – legislature, government, multi-level administration, etc. – were maintained throughout the Soviet system, the actual political power was in the hands of the Communist party, which was even enshrined in the Constitution from 1972 on. At the parliamentary elections, only the candidates of the Popular Front lead by the Communist Party could be nominated. (Even though the multi-party system was not formally banned, other still existing parties suspended their activities with the introduction of political monocracy.)

In 1948, a unified workers' party was established under the name of *Magyar Dolgozók Pártja* (Hungarian Workers' Party, HWP), marking an important stage of the introduction of political monocracy through the "union" of the communist and social democratic parties. The union of the two parties actually meant the incorporation of the social democratic party, which had been preceded by pushing the politicians who intended to keep to the authentic line of social democracy out of the leadership and the party itself, with drastic means, both politically and administratively. The HWP elaborated a dual structure within the entire state structure; operational control was exercised by the state and by public administrative bodies, while fundamental decisions were made by parallel party organizations, which were also in charge of the administrative implementation of decisions. This structure remained unchanged even after the Hungarian Revolution in 1956. Even if the HWP collapsed during the days of the revolution, after the intervention of the Soviet Army, the Communist Party was reorganized under the name of *Magyar Szocialista Munkáspárt* (Hungarian Socialist Workers' Party, HSWP).

Once the dictatorship had been established, self-governance was substituted by the council system. District councils and county councils were set up above the municipal (village or town) level. (The district level was abolished in 1983.) In the capital, the lower level was composed of 22 districts. At the top of the councils there were the presidents of the village, district, town or county councils. The central executive power was held by the government, whose leader, the prime minister, was elected by the Parliament. Similar to all the important state, economic and cultural offices, he was suggested by the party's responsible bodies. The members of Parliament were elected by general and secret ballots,[10] but only those who represented the party policy and adopted the program of the Popular Front could be nominated in

the *a priori* single-party 'competition'. The legislative body unanimously elected with a nearly hundred percent participation convened two or three times a year for a few days only. The so-called law decrees replaced laws and were adopted by the collective presidential board, the Presidential Council, which was composed of the members of the Parliament representing different social groups and institutions, eliminating even the possibility of a public debate. The implementation of the few laws (like the three- and five-year-plans determining the direction of the nationalized economy) and the law decrees of a significantly higher number were ensured by the governments' and ministries' apparatus. In the hierarchy, the prime minister was followed by the deputy prime ministers whose task was to supervise several fields. The heads of the ministries were the ministers who had several deputies controlling sub-fields; from the 1970's the position of the State Secretary dating back to before 1949 was restored. Besides the ministries, bodies of national competence, for example the National Planning Office, the National Bank and the National Forestry Directorate, etc. were also led by people in state secretarial or deputy ministerial ranks.

Corresponding to the hierarchy of state administration, the lower level of party organization was the local (village, town, district) or the factory/workplace party organization. Not even a chief executive of a company could avoid being controlled by the company party secretary who, in the case of a larger institution, performed his duties full-time. The party secretaries of the most important heavy industrial plants sometimes had greater power than the presidents of the given community's council. The next level is, according to the administrative arrangement, the district, town, capital, or county party committee. Heads of these bodies were the first secretaries and below them in the hierarchy there were secretaries controlling different fields. Even a district or small-town party committee had its own bureaucracy, which, along with the independent secretaries and other functionaries, amounted to a class of party agents of about ten thousand people altogether.[11] The party's main decision-making body was the Congress.[12] This forum was responsible for the election of the governing board operating between the two Congresses, which in the case of the HWP was the Central Board (CB), and in the case of the HSWP the Central Committee (CC). (At the same time they were familiar with the notion of co-opting, when the board itself invited new persons to join them.) These bodies which had anywhere from seventy to hundred and twenty members, including the substitute members[13] with consultation right, met regularly (in the 1960's and 1970's every two or three months) to discuss current political issues as well as reports and plans issued by departments, committees and bodies of the CB or the CC. Along with the Congress these bodies were supposed to decide about the strategic policy direction.[14]

The operational control was exercised by the Politburo, elected from the members of the CC (CB), which met every week. The number of the members of this

board (regular and substitute members) did not exceed twenty, and in the 1970's it was around thirteen-fifteen.[15] There were no formal regulations concerning its composition, but based on political considerations, the representatives of certain posts like that of the prime minister, or of certain fields, trade unions conveying the party's policies or the agricultural sector were usually included instead of representing real interests. The head of the party hierarchy was the CC's first or general secretary. (Throughout the entire period examined in this paper, the first secretary of the CC of the HSWP, and from 1985 its general secretary, was János Kádár, the politician after whom this era was named.) The Central Board or Committee set up departments for the supervision of different subfields. At the top the heads of departments and main departments were the secretaries responsible for several fields. (There was a large overlap between the members of the secretariat and the PB, but formally the membership of none of these bodies was a precondition of the membership in the other.) The structure was more flexible than that of the state administration, since for a current task working committees and teams were set up, which existed for a shorter or longer period of time.

In addition to the formal position held, informal aspects also influenced the political significance of a given person. In the party-state, armed forces (army, police, Workers' Militia) were always represented in the leading bodies. In keeping with the administrative division there were nineteen positions of county first secretary, while, for instance, the head of the party committee in Vas County, a county with insignificant industry on the western border of the country, had much less political influence than the first man of the counties Borsod-Abaúj-Zemplén, Fejér or Győr-Sopron, which were known for their important mining activities and heavy industry, and thus for their strong industrial working class. Budapest's first secretary did not necessarily need to be a member of the PB (although in many cases he actually was one), to be able to give weight to his word as the leader of the capital representing one fifth of the country's population. The positions occupied in the party hierarchy were generally considered more important than those held in the state administration. Sometimes a deputy minister with a CC membership had greater political power than his minister without a CC membership. In 1975, Pál Losonczi was not chosen to be part of the PB as the Chairman of the Presidential Council (for he held this position from 1967), but as a former president of a co-operative and Minister of Agriculture, representing agriculture and the working peasantry.

Descriptive analysis

The analysis is based on the *trophy presentations* of the Egyetértés hunting association between 1968 and 1986. The annual statements were based on the records of individual shooting of big game. The difference between trophy presentations and a complete game book is that the former only records the data of shooting red deer and fallow-deer but not those of other game like wild boars and roes etc. hunted individually as well, or those of corporate hunts, for example pheasants, rabbits, foxes or mallards. On the basis of the trophy presentations the shooting of 2.323 big game could be retraced. The record of shooting cited the name of the hunter, the time and the place of the shooting, and in certain cases even the number of tines on the antler, its weight, the type of game, the international and Nadler score of the trophy, and whether the trophy was a medalist (bronze, silver, gold). The database does not completely cover the operation of the Egyetértés hunting association, since it was already founded in 1964. Up until the change of regime in Hungary in 1989 the association retained its original form. After comparisons with data from other sources and conversations led with certain participants we can state that the integrated trophy presentation can be considered, from the aspect of trophy shootings, as a valid source.

The killing of 2.323 big game can be linked with 152 participants. The number of killings shows, however, a very skewed distribution. In the case of 46 people only one quarry is noted and five or less killings can be associated with the names of half of the hunters (77 people). By contrast, the most active 10 hunters shot over 50 games.

Table 1: The persons killing the most trophy game

Name	Number of shot game
Jenő Fock	106
József Veres	83
György Aczél	71
Mátyás Timár	65
Ferenc Szűcs	62
József K. Papp	58
Lajos Cseterki	57
Lajos Papp	53
Pál Losonczi	52
István Gergely	51

The table shows the top 10 hunters based on the number of game shot. The first is Jenő Fock, Prime Minister between 1967 and 1975, who shot 106 animals himself, the second József Veres (he was a member of the CC until the cessation of the board's activities in 1989) shot 83, while the third, György Aczél, the most prominent cultural politician and emblematic figure of this era, shot 71.

The large majority of the game animal killed were harts (80%), 20% fallows. In 68% of the cases the classification of the trophy of the shot animal was registered: 277 stags were qualified as gold, 388 as silver and 557 as bronze. During the 19 years, 80 hunters shot gold medalist stags. Most of them were killed by János Kádár (after the suppression of the Revolution in 1956 he was the principal leading politician until 1988) and Jenő Fock, each of whom shot 11, and the third in line was Pál Losonczi with 9. Losonczi was considered an emblematic politician of the Kádár era as well, from 1957 on, he was constantly a member of the party leadership. At the time of the collectivization campaign of the 1960's he was the minister of agriculture, then, from 1967 until 1987, Chairman of the Presidential Council, which actually meant he was head of state.

In the statements, two scores were listed with the game killed. First the international score of the antler was registered and also the Nadler score which was only interpreted for harts (the Nadler score is registered with the third of the killings, while the international score with two thirds). The two scores, even if they correlated very strongly (0.82 correlation), do not entirely coincide.

The most prestigious trophy (according to the Nadler scoring) was shot by János Kádár on 12, September, 1976 in Telki, while, according to the international scoring, Ferenc Szűcs's hart, which he shot on September 14, 1974 in Gemenc, was the most prestigious trophy.

Table 2: The most prestigious trophies

Name	Place	Date	Nadler score
János Kádár	Telki	12 September 1976	231.70
Kálmán Kazareczky	Gemenc	19 September 1975	231.10
Károly Németh	Telki	13 September 1975	230.18
			International Score
Ferenc Szűcs	Gemenc	14 September 1974	249
Árpád Papp	Gyarmatpuszta	17 September 1970	247
Kálmán Kazareczky	Gemenc	19 September 1975	247

As mentioned above, the shooting of medalist trophies was strictly regulated within the hunting association. Each year it was laid down how many gold, silver, and bronze medalist stags could be shot by each person; every two or three years each hunter in the Egyetértés association could have a gold medalist stag. This order was reshuffled as a result of important anniversaries (like the fiftieth or sixtieth birthdays), and occasions when the professional hunters spotted some special stag in the game population.[16] In these cases, the members voted by "acclamation" to determine who could shoot the game in question, usually ceding this triumph to the leading functionaries of the party. The following diagram shows, in the case of members having shot at least 30 animals, the average international score reached by the trophies of the stags shot by them. The diagram also shows the variation in scores. This way the error bar[17] shows in which hunters there is a significant difference in the quality of the shot game's trophies.

The variation of international scores nicely illustrates how, in the case of most hunters, there is no significant difference between the trophy scores, the average scores of each participant varying between 180 and 200 points. But if we take a look at the top rank of the list, it is obvious that the leading positions are taken by the members of the party elite, with Kádár, Lajos Czinege (he was a member of the CC during the whole period covered by the database, serving as Minister of Defense from 1960), Károly Németh (a member of the PB from 1970 and later Chairman of the Presidential Council) and Pál Losonczi at the top.

The lowest number of killings (46) registered in the period covered by the database was from 1981 and the highest (278) from 1972. At the beginning of the term the annual number of killings was higher than it was closer to its end. This could indicate that towards the end of the socialist system hunting had gradually lost its importance in the eyes of the party leaders (one of the reasons for this might be that Kádár, known as a great hunter, hunted less often). On the other hand, we shouldn't forget that the elite, given the rigid political structure, hardly changed, so the politicians grew older and older and invariably spent less time in the forest due to their physical limitations.

We divided the period between 1968 and 1986 into three parts, with the intention of drawing the temporal dynamics emerging from the data. When defining the three periods we tried to follow the turning points in political history. Therefore we drew the lines at the times of HSWP congresses and new governments. The first period is between 1968 and 1974; this period registered the most hunts, 55% of all the killings. We defined the second period as being between 1975 and 1979, which showed 22% of the hunts. In 1975, the XI. Party Congress was held, and from this year, as a symbol of the conservative economic turnaround György Lázár succeeded prime minister Jenő Fock, who was considered an advocate of the economic reforms

Diagram 1: Average score of the trophies shot (error bar)

Hunter Name

- Borbély Sándor
- Veress József
- Bodnár Ferenc
- Oláh György
- Kiss Dezső
- Horn Dezső
- Földes László
- Timár Mátyás
- Aczél György
- Gergely István
- K. Papp József
- Papp Lajos
- Cseterki Lajos
- Szirmai Jenő
- Vallus Pál
- Lázár György
- Antos Zoltán
- Tömpe István
- Papp János
- Csémi Károly
- Fock Jenő
- Apró Antal
- Szabópál Antal
- Zoltán János
- Lénárt Lajos
- Szücs Ferenc
- Szabó Zoltán
- Biszku Béla
- Nezvál Ferenc
- Kádár János
- Losonczi Pál
- Németh Károly
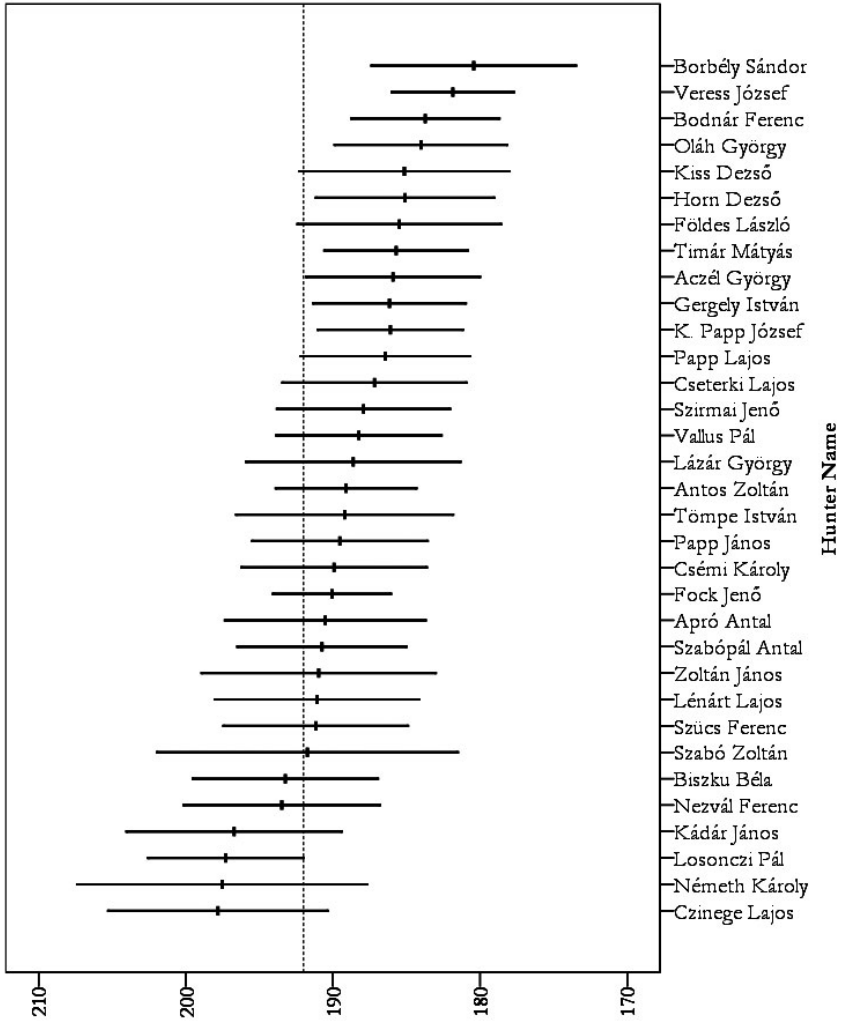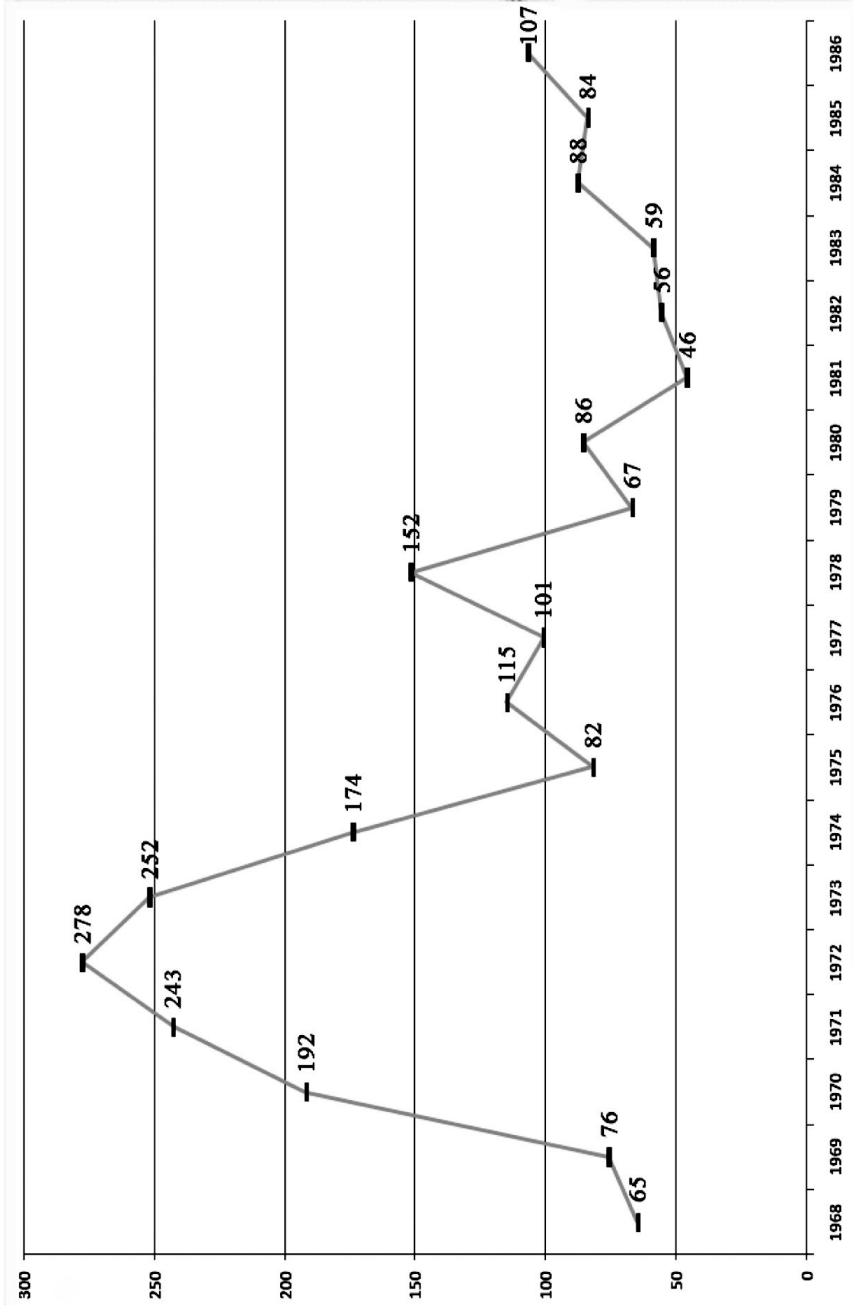- Czinege Lajos

210 200 190 180 170

Diagram 2: Annual number of the trophy games shot

introduced in 1968. The third period begins after 1980 when 23% of the hunts occurred. The XII. Party Congress was held in 1980, and this served as a marking point for the last caesura.

Over the entire 19-year period under study here, the positions and the power of many people in the party structure changed. This is partially reflected in the hunts. Although the number of hunts does not necessarily signal the strengthening or weakening of positions, it is certainly interesting to observe who hunted the most in each of the three phases.

Table 3: The persons hunting the most in the three periods

1968–1974		1975–1979		1980–1986	
Jenő Fock	83	József Veres	23	József Veres	27
György Aczél	47	Sándor Borbély	20	Lajos Papp	22
Lajos Cseterki	41	György Oláh	18	Lajos Krasznai	19
Pál Losonczi	38	István Gergely	16	Mátyás Timár	19
József K. Papp	36	Ferenc Szűcs	16	László Földes	16
		Mátyás Timár	16	József Szakali	16

The persons hunting the most in the first period disappeared from the top rank in the second and third periods, which is especially noticeable in the case of Jenő Fock who hunted intensively between 1968 and 1974. Thus, as Fock's political trend was neglected, which is also marked by his being replaced as prime minister, he also lost his central role during the hunts. In the following two periods the constant is József Veres who shot the most big game in both periods, and Mátyás Timár who figured among those who hunted the most in both periods. By that time Timár had reached the top of his career as the chairman of the National Bank, while Veres, being from an older generation, already retired in 1970, partially retained his political influence, which is marked by his CC membership.

In the first period Jenő Fock did not just hunt a lot but he was still the one to shoot the most gold medalist stags, nine in number, followed by János Kádár with seven and Károly Csémi with six. In the second period Ferenc Nezvál shot the most gold medalist stags, five; Béla Biszku, László Földes and Losonczi shot four. Nezvál's lead is somewhat surprising, since he retired in 1966 and did not figure in the leadership of the party thereafter. In the third period, with the reduced number of hunts, there is much less shootings of gold medalist stags listed in the database, except for József Szakali who shot three. (Later we will come back to his role as well.)

The hunts for big game always fell into the second half of the year, following the rut of the stags. In practice this meant that 62% of the game killings took place in September and 37% in October. Less than 30 shootings occurred in the months August/November/December.

28% of the successful big game hunts took place on Saturdays, 19% on Sundays and 14% on Fridays, that is, 47% on the weekends, and more than 50% on weekdays (although Friday hunts could partly be considered as weekend hunts). In the three periods there was no difference in this breakdown. However, there were significant differences regarding the hunters. Kádár hunted almost exclusively at the weekends and the majority of Károly Németh's hunts occurred on Saturdays or also Sundays. By contrast, there were members of the association who hardly went on a hunt on the weekend, like Nezvál or Antal Szabópál, for instance. Obviously, the weekday hunters were those who were partially or completely retired in the period under study and did not have to deal with politics actively during the weekdays. (Or in case of Szabópál, being from Tolna County, he could easily be out on the field right after working hours.)

For the later network analysis of the data the location of the hunting grounds where the members of the association hunted is an extremely important piece of information.

Three central locations were Telki, Gemenc and Gyulaj. Telki was one of the hunting grounds closest to Budapest belonging to Egyetértés, while Gemenc was very popular for its game population. In Telki, a well-equipped hotel awaited the guests, and in Gemenc there were five guesthouses.[18] One of these, Lenes, is even mentioned separately as the site of two killings in the database. The third most numerous big game shooting happened in Gyulaj, where until 1982 a smaller guesthouse, and later, from 1982 a larger house accommodated the hunters. Over 80% of the hunts were related to these three grounds. In Gyarmatpuszta an ancient castle was used as lodging, and later from 1984 there was a guesthouse as well. Three guesthouses belonged to the Gödöllő grounds: Gödöllő (Green house), Isaszeg, Valkó, all of which were mentioned in the trophy presentations. Besides these there were territories, which did not primarily belong to Egyetértés but members of the association were still permitted to occasionally hunt on these grounds. On the diagram these grounds are marked with a dark color.

There were two hunting grounds, Mezőföld and Martonvásár, which belonged to Egyetértés but they did not appear in the database. These are mainly small game grounds, which explains why on these territories no trophy game could be shot.

Diagram 3: The number of big game shot per hunting ground
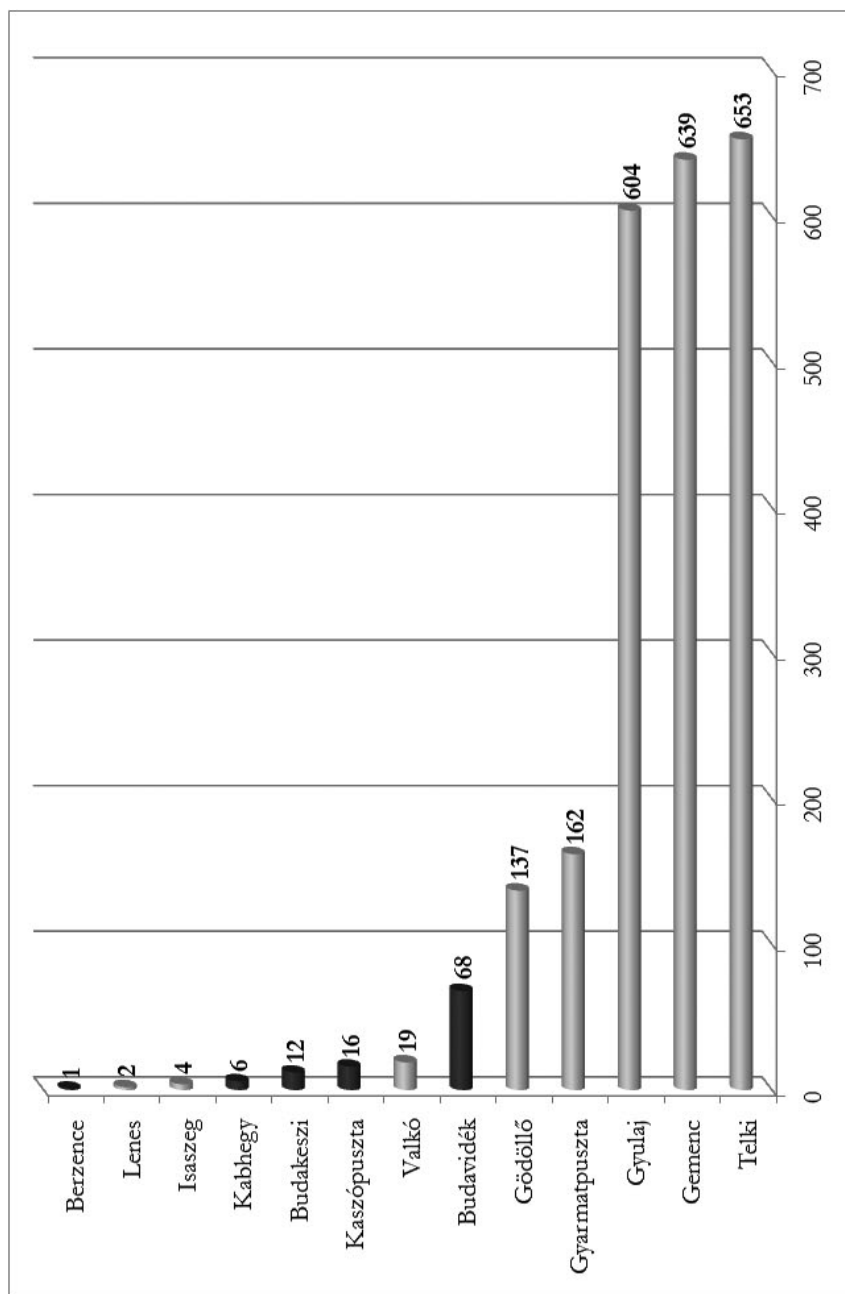
The configuration of the network structure

As we have already indicated in the introduction, network research had hardly ever been applied in historical research in Hungary. However, the trophy presentations of Egyetértés allow us to identify (within certain limits) the social network of figures belonging to the Kádár elite. Apart from this claim, we also need to formulate two very important stipulations. Firstly, although the majority of the elite of the socialist era used to go hunting, this occupation was not obligatory; we know many important personalities with whom no data in the trophy presentations can be connected, for example András Benkei (Minister of Interior between 1963–1980) yet he was a founding member of Egyetértés. Secondly, some other keen hunter politicians were members of the other elite hunting association (of the defense forces). Although neither of the hunting companies had exclusive membership, the number of those who were members in both is rather low. Such a rare exception was János Zoltán, a medical doctor, or Lajos Czinege, Minister of Defense. We also need to highlight that the analysis only relies on the shootings of trophy game. Due to the data at hand we unfortunately had to refrain from identifying the persons appearing together at a corporate hunt. This certainly limits the scope of the results. In this context we need to stress that although trophy game was shot on individual hunts, this did not rule out the possibility of members meeting in the hunting lodges before or after the hunt. What is more, a participant even recalls having gone specifically with his friends to certain big game hunts.[19] Hunting lodges offered high-comfort leisure facilities to members who in many cases brought along their families, at a very low price. Given the shortness of the big game hunting season, considering the periods of rutting, several people could be simultaneously present at the same location. The hunting lodges had to be reserved in advance, so it seems rather unlikely that people who did not get along well could have ended up in the same hunting lodge on the same day. Since the names of the persons present at different hunts is not known, we proceeded from the list of those who shot a big game on the same day and at the same location. We assumed there were edges among these persons in the network. In our network configuration hunters are the nodes; and if two hunters shot a stag on the same day and at the same location, we assume a unit edge between them. Thus, we have elaborated an undirected graph from the hunters and the hunts. From this data structure it cannot be deduced if two people were present at the same location with only one of them shooting a game. Maybe it would be helpful not to limit the period of joint hunting to a day and to assume a relation even within a distance of one to two days, if the two hunters shot a big game at the same location. Reminiscences, however, indicate that on the occasion of big game hunts the members generally only spent one day at the location, after the killing they often returned home

late at night after dinner. Of course, the meeting of the members cannot be uncon-ditionally proven by the fact that they shot a game at the same location on the same day, but following our previous reasoning we will assume that in this case these peo-ple spent some time together. Thus, relational data do not refer to joint hunting but rather concern the question as to how often the members were likely to meet during their trophy hunts. What makes it more difficult to analyze the data is, as we have already mentioned, that there were many grounds with several guesthouses and the association hunted sometimes on grounds which did not belong to Egyetértés. Since from this last case we only have a few examples, we will not include them in the net-work configuration. The first problem, however, needed to be addressed in any case. To deal with it we divided the probability of the encounter with the number of the guesthouses on the ground. Since the number of guesthouses changed over time, we also needed to calculate this factor. The following table summarizes how many guesthouses we considered on each of the grounds.

Table 4: Hunting grounds

Hunting ground/hunting lodge	Number of hunting lodges
Telki	1
Gemenc (Lenes was part of this)	5
Gyulaj	1, then 2 from 1982
Gyarmatpuszta	1, then 2 from 1984
Gödöllő	1
Isaszeg (Gödöllő hunting ground)	1
Valkó (Gödöllő hunting ground)	1

While configuring the graph, we applied further narrowing. Only those hunters could be included in the network who shot at least five game in the examined period. By narrowing we intended to filter the non-members (invited guests) from the net-work. Of course, if a person at the same location on the same day shot more than one game, we only counted one of his hunts in the graph (this way we filtered 387 hunts). We also disregarded hunts where a person shot a game at two different loca-tions on the same day (12 cases).

After the narrowing, the graph was configured on the basis of 1,609 hunts of 74 persons. For the analysis we used R statistical software, for the network data, we applied the "igraph" package (http://igraph.sourceforge.net, May 25, 2011).

During the complete examination period we were able to identify 454 hunts on identical grounds altogether. The sequence of joint hunts based on the locations mapped

Diagram 4: The joint hunt graph of the entire period[20]

the total number of hunts on these grounds according to our expectations. In Isaszeg, which was also one of the hunting grounds, there was no occasion when two hunters shot a trophy big game at the same time.

In the case of all the 74 actors considered for the network generation, there was at least one joint hunt with another member. The hunting graph projected on the complete period is hard to construe at first sight because of the relatively high number of actors and the edge density.

Among the 74 persons we can identify 397 edges, which means that the graph's density[21] is 0.15. The graph's diameter[22] is 5 and the average shortest path[23] between the persons is 2.13. The graph's clustering coefficient[24] is 0.2.[25] Average degree[26] distribution is 10.7 in the graph, and the graph's distribution can be best compared to a Poisson distribution (but on the level p=0.04 it significantly diverges from the Poisson distribution).

The structural properties that can be assigned to the actors of the graph help identify whom we can consider as the graph's central actors (the most important structural properties that can be assigned to each actor are specified in the Annex). Based on the degree number in the graph Mátyás Timár has the most joint hunts (30); he is followed by Cseterki (28) and Fock (26). János Kádár hunted together with 17 other actors during the complete period, which gives him rank 13 in the list. The closeness index[27] reveals similar results. Timár assumes the central position according to this as well, followed by Cseterki, Gergely, Aczél and Lajos Papp. Based on the index number there are no large divergences between the important actors. The betweenness index[28] does not identify "unexpected", that is, lower-positioned actors either; the top list coincides with the one shown in the previous case, although in this one Aczél is somewhat pushed back, while Zoltán Antos moved significantly forward. One of the main reasons for the latter might be that he was very close to Mátyás Timár in the network structure. The last indicator used to measure centrality is the Burt coefficient[29]. Although this indicator differs the most from the previously introduced indicators, the "top rank" does not change significantly here either, Cseterki, who has the lowest value, is followed by Timár and Fock.

The position of the actors is more nuanced in the graph if we only represent the persons with the stronger connection to each other. In the following graph only those were included who hunted together more than once (a weighted probability was also analyzed in this case).

The most central actor is Aczél in the graph's center, which based on our historical knowledge is not a surprising result, either. Aczél was famous for being very good at organizing his relational capital,[30] and he was one of the central actors of informal networks. By excluding him from the network the strong block of the hunting graph would practically fall apart (and yield several non-related components).

Diagram 5: Entire period strong blocks

Diagram 6: 1968–1974 – graph of joint hunts
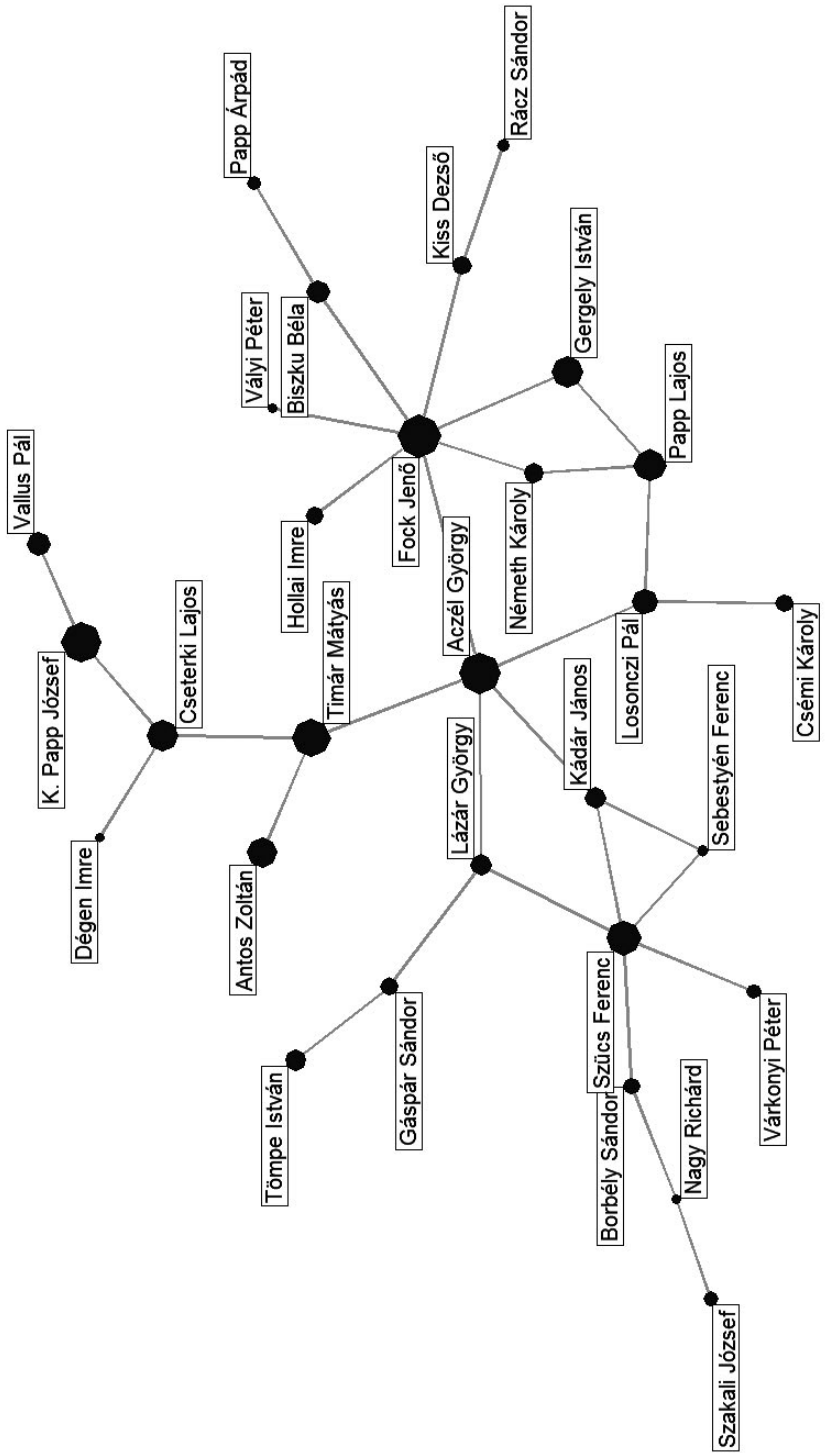
The position of Jenő Fock is very interesting. While he stands in a strong connection with 7 other actors, these actors are not interconnected. As previously referred to, Zoltán Antos is connected to Timár. Kádár has a stronger connection to Aczél, Ferenc Szűcs, one of the most passionate hunters[31], and Ferenc Sebestyén, the commander of the Government Guards.


1968–1974

In the first period we examined, the graph's structural properties did not significantly differ from the data of the entire period. In other words: by and large the first period determined the structure of the whole graph as well, since it was then that we could identify the most joint hunts.

In this period there were 63 actors who participated in a joint hunt with somebody else, and there were 268 edges between them. The graph's density was 0.14, the average shortest path 2.27, the diameter 5, the clustering coefficient 0.19.

On the basis of the degrees, Cseterki, Gergely and Timár were the most central actors and they were followed by Fock and Aczél. According to the indices of closeness and betweenness they were also the same hunters in the center. The Burt coefficient is the only to reveal significant divergences; based on this index, Kádár ranked third.

Diagram 7: 1968–1974 – strong blocks
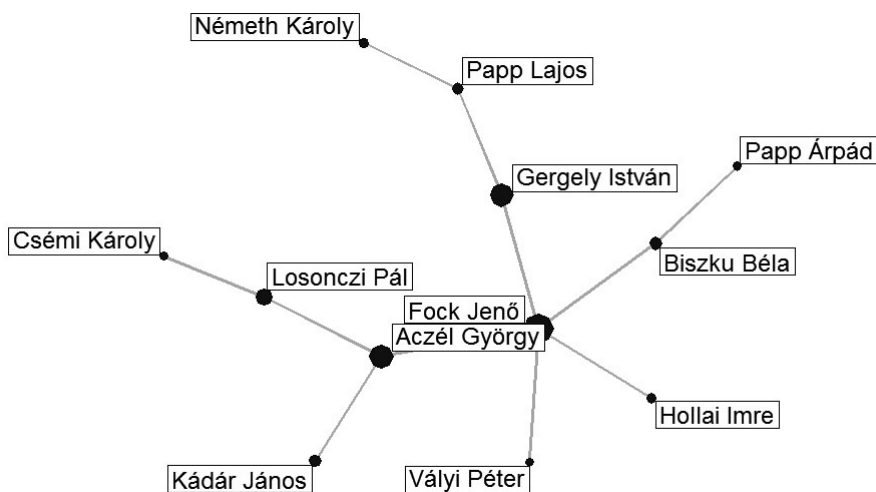
The presentation of the block with a stronger connection imparts further nuances to the previous results. In this graph, Jenő Fock, Prime Minister at that time, was an absolute central actor, while Timár and Cseterki, who hunted a lot do not even figure in the graph. Aczél, here too, assumes an important position, and it is only through him that Kádár is connected to the network.

1975–1979

The second period reveals major divergences in many aspects as compared to the first period.

The graph reveals a much more diluted structure than in the first period. In total there are 51 nodes and 81 edges integrated into the second period's network diagram. The graph's density is 0.06, with the average shortest path being 3.5, the diameter 8 and the clustering coefficient 0.08.

Ferenc Szűcs has the highest degree (8), he is followed by János Papp and György Oláh (7-7) and quite a lot of actors have six relations. The closeness index, however, draws new central positions, Richárd Nagy has the highest value; he is followed by György Oláh, György Lázár and Sándor Rácz. The appearance of Richárd Nagy is not surprising, since he became a member of the party's CC from 1975, just like Sándor Rácz. What is surprising though is the central position of György Oláh, since he was a member of the CC only until 1975 and retired in 1976. On the basis of these data, he kept part of his relationships in spite of his retirement. György Lázár's appearance in a central position was also expectable in light of the historical events. He was a CC member from 1970, and he became Prime Minister from 1975 (which he remained until 1987). Based on the betweenness indicator, Oláh and Nagy figure in the first two positions, while Ferenc Szűcs ranks 3. Szűcs was a member of the elite throughout the whole period; from 1962 he was deputy chief of staff of the army, but he only joined the CC in 1980. If we examine the strong block in this period (which only involved four actors!), he assumes a central position in connection with Kádár. By virtue of his position in the graph we can assume that his central role in the hunting network and his relation with Kádár adumbrates his subsequent important engagement. Based on the Burt coefficient, in addition to the previously cited actors, Lajos Papp (who received the lowest value) Lajos Lénárt and Antal Apró held a central position. Papp's and Lénárt's position is not evident, since none of them was a CC member. The former was, from 1970, the chairman of the Office for Local Councils, and the latter, after being Deputy Minister of Agriculture, was the manager of a large food company, Gabonatröszt ('Cereal Trust'). Apró was a PB member, from 1971 Chairman of the Parliament until 1984.

Diagram 8: 1975–1979 – Joint hunt graph
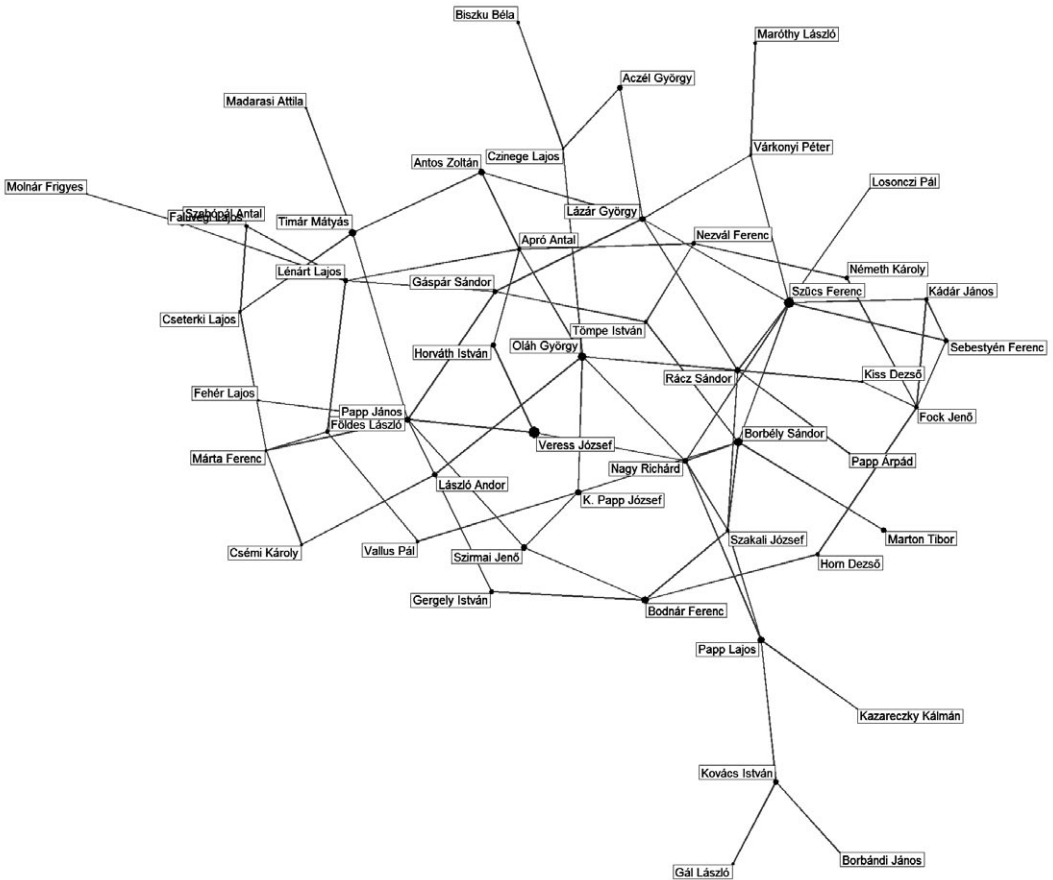
1980–1986

Given the graph's structural properties, the last period resembles the second period, but contains even less realized relations. To the 44 nodes only 65 edges are connected, and the density of the graph is 0.07. The diameter is 9, the average shortest path 3.7, and the clustering coefficient is 0.09.

Diagram 9: 1980–1986 – Joint hunt graph
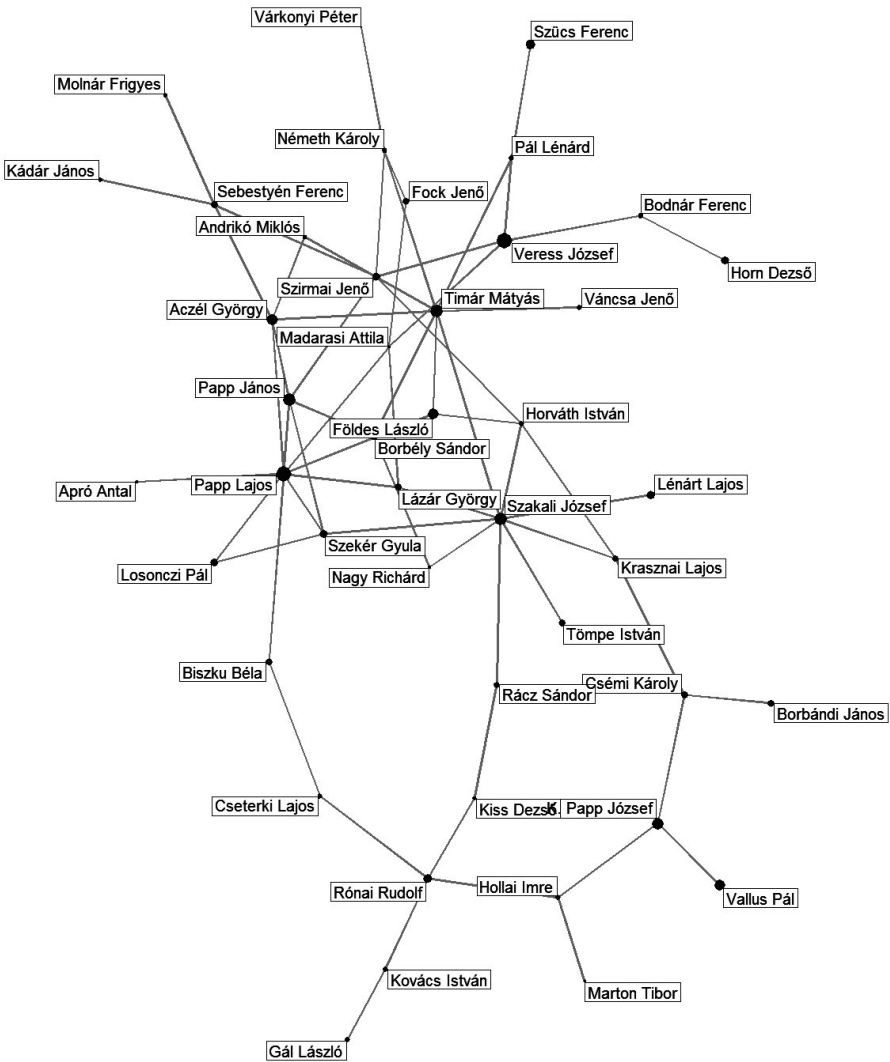
József Szakali hunted with the most people (11), Lajos Papp had 9 joint hunts, and Mátyás Timár 8. Szakali was a CC member from already 1975 until 1988. Papp Lajos was mentioned earlier. Timár was also an actor who, during the entire period, counted as one of the central figures of the elite; he joined the CC as early as the 1960's (and was a member until 1985). On the basis of the closeness indicator István Horváth assumed a central position in the hunting network (4. highest value) who, after taking the appropriate steps, entered the CC in 1980. An equally central role in the

graph was played by Jenő Szirmai who held no significant office after 1975. Accor-
ding to the betweenness indicator another important personality of the era was Jenő
Krasznai, whose career started ascending in the 1980's and who only entered the
CC in 1988, or Rudolf Rónai who returned from Helsinki in 1977 (he had been an
ambassador) and retired in 1981.

As the structural index of the graph shows, in the last decade of the system, hunts
did not play such a central role in the network of relationships. Important officers
were less likely to hunt together, while the less important actors of the party direc-
tion (in many cases pensioners) figured in the graph's important positions. How-
ever, some examples show that certain actors considered it useful for their career to
foster the strongest possible organic integration into the political elite by means of
hunting.

Comparison of the three periods and the role of particular participants in hunting

Previously, we repeatedly pointed out that structural characteristics of graphs chan-
ged during the three periods. We have synthesized the already presented data in the
following table.

Table 5: The characteristics of the graph

	Number of nodes	Number of edges	Diameter	Average shortest path	Density	Clustering coefficient
Whole period	74	397	5	2.13	0.15	0.21
1968–1974	63	268	5	2.27	0.14	0.19
1975–1979	51	81	8	3.50	0.06	0.09
1980–1986	44	65	9	3.70	0.07	0.09

The period indicated here does not cover the same number of years, and for this
reason the overall picture could be slightly deceiving. At the same time, there are
remarkable differences between them, which is certainly noteworthy. It was appa-
rently in the first period that the graph showed the highest density according to each
indicator, when the graph had the highest number of participants, its smallest dia-
meter and the average shortest path between the cases. The clustering coefficient
was also significantly higher than in the second and third periods. The differences
between the second and the third period, however, are not significant, but if we take

into consideration the third part being two years longer than the second, we can formulate a hypothesis about the gradual disappearance of the hunting events possibly being a sign of the political decay of the Kádár regime. Obviously, this was in connection with the fact that the power potential of certain central actors of politics such as Kádár or Jenő Fock was in decline by the end of the period. This was certainly true in the case of the latter already from the second half of the 1970's.

Using the centrality indicators calculated for the three periods, it was possible to classify the various "hunting" careers into different groups (clusters). We assume that this is partly an indicator of the changes in positions within the elite as well.

In each of the three periods the degree, the closeness, the betweenness, and the Burt coefficient were reduced to one variable by performing Principal Component analysis (the first principal component explained more than 80% of the variance of the 4 variables). Using these newly created three variables, we segmented the participants of the hunting events through cluster analysis. According to preliminary analyses a 7-cluster-solution proved to be the most stable and easily interpretable one. At the final clustering the K-means method was applied.

Based on the three variables the cluster centers were the following:

Table 6: Cluster structure

| | Final Cluster Centers | | | | | | |
	1	2	3	4	5	6	7
1968–74	−1.55	0.73	0.15	−1.56	−1.25	0.11	1.66
1975–79	1.03	0.68	1.17	−0.8	1.15	−0.82	0.19
1980–86	0.56	1.32	−0.30	0.24	3.32	−0.6	−0.44

The first cluster consisted of 6 persons.[32] They were unimportant participants in the first period, and became central though in the second and moderately so in the third period from the point of view of the network. From among the previously discussed people Richárd Nagy who like Sándor Rácz had become member of the CC in 1975, was one who became part of this cluster. The agents in this group can generally be claimed to have acquired influential positions within the political elite by the middle of the 1970's.

Eleven people were assigned to cluster two. They were key characters of the system during all the three periods and from the point of view of the hunting network they were always considered to be relatively active members. Among others, Aczél, Timár, Lajos Papp, János Pap and József Veres belonged to this group.

The third cluster consisted of twelve persons. They were seen as moderately active in the first period, and then assumed central roles in the second, while becoming

players of minor importance in the third one. These included, for example, György Oláh who retired in 1976, Béla Biszku, dismissed from his position as secretary of the CC in 1978, Prime Minister György Lázár ("promoted" to party deputy secretary general in 1987) and Sándor Gáspár and Lajos Czinege who got gradually set aside.

The nine members of cluster four never were central figures within the hunting network. Although they gained ever more prominence, even between 1980 and 1986 they only belonged to the moderately important figures. They were typically young, active politicians, none of whom managed to get, however, into the forefront of politics.

There was just one person who was part of cluster five, József Szakali, who never held any substantial political position. In the first period he was a figure with no significance in the graph, while in the second period he became an important actor, growing to become one of the strongest members of the network in the third period, presumably also because it was his function by then that might have left him the most amount of free time to hunt.

Cluster six is a broad group. With the exception of Pál Losonczi we cannot find anyone previously discussed here. Apart from Losonczi they were moderately prominent persons from the second line of politics during the first period, later becoming marginalized or even dropping out of the hunting network.

The seven members of cluster seven were all central figures, highly dominant in the network during the first period, but becoming more and more sidelined in the long run. Kádár, Fock, Gergely and Cseterki, among others, belonged to this group. It is also worthwhile taking a look at the nodes of the seven clusters on the hunting graph. In the middle of the network the members of cluster two are located, playing central roles throughout the entire era. Participants of cluster seven are represented in the middle of the net as well (in yellow). They were the most important hunters of the first period, but subsequently became less and less active. As the network of the whole era was mainly determined by the data of the first period, it was possible for them to lose importance over time and still maintain their positions in the middle of the graph. The members of cluster three also constitute a coherent block (in green); they are a bit more marginal than the characters in clusters two and seven, but they still are aggregated in the more prominent part of the graph. Some of them were the most influential in the 1970's, while others reached the peak of their careers in the period following 1975, and then got pushed aside more and more markedly by the end of the observed period. The remaining four clusters are located in different areas within the topology of the network, and their participants are not grouped close to each other. Thus, it is cluster two, three and seven, the members of which reflect similar network indicators, while at the same time they showed stronger interaction among each other.

Diagram 10: Figure of hunting in the whole era colored according to clusters[33]

clus1 – black
clus2 – red
clus3 – green
clus4 – blue
clus5 – cyan
clus6 – magenta
clus7 – yellow
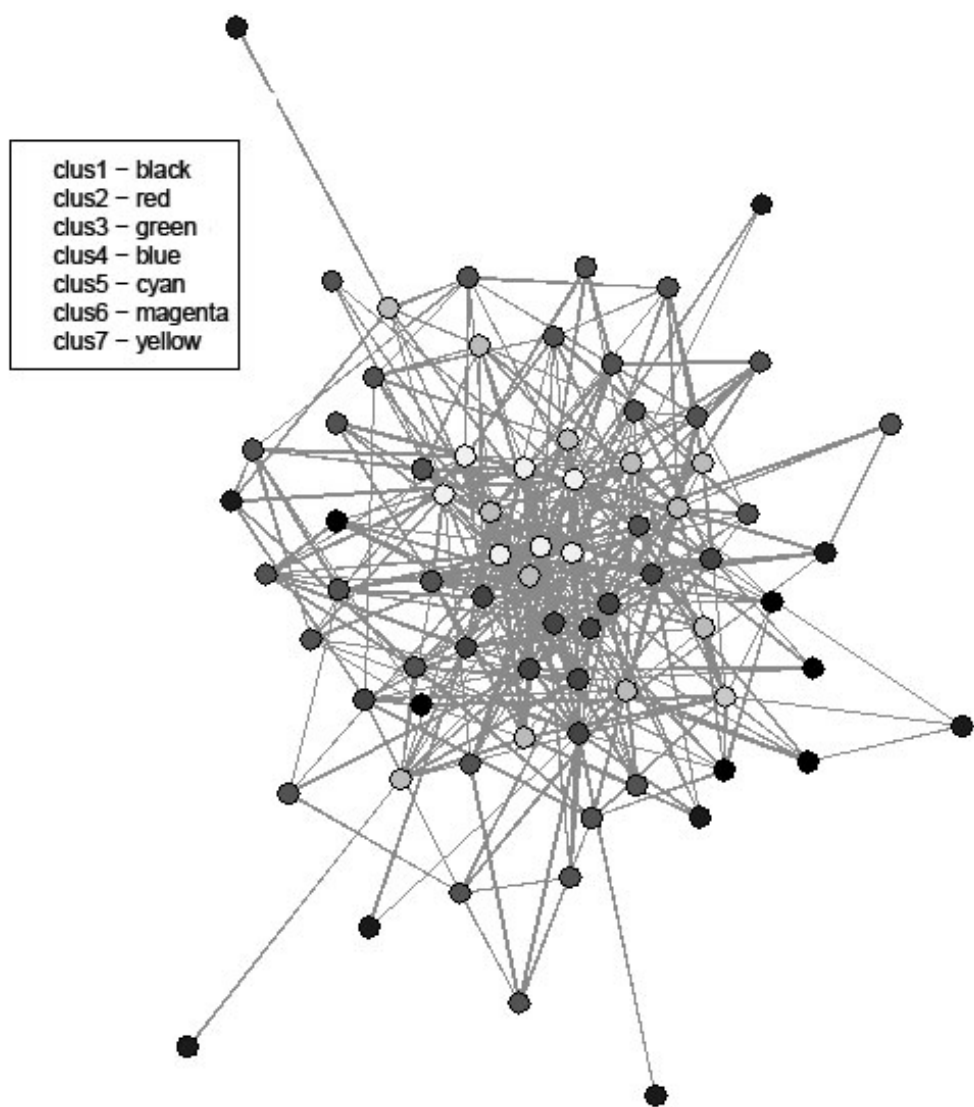
It is also worthwhile dedicating a bit of thought to those important figures of the hunting network who nevertheless hunted seldom, or to the actors who hunted a lot, yet still did not count as truly central actors.[34] As for the latter group, we need to mention two names: Pál Vallus who shot a relatively great number of game in Egyetértés but hardly made it into the network. He used to be a member of the National Game Farming and Hunting Council, as well as president of the National Association of Hungarian Hunters until 1990. It is the latter position which could have made him worthy of hunting in Egyetértés. The other person to highlight is József Veres whose role in the network was also not negligible, and yet despite the fact that he had a reputation of being one of the most active hunters after 1975, he participated in surprisingly few joint hunts. There are two different possible explanations for this: on the one hand, he no longer took active part in political life (even though he was a good friend of Kádár), which is why he did not need to build relationships through hunting.[35] On the other hand, as we already alluded to above, he retired relatively early, and thus had time for hunting even on weekdays. At the other end of the scale we find people with central positions in the network who weren't considered to be famous hunters. They can be the ones who indeed used hunting for relationship building. The three most important names from this group are Cseterki, Szakali and János Pap.

Structural characteristics of the network

In the last part of our study we examined the structural parameters and the sabotage tolerance of our network more specifically. The parameters have already been presented in detail, which will now be completed by comparing these characteristics with the parameters of several simulated networks with a structurally different topology. As simulated networks we used a random Erdős–Rényi-graph[36], a Barabási-type scale-free network with preferential linking[37], such as a small-world network of Watts–Strogartz[38]. In these networks the number of nodes and edges were set so as to match the data of the hunting graph of the whole period. In the case of simulated networks we generated bootstrap samples consisting of 1.000 elements. The following table presents the most important characteristics of the simulated networks.

Table 7: Characteristics of the simulated networks

		Minimum	Lower quartile	Median	Mean	Upper quartile	Maximum
Erdős–Rényi	Diameter	3	3	3	3.27	4	4
	Average shortest path	2	2	2	2	2.1	2.1
	Clust. Coeff	0.11	0.11	0.14	0.15	0.15	0.17
Barabási[39]	Diameter	3	3	3	3.4	4	5
	Average shortest path	1.9	1.9	2	2	2	2
	Clust. Coeff	0.06	0.11	0.13	0.12	0.14	0.19
Watts–Strogartz	Diameter	4	4	5	4.51	5	6
	Average shortest path	2.4	2.4	2.5	2.5	2.6	2.8
	Clust. Coeff	0.43	0.5	0.51	0.51	0.53	0.58

The diameter in the complete graph was five, which is closest to the Watts–Strogartz-type small-world network. The value of the average shortest path, however, is significantly lower than the value measured in small-world networks. The actually measured observed value is much closer to the ones of the network with preferential linking and that of the random network. By the same token, the clustering coefficient is significantly higher than in the preferential or random graphs, not even reaching half of the clustering coefficient of small-world networks. Consequently, the hunting network does not look like any of the simulated networks, exhibiting perhaps mostly small-world characteristics.

The last aspect of our graph that we examined was the change in sabotage tolerance during the three periods. By sabotage tolerance we mean that some nodes get deleted from the network randomly or in a directed (targeted) way using particular centrality indicators. We then investigate the probability of the disintegration of the network (the probability of its consistency ceasing).

As the three periods showed different numbers of cases, we tested the probability of the consistency of our graph deleting 10% of the nodes. Accordingly, we deleted

six nodes from the graph of the first period, five from the one of the second and four from the graph of the third period. For targeted attack we used the betweenness indicator, the probability, based on which cases got eliminated from the graph, was calculated from that indicator. 1.000 bootstrap simulations were performed in this case as well.

Table 8: Sabotage tolerance of the graphs

	Probability of the consistency of the graph	Upper confidence interval	Lower confidence interval
1968–74 undirected	68.7%	71.6%	65.8%
1968–74 targeted	36.5%	39.5%	33.5%
1975–79 undirected	29.9%	32.8%	27.0%
1975–79 targeted	1.2%	1.9%	0.5%
1980–86 undirected	24.9%	27.6%	22.2%
1980–86 targeted	1.3%	2.0%	0.6%

The results confirmed our expectations. The targeted attack in all of the three periods decreased the consistency of the graph, practically reducing it to zero in the second and the third periods. From the perspective of random perturbations, however, the graph of the first period seems robust. Random perturbations basically offer a model for the possible outcomes of the system in the case of a scenario of permanently losing some of its leaders due to sickness or an accident. It was also in the first period that the graph showed the strongest sabotage tolerance against targeted attacks, which was partly predicted by the higher values of the clustering coefficient and the density indicator. The second and third periods did not show significant differences concerning sabotage tolerance. This further supports our hypothesis that hunting played the most important role in the first period, between 1968 and 1974. Hunting here fulfilled a significant function within the elite; the graph is highly clustered and is not organized around some major figures, although in the center we can find the most dominant figures of the era. In the period following 1975 the hunting network became much less dense. By eliminating some of the leading actors it could be practically split into subgraphs.

Summary

Hunting played a prominent role in the life of the political elite of the Kádár era; besides recreation, it also provided an excellent opportunity for relationship building. In our study we set out to identify certain features of power dynamics, as well as structural characteristics of the system based on the trophy presentation lists of one of the most remarkable hunting associations of the era, Egyetértés, founded exclusively for the members of the political elite.

The results confirmed our initial hypotheses suggesting that a reflection of the slow decomposition of the system could be observed through the hunting customs. Over time the leading political members of the hunting association Egyetértés hunted less and less together, with the network of joint hunting collaterally losing its density, showing a diminished clustering coefficient and sabotage tolerance. Signs of the decay of the system were clearly reflected by hunting customs and the hunting network.

Nevertheless, the data demonstrate more than that: they mark the actors' informal position within the power structure, while at the same time outlining the path of power dynamics of the given figures. Of course, our database does not allow us to decide whether hunting in the association meant being a prominent decision maker. It did, however, certainly mean that hunting provided participants with a guarantee for not getting pushed out of the inner circles. The case of József Veres serves as a representative example: he retired relatively early, but by maintaining a personal relationship with Kádár he was able to remain in the system, even though he ceased to be a major figure from the point of view of centrality. However, dropping out of the power elite did result in disappearing from the hunting graph, as the case of Jenő Fock, who became marginalized after 1975, demonstrates this. The data also delimit a group of persons preserving their central role throughout the whole era, led by György Aczél.

We could certainly gain a more complete picture of the era if we considered further databases suitable for social network analysis. It would be exceptionally interesting, for instance, to investigate the hunting association of the Ministry of Defense. We could obtain similarly intriguing data by processing the guest lists of party and government resorts. However, we do not have access to these databases at present. In our further research we will make an attempt to collect and process the available data, as well as to extend the methodology of social network analysis to a wider range of the socialist era elite. We believe that the network approach, apart from supporting our previously existing information in the majority of cases, also enables us to explore yet unknown connections, thus giving new impetus to historical research.

Annex

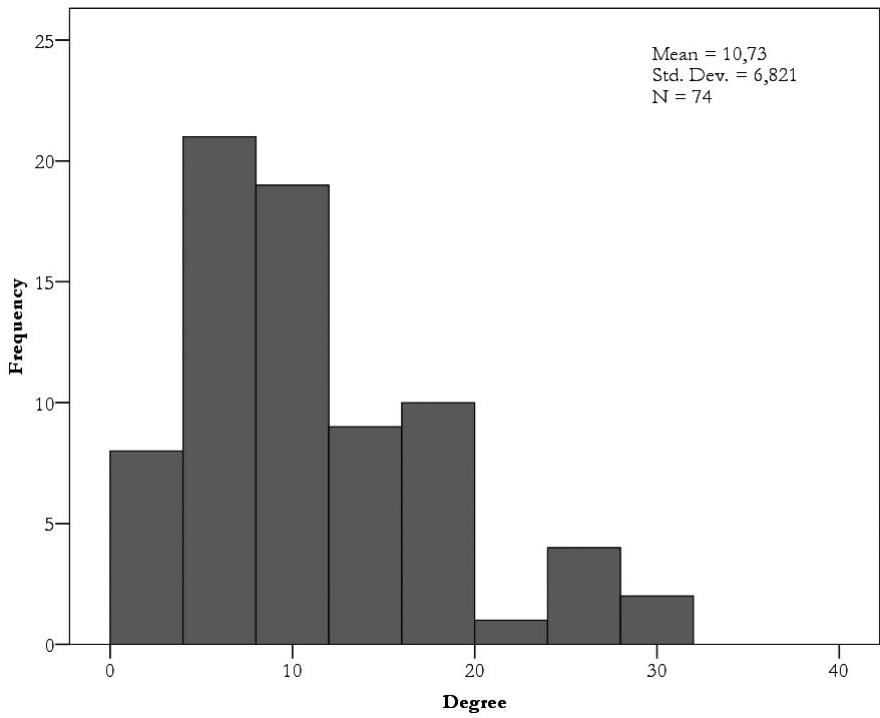*Diagram 11: Edge distribution of the entire period*

Table 9: The actors' position in the network and their cluster classification

	Entire period		1968–1974		1975–1979		1980–1986		
	Degree	Close-ness	Degree	Close-ness	Degree	Close-ness	Degree	Close-ness	Cluster
Aczél, György	23	0.57	18	0.55	2	0.29	5	0.34	2
Andrikó, Miklós	2	0.40	0	0.00	0	0.00	2	0.30	4
Antos, Zoltán	19	0.53	16	0.53	3	0.33	0	0.00	7
Apró, Antal	12	0.51	7	0.44	5	0.35	1	0.27	3
Balassa, Gyula	5	0.45	5	0.45	0	0.00	0	0.00	6
Bálint, József	7	0.44	6	0.43	0	0.00	0	0.00	6
Biszku, Béla	10	0.50	7	0.45	1	0.23	2	0.30	6
Bodnár, Ferenc	10	0.50	5	0.43	4	0.31	2	0.24	3
Borbándi, János	11	0.49	9	0.47	1	0.20	1	0.22	6
Borbély, Sándor	8	0.47	0	0.00	6	0.36	3	0.30	1
Czinege, Lajos	7	0.45	4	0.41	3	0.29	0	0.00	3
Csémi, Károly	14	0.53	9	0.47	2	0.26	3	0.28	2
Cseterki, Lajos	28	0.59	24	0.57	3	0.25	2	0.26	7
Dégen, Imre	8	0.47	8	0.46	0	0.00	0	0.00	6
Faluvégi, Lajos	2	0.39	0	0.00	2	0.26	0	0.00	4
Fehér, Lajos	6	0.47	4	0.44	1	0.26	0	0.00	6
Fock, Jenő	26	0.56	20	0.55	6	0.27	2	0.27	7
Földes, László	15	0.52	9	0.47	3	0.28	3	0.34	2
Gábor, István	4	0.42	4	0.41	0	0.00	0	0.00	6
Gál, László	2	0.31	0	0.00	2	0.20	2	0.17	4
Gáspár, Sándor	14	0.53	12	0.50	4	0.36	0	0.00	3
Gergely, István	25	0.57	23	0.57	2	0.29	0	0.00	7
Guba, István	3	0.42	3	0.41	0	0.00	0	0.00	6
Hollai, Imre	11	0.50	7	0.45	0	0.00	3	0.22	6
Horn, Dezső	8	0.46	6	0.45	2	0.26	1	0.19	6

	Entire period		1968–1974		1975–1979		1980–1986		
	Degree	Close-ness	Degree	Close-ness	Degree	Close-ness	Degree	Close-ness	Cluster
Horváth, István	7	0.43	0	0.00	2	0.30	5	0.36	1
K. Papp, József	19	0.53	12	0.48	5	0.34	3	0.24	2
Kádár, János	17	0.53	15	0.53	3	0.29	1	0.23	7
Kazareczky, Kálmán	6	0.45	5	0.43	1	0.24	0	0.00	6
Kiss, Dezső	10	0.48	8	0.46	2	0.29	2	0.27	2
Kovács, István	8	0.46	3	0.42	4	0.24	3	0.21	3
Krasznai, Lajos	3	0.38	0	0.00	0	0.00	3	0.33	4
László, Andor	10	0.47	8	0.46	2	0.30	0	0.00	6
Lázár, György	14	0.52	8	0.44	6	0.38	3	0.34	3
Lénárt, Lajos	13	0.50	7	0.44	5	0.32	1	0.28	3
Losonczi, Pál	17	0.51	16	0.49	1	0.27	2	0.29	6
Madarasi, Attila	5	0.45	0	0.00	1	0.23	4	0.33	4
Marjai, József	7	0.47	7	0.46	0	0.00	0	0.00	6
Maróthy, László	1	0.33	0	0.00	1	0.24	0	0.00	4
Márta, Ferenc	4	0.42	0	0.00	4	0.29	0	0.00	1
Marton, Tibor	6	0.41	4	0.36	1	0.27	1	0.18	6
Molnár, Frigyes	10	0.46	8	0.44	1	0.20	1	0.23	6
Nagy, Richárd	8	0.46	1	0.34	6	0.39	3	0.29	1
Németh, Ferenc	4	0.42	4	0.41	0	0.00	0	0.00	6
Németh, Károly	16	0.53	11	0.48	2	0.26	4	0.31	2
Némethy, Béla	3	0.39	3	0.38	0	0.00	0	0.00	6
Nezvál, Ferenc	10	0.48	7	0.45	3	0.30	0	0.00	3
Oláh, György	13	0.49	6	0.40	7	0.38	0	0.00	3
Pál, Lénárd	5	0.46	2	0.37	0	0.00	3	0.30	4
Pap, János	24	0.56	13	0.49	7	0.35	5	0.34	2
Papp, Árpád	7	0.42	6	0.41	1	0.27	0	0.00	6
Papp, Lajos	24	0.57	12	0.50	4	0.31	9	0.36	2

	Entire period		1968–1974		1975–1979		1980–1986		Cluster
	Degree	Close-ness	Degree	Close-ness	Degree	Close-ness	Degree	Close-ness	
Pataki, László	5	0.45	5	0.45	0	0.00	0	0.00	6
Rácz, Sándor	8	0.45	1	0.32	6	0.38	2	0.31	1
Rónai, Rudolf	6	0.43	1	0.29	0	0.00	4	0.26	4
Sebestyén, Ferenc	7	0.45	0	0.00	4	0.29	4	0.29	1
Somi, Benjamin	10	0.47	10	0.48	0	0.00	0	0.00	6
Szabó, Zoltán	18	0.53	18	0.53	0	0.00	0	0.00	7
Szabópál, Antal	15	0.51	13	0.50	2	0.25	0	0.00	7
Szakali, József	16	0.48	1	0.27	5	0.34	11	0.39	5
Szekér, Gyula	11	0.50	7	0.45	0	0.00	4	0.34	6
Szénási, Géza	7	0.45	7	0.45	0	0.00	0	0.00	6
Szirmai, Jenő	17	0.54	9	0.47	3	0.32	5	0.35	2
Szücs, Ferenc	19	0.54	14	0.51	8	0.37	1	0.23	3
Timár, Mátyás	30	0.59	21	0.56	4	0.30	8	0.38	2
Tolnai, Ferenc	8	0.46	8	0.46	0	0.00	0	0.00	6
Tóth, Sándor	4	0.40	4	0.39	0	0.00	0	0.00	6
Tömpe, István	10	0.48	7	0.43	3	0.33	1	0.28	3
Vallus, Pál	6	0.44	4	0.42	2	0.28	1	0.19	6
Vályi, Péter	8	0.47	8	0.46	0	0.00	0	0.00	6
Váncsa, Jenő	1	0.37	0	0.00	0	0.00	1	0.28	4
Várkonyi, Péter	12	0.48	9	0.45	3	0.31	1	0.24	3
Veres, József	19	0.56	13	0.52	3	0.34	4	0.30	2
Zoltán, János	6	0.42	6	0.39	0	0.00	0	0.00	6

Essential Data about the Most Prominent Actors

Aczél, György (1917–1991); originally a builder by trade. He joined the illegal communist party in 1935. A party worker between 1945–49, a leader party secretary of Zemplén County, later of Baranya County. He was sentenced in a show trial to imprisonment in 1949. He was released and rehabilitated in 1954. Member of the Central Committee (CC) of the Hungarian Socialist Workers' Party (HSWP): 1956–89, responsible for the cultural area between 1967–74 and 1982–85, member of the Politburo (PB): 1970–88. Deputy Minister of Culture: 1957–67, Deputy Prime Minister: 1974–82. Head of the Social Studies Institute of the HSWP: 1985–89. Member of Parliament: 1947–49, 1958–67, 1971–90. The most important leader of the cultural policy of the Kádár era.

Antos, Zoltán; chairman of the State Office of Survey and Cartography, member of the executive committee of the National Association of Hungarian Hunters. He was the brother of István Antos, substitute member of CC: 1957–59, then member of it until his death in 1960, Deputy Minister of Finance: 1951–55 and 1956–57, Minister of Finance from 1957.

Apró, Antal (1913–1994); originally a house painter. He joined the illegal communist party in 1931. A party worker from 1945, member of the Central Board (CB) of the Hungarian Workers' Party (HWP), then of the CC of the HSWP: 1945–88, member of PB: 1946–80. Secretary General of the Central Council of the Hungarian Trade Unions (CCHTU): 1948–51. Minister of the Building Material Industry: 1952–53, then Deputy Prime Minister until 1956. Minister of Industry: 1956–57, then Deputy Prime Minister again until 1971. Member of Parliament from 1945, Chairman of the Parliament: 1971–84.

Biszku, Béla (1921–); originally a tool mechanic. He joined the illegal communist party in 1944. A party worker between 1945 and 1956, member of CC: 1956–85, then of PB: 1956–80. First secretary of the Budapest party committee: 1956–57, Minister of Interior: 1957–61, then Deputy Prime Minister till 1962. Secretary of the CC: 1962–78, until his retirement. Member of Parliament: 1958–71 and 1975–85.

Bodnár, Ferenc (1924–); originally an agricultural worker. He joined the communist party in 1945. District secretary of the party, then head of department at the party committee of Borsod-Abaúj-Zemplén County: 1953–56. Deputy chairman of the County Council of Borsod-Abaúj-Zemplén: 1957–62. Secretary of the county party committee: 1962–63, first secretary: 1963–79. Member of CC: 1966–80. Member of Parliament: 1971–85.

Borbély, Sándor (1931–1998); originally a tool mechanic. Political worker of the Federation of Working Youth from 1950. Secretary of the CC of the Federation of the Communist Youth, Budapest secretary of the Federation of the Communist Youth: 1957–60. First Secretary of the party committee in district Csepel (district XXI, Budapest): 1966–70, party secretary of the Csepel Iron and Metal Works: 1970–75. Leader of the industry, agriculture and trade department of the CC: 1975–76, then secretary of the CC till 1980. National Commander of the Workers' Militia as major general, then lieutenant general: 1980–89. Substitute member of CC: 1957–62, regular member: 1970–89.

Czinege, Lajos (1924–1998); originally a smith. Political worker in the Hungarian army: 1951–54. Head of department of the CB from 1954. First secretary of the party committee of Szolnok County: 1957–60. Member of CC: 1959–88, substitute member of PB: 1961–70. Minister of Defense: 1960–84, ranked field marshal in 1978. Deputy Prime Minister: 1984–87. Member of Parliament: 1958–67.

Csémi, Károly (1922–1992); originally a miller. He joined the communist party in 1945. He became a professional soldier, head of department at the army academy: 1953–56, regimental commander of the armed force: 1956–57, then commander of the Zrínyi Miklós Military Academy: 1957–61. Higher unit commander: 1961–63. Chief of staff in the Hungarian army: 1963–73, Deputy Minister of Defense, then State Secretary of the Ministry of Defense: 1973–84, until his retirement. General from 1978. Member of CC: 1966–85.

Cseterki, Lajos (1921–1983); originally an elementary school teacher. He joined the communist party in 1944. Lecturer at the Academy of the Party: 1950–51, secretary general of the Teachers' Trade Union: 1951–53, secretary of the CCHTU until 1956. First secretary of the party committee of Fejér County: 1957–61, then of Borsod-Abaúj-Zemplén County until 1963. Member of CC: 1959–80, substitute member of PB: 1962–66, cultural secretary of the CC: 1963–67. Secretary of the Presidential Council 1967–78, until his retirement. Member of Parliament from 1958.

Fehér, Lajos (1917–1981); originally a secondary school teacher. He joined the illegal communist party in 1942. Deputy head of the state defense police in Budapest: 1945–47, then editor of the weekly Szabad Föld until 1954. Deputy chief editor of the Szabad Nép, the central newspaper of the HWP: 1954–55. Head of the Balaton-Nagyberek State Farm: 1955–56. Chief editor of the central newspaper of the HSWP, Népszabadság, in 1956. Substitute member of CB: 1954–56, member of CC from 1956, member of PB: 1956–75, head of the agricultural department of the CC: 1957–59, then its secretary: 1959–62. Deputy Prime Minister: 1962–74. Member of Parliament: 1950–53 and 1958–67. The agricultural policy of the 1960's is highlighted by his name.

Fock, Jenő (1916–2001); originally a technician. He was a member of the illegal communist party from 1932 and the social democratic party at the same time. A party worker after 1945, then ministry clerk. Deputy Minister of Metallurgy and the Machine Industry: 1951–54. Secretary of the CCHTU: 1955–57. Substitute member of CB in 1956, member of CC: 1956–89. Secretary of the economic policy of the CC: 1957–61. Member of PB: 1957–80. Deputy Prime Minister: from 1961, Prime Minister from 1967 until his retirement in 1975. Member of Parliament in 1945, then between 1958–67 and 1971–85.

Földes, László (1914–2000); originally a carpenter. He joined the illegal communist party in 1937. A party worker after 1945, deputy head of the cadre department of the CB from 1948. Party secretary of the newly built Sztálinváros: 1951-54, then of the Csepel Iron and Metal Works. Deputy Minister of Foreign Trade: 1955–56. Head of the cadre department of the CC: 1956–58, then Deputy Minister of Interior till 1964. Head of the National Forestry Directorate: 1964–67, then Deputy Minister of Food and Agriculture until 1971. Chief Executive of Hungexpo: 1972–81. Substitute member of CB in 1956, regular member of CC: 1956–70. Member of Parliament: 1948–67.

Gáspár, Sándor (1917–2002); originally a motor mechanic. He joined the social democratic party in 1936. Then, in 1945, he left it for the communist party. A party worker, official of the Iron Trade Union: 1947–51. General Secretary Deputy of CCHTU: 1952–56, then leader of this organization as chairman and general secretary until 1988. President of the World Federation of Trade Unions: 1978–89. Member of CB: 1946–56, then of the CC until 1988. Secretary responsible for the economic policy of the CC: 1961–62, besides, party secretary of Budapest (1959–61, 1962–65). Member of PB: 1962–88. Member of the Presidential Council: 1954–88, Vice-President of the Presidential Council from 1963.

Gergely, István (1930–1980) agronomist. Chief agronomist of the Tiszaszentimre State Farm, then of the Középtiszai State Farm: 1957–63. He joined the HSWP in 1956, official of the CC: 1963–65. Head of department at the Ministry of Cultivation: 1965–67, then Deputy Minister until 1972. First secretary of the party committee of Szolnok County: 1972–75, then Chairman with the rank of State Secretary of the National Water Conservation Office from 1975. Member of CC from 1975.

Horn, Dezső (1918–1987); originally a telephone mechanic. He joined the communist party in 1945. Trade Union official from 1947, secretary of CCHTU: 1951–53, then president of the Postmen's Trade Union until 1954, general secretary of it: 1956–59, then secretary of it again: 1959–62. Deputy Minister of Transport and Telecommunications: 1962–80 and Chief Executive of the Hungarian Post: 1967–80. Substitute member of CC: 1962–66.

Horváth István (1935–) lawyer, judge of the district court: 1958–59. Official of the party committee of Bács-Kiskun County from 1959, secretary: 1968–70. First secretary of the CC of the Federation of the Communist Youth: 1970–73. First secretary of the party committee of Bács-Kiskun County from 1973–80. Member of CC: 1970–89, secretary of it: 1985–87. Interior Minister: 1980–85, Deputy Prime Minister in 1987, then Interior Minister again: 1987–90. Member of Parliament: 1971–75, at the same time also a member of the Presidential Council.

K. Papp, József (1924–2002); originally a navvy. He joined the communist party in 1944. Official of the Ministry of Cultivation: 1950–54. Head of the Marxism Department of the Academy of Agriculture till 1957 in Mosonmagyaróvár. Secretary of the party committee of Mosonmagyaróvár: 1957–59, then of Győr-Sopron County until 1965. First secretary of the party committee of Tolna County: 1965–85. Member of Parliament: 1967–85.

Kádár, János (1912–1989); originally a typewriter mechanic. He joined the illegal communist party in 1931, member of CC from 1942, its secretary from 1943. Member of the CB, the PB and the Secretariat from 1945, deputy secretary general: 1946–51. Interior Minister: 1948–50, then head of department of the CB. Accused of false charges, sentenced in 1951, released in 1954, rehabilitated, became the secretary of the party committee in district XIII, Budapest. Then first secretary of the party com-

mittee of Pest County until 1956. He regained all his former party ranks in July 1956. During the revolution in 1956 the Soviet party leadership, having decided to intervene with their armed forces, made him leader of the newly formed communist party called HSWP. Member of the CC from 1956 till his death, of the PB and the Secretariat from 1956–88, also the first secretary of the party, general secretary: 1985–88. The entire political era was named after him. In 1988 he was placed in a position without real political power: namely, that of the president of the party. He resigned from this function in May 1989, after falling seriously ill. Prime Minister: 1956–58, then: 1961–65. Member of the government as Minister of State: 1958–61. Member of Parliament: 1945–51 and 1958–89. Member of the Presidential Council from 1965.

Kazareczky, Kálmán (1932–1994) economist. He joined the HWP in 1950. Official of the National Planning Office as deputy head of the agricultural department: 1954–64. Head of the Investment department of the Ministry of Cultivation: 1964–67, then Deputy Minister until 1975. Chief executive of the Agricultural Planning and Investing Firm: 1976–84, then of the Water Construction Trust.

Kiss, Dezső (1920–); originally a tool mechanic. He joined the social democratic party in 1938. He worked for the state defense police: 1945–46, then for the party committee of the Csepel Iron and Metal Works from 1948, party secretary there: 1951–52. Deputy head of the Budapest party committee: 1954–56, then first secretary of the party committee of Csepel (district XXI, Budapest). Party secretary of the Csepel Iron and Metal Works again: 1956–59. Second secretary of the Budapest party committee: 1959–61, then first secretary till 1962, again second secretary until 1963. Deputy Minister of Transport and Telecommunications: 1963–79. Member of CC: 1957–66. Member of Parliament: 1958–67.

Krasznai, Lajos (1938–). Worked as an engine fitter until 1964. He joined the HSWP in 1961. Official of the CC of the Federation of the Communist Youth from 1964, deputy head of department from 1967. Worked for the HSWP from 1974, first secretary of the district committee of Buda. Deputy head of the party and mass-organization department of the CC: 1982–85. First secretary of the party committee of Pest County: 1985–88. Deputy Minister of Defense: 1988–89, main political section head of the army as major general. Military attaché in Moscow: 1989–90, until his retirement. Member of CC: 1988–89.

Lázár, György (1924–); originally a technician. He joined the communist party in 1945. Worked for the National Planning Office from 1948, deputy head of it: 1958–70. Minister of Labour: 1970–73, then Deputy Prime Minister until 1975, and Chairman of the National Planning Office. Prime Minister: 1975–87. Member of CC: 1970–88, member of PB: 1975–88. Party deputy secretary general: 1987–88. Member of Parliament: 1975–88.

Lénárt, Lajos (1922–); originally a clerk. Chief executive of The Kaposvár Animal Trade Firm: 1950–51, Deputy head of the Budapest Animal Trade Trust: 1951–52. Head of department, then of main department of the Ministry for Collecting Agricultural Surplus Produce and Livestock from 1952. In 1963 he joined the HSWP. Deputy head of the main department of the Ministry of Food until 1967, from 1962 he is member of the National Game Farming and Hunting Council. Deputy Minister of Agriculture and Food: 1970–75, then leader of the Gabonatröszt ('Cereal Trust').

Losonczi, Pál (1919–2005); originally an agricultural worker, farmer. He joined the communist party in 1945. Leader of the co-operative farm in Barcs: 1948–60. From 1954 he is a substitute member of CB. Member of CC: 1957–89. Member of PB: 1975–87. Minister of Cultivation: 1960–67. Member of the Presidential Council: 1967–89, Chairman of the Presidential Council: 1967–87. Member of Parliament: 1953–89.

Nagy, Richárd (1928–2009); originally an electric mechanic. He joined the communist party in 1945. Party worker, journalist: 1954–57. Secretary of the CC of the Federation of the Communist Youth: 1957–59, Budapest first secretary of the committee of the Federation of the Communist Youth until 1965. Head of the agitprop department of the Budapest party committee: 1965–69. First secretary of the party committee of district VIII, Budapest: 1969–71, then secretary of the party committee of Budapest till 1974. President of Hungarian Television from 1974. Member of CC: 1975–85. Member of Parliament: 1963–75.

Németh, Károly (1922–2008); originally a butcher. After 1945 he was a communist party worker. First secretary of the party (HWP, then HSWP) committee of Csongrád County: 1954–60. In 1956 he is member of CB, then member of CC: 1957–88. Head of the agricultural department of the CC: 1959–63, CC agricultural secretary: 1962–65, CC economic policy secretary: 1974–78. First secretary of

the party committee of Budapest: 1960–74. Substitute member of PB: from 1966, then regular member: 1970–88. Party deputy secretary general: 1985–87. Chairman of the Presidential Council: 1987–88. Member of Parliament: 1958–88.

Nezvál, Ferenc (1909–1987); originally a shoemaker. He joined the illegal communist party in 1928. After 1945 he was a party worker, Deputy Mayor of Budapest from 1949 and vice-president of the council. Deputy Minister of Municipal and Communal Ministry: 1954–56-ig. Minister of Justice: 1956–66. Substitute member of CB: 1954–56, member of CC: 1957–66. Member of Parliament: 1949–85, member of the Presidential Council: 1951–56.

Oláh, György (1921–); originally an agricultural worker. He joined the communist party in 1945. President of the County Council of Szolnok: 1957–65, then first secretary of the party committee of Heves County until 1973. Deputy Minister of Interior as a lieutenant general: 1974–76, until his retirement. Member of CC: 1966–75, Member of Parliament: 1958–71.

Pap, János (1925–1994); originally a chemist technician. He joined the communist party in 1946. Party worker in Veszprém County: 1949–56. First secretary of the party committee of Veszprém County: 1957–61. Member of CC: 1959–85. Minister of Interior: 1961–63, Deputy Prime Minister until 1965. First secretary of the party committee of Veszprém County again: 1965–85. Member of Parliament: 1958–85.

Papp, Árpád (1927–1982); originally an electric mechanic. He joined the illegal communist party in 1942. Army officer: 1949–56. Took part in setting up the Workers' Militia: 1956–58. Works for CC: 1958–62. Commander of the Workers' Militia as major general: 1962–80. Substitute member of CC: 1962–66, regular member from 1966.

Papp, Lajos (1924–) economist. He joined the HWP in 1952. Head of sub-department in the Ministry of Cultivation: 1950–54. Head of the directorate of agricultural machine centre stations of Tolna County: 1955–57. Major section department head of the Ministry of Cultivation from 1957. President of the County Council of Borsod-Abaúj-Zemplén: 1963–68. Head of the department for local councils of the government: 1968–70, Chairman of the Office for Local Councils from 1970, from 1971 in a state secretarial rank. Member of Parliament: 1965–67.

Rácz, Sándor (1925–); originally a furnace man. He joined the communist party in 1945, party worker of the youth organization of the party. District party secretary from 1948, then works for the CC: 1951–58. Head of the state defense department of the Ministry of Interior: 1958–62, then major section deputy head of it. Head of the administrative department of the CC: 1962–66. Deputy Minister of Interior as major general: 1966–73, state secretary of it: 1973–74. Head of the administrative department of the CC again: 1974–83. Deputy Minister of Interior as lieutenant general: 1983–86, until his retirement. Member of CC: 1975–85.

Rónai, Rudolf (1921–); originally a printer, member of the social democratic party. Official of the Ministry of Interior and the Ministry of Defense: 1945–50 served as squadron commander. From 1950–54 he works for the Furniture Trading Company. From 1955 he is allowed to go back to aviation as a colonel leader of the chief administration: 1957–63. Deputy Minister of Transport and Telecommunications: 1963–67. From 1967 he is a civil servant of the Ministry of Foreign Affairs, Ambassador in Helsinki: 1975–77, then Head of the Cultural Relations Institute until his retirement in 1981.

Sebestyén, Ferenc (1923–2011); originally a shop assistant. He joined the communist party in 1946. Party official at companies and district party committees: 1949–54. District party committee secretary in Veszprém County from 1954, then secretary of the county party committee of Veszprém: 1955–56. Deputy Commissioner of the police force of Veszprém County: 1957–58, then chief commissioner. Commander of the Government Guards from 1958, from 1983 as a lieutenant general.

Szabó, Zoltán (1914–2007) medical doctor. He joined the communist party in 1947. University lecturer in Pécs: 1939–52, then in Budapest: 1959–63. General secretary of the Doctors' and Medical Workers' Trade Union: 1952–63, then president of it from 1986. Deputy Minister of Public Health: 1963–64, then Minister till 1974. Member of CC: 1962–75. General secretary of the Hungarians' World Federation: 1974–80.

Szabópál, Antal (1931–2009); originally a mason. He joined the social democratic party in 1947, then member of HWP. First secretary of the district party committee of Paks: 1951–57, then of Szekszárd till 1963. President of the County Council of Tolna from 1963 until his retirement as invalid in 1982.

Szakali, József (1925–2003); originally a worker. Party worker from 1945, First secretary of the Federation of Working Youth CB: 1953–56, member of HWP CB: 1954–56. First secretary of the party commit-

tee of Pest County: 1961–67, then of district X, Budapest. Chairman of the Central People's Control Commission as a State Secretary: 1977–86. Member of CC: 1975–88.

Szirmai, Jenő (1921–); originally a tailor. He joined the communist party in 1945. Party worker in the youth organization until 1948, then first secretary of the district party committee of Marcali: 1948–50. Official of the county party committee of Somogy: 1950–51, then first secretary of the district party committee of Fonyód. Head of department of the County Council of Somogy: 1952–53. Deputy head of the coal mine in Komló: 1953–56. First secretary of the county party committee of Somogy: 1956–62. President of the Federation of the Nationwide Co-operatives: 1962–68. Chief Executive of the National Savings Bank from 1968. Substitute member of CC: 1962–66, regular member till 1970. Member of Parliament: 1958–71.

Szűcs, Ferenc (1922–1999) army officer. Party worker of the National Peasants Party: 1945–48. Army officer from 1949, one of the chiefs of main staff of the Hungarian Army: 1957–61. Deputy chief of staff from 1962 as major general, then as lieutenant general from 1983 until his retirement in 1989. Member of the Council of the National Association of Hungarian Hunters from 1962. Member of CC: 1980–89. Member of Parliament: 1947–53.

Timár, Mátyás (1923–); originally a worker in the leather industry. Party worker from 1945, then official of the Ministry of Finance: 1949–55, head of department from 1952. Deputy Minister of Finance: 1955–57 and 1960–62 again. Minister of Finance 1962–67, Deputy Prime Minister: 1967–75. Member of CC: 1966–85. Chairman of the National Bank: 1975–88.

Tömpe, István (1909–1988); originally an upholsterer. He joined the illegal communist party in 1928, volunteered in the Spanish civil war. Head of main department of the Ministry of Interior: 1948–49, head of department of the Ministry of Cultivation: 1949–50. Head of the chief administration of forests until 1956. Deputy Minister of Interior: 1956–58, then of Cultivation until 1962. Member of CC from 1956. President of the Hungarian Radio and Television from 1962, President of the Hungarian State Radio and Television Committee: 1974–83, till his retirement. Member of Parliament: 1958–67.

Vallus, Pál: Vice-President of the Price Control Office in 1962, member of the National Game Farming and Hunting Council, President of the National Association of Hungarian Hunters until 1990.

Veres, József (1906–1993); originally a machine fitter. Party worker: 1945–48. Head of department of the Ministry of Interior: 1948–50, state secretary: 1950–51, Deputy Minister in 1951. Imprisoned after a show trial in 1951, released in 1954, rehabilitated in 1956. First secretary of the party committee of district XX, Budapest: 1956–58. President of the Municipal Council of Budapest. Member of CC: 1959–89. Minister of Labour: 1963–70. Member of Parliament: 1945, 1949–51 and 1958–67.

Notes

1   Zoltán Kmetty received support from the TAMOP 4.2.1./B-09/1/KMR-2010-0003 grant for writing this study.
2   We acquired our data from the annual trophy exhibitions of the hunting association; our source will be presented below in detail.
3   György Majtényi, Az elit és a vadászat – újjáépítés és rendszerváltás között, in: György Majtényi/ Csaba Szabó, eds., Távolodás és közelítések. Rendszerváltás és a Kádár-korszak, Budapest 2008, 489–508; Id., K-vonal. Uralmi elit és luxus a szocializmusban, Budapest 2009; János Zoltán, Legenda és valóság. Az Egyetértés és a Zalka Máté Vadásztársaság története, Budapest 1996.
4   Berry Wellman/Charles Wetherell, Social Network Analysis of Historical Communities: Some Questions from the Present for the Past, in: The History of the Family 1/1 (1996), 97–121.
5   John F. Padgett/Christopher K. Ansell, Robust Action and the Rise of the Medici, 1400–1434, in: The American Journal of Sociology 98/6 (1993), 1259–1319.
6   Tünde Cserpes, Measuring Identity Change: Analyzing Fragments from the Diary of Sándor Károlyi with Social Network Analysis, in: European Review of History, Biographies and Identities 19/4 (2012). (Accepted.)

7   Fruzsina Albert/Beáta Dávid/Zsuzsanna Kőrösi, Kísérlet életútinterjúk kapcsolathálózati elemzésére, in: Évkönyv VIII, Budapest 2000, 323–338; Endre Sík, Aczélhálóban. Adalék a kapcsolati tőke működésének megértéséhez, in: Szociológiai Szemle, 2001/3, 64–77; Czerpes, Measuring.

8   Pierre Bourdieu, The Forms of Capital, in: John G. Richardson, ed., Handbook of Theory and Research in the Sociology of Education, New York/London 1986, 241-258; Ronald S. Burt, Structural holes: the Social structure of Competition, Cambridge MA 1992; Lynne McAllister/Claude S Fischer, A Procedure for Surveying Personal Networks, in: Sociological Methods Research 7 (1978), 131; Peter V. Marsden, Core Discussion Network of Americans, in: American Sociological Review 52/1 (1987), 122–131; Nan Lin/Mary Dumin, Access to Occupations through Social Ties, in: Social Networks 8 (1986), 365–385; Nan Lin/Bonnie H. Erikson, Social Capital. An International Research Program, Oxford 2008; Henk Flap, Social capital in the production of inequality. A review, in: Comparative Sociology of Family, Health, and Education 20 (1991), 6179–6202; Martin Van der Gaag, Measurement of individual Social Capital, Groeningen 2005.

9   Róbert Angelusz/Róbert Tardos, Társadalmak rejtett hálózata, Budapest 1991, 7.

10 The Parliament's mandate lasted initially four, from 1975 on five years. The parliamentary terms of that epoch were: 1953–1958 (because of the Revolution of 1956 the mandate was extended); 1958–1963; 1963–1967; 1967–1971; 1971–1975; 1975–1980; 1980–1985; 1985–1990.

11 Ignác Romsics, Magyarország története a XX. században, Budapest 1999, 338–340, István Vida, Az állami-politikai vezető réteg összetétele az 1980-as évek elején. Előadások a Történettudományi Intézetben 18, Budapest 1992, 5–6.

12 The party congresses of the period (in the numbering the congresses of the legal predecessors, the Party of Hungarian Communists, the Hungarian Communist Party and the HWP were also included): 1957: national party conference; 1959: VII. Congress; 1962: VIII. Congress; 1966: IX. Congress; 1970: X. Congress; 1975: XI. Congress; 1980: XII. Congress; 1985: XIII. Congress; 1987: national party conference; 1989: XIV. Congress.

13 Substitute members were elected to the CC for the last time at the VIII. Congress in 1962. Alternate members participated in the work of the PB until 1970.

14 Karola Némethné Vágyi et al., eds., A Magyar Szocialista Munkáspárt Központi Bizottságának 1957–1958. évi jegyzőkönyvei. A Magyar Országos Levéltár kiadványai II. Forráskiadványok 29, Budapest 1997, 7–23).

15 András Nyírő, ed., Segédkönyv a Politikai Bizottság tanulmányozásához, Budapest 1989, 9–28.

16 Zoltán, Legenda, 96–97.

17 The diagram "error bar" does not only reveal average data but also the confidence interval associated to the average which makes it possible to differentiate between the significant data.

18 Zoltán, Legenda, 14–18.

19 Ibid., 92.

20 The size of nodes in the network results from the number of game shot in the period, the size of edges results from the weighted probability of the connection between the nodes. For configuring the network we used the Fruchterman–Reingold-method Cf. Thomas M. J Fruchterman/Edward M. Reingold, Graph Drawing by Force-directed Placement, in: Software – Practice and Experience 21/11 (1991), 1129–1164..

21 Density of graph: number of possible edges divided by the number of realized edges.

22 Diameter: the shortest path between the two furthermost actors.

23 Shortest path: The minimum number of intermediate nodes you need to cross to get from one chosen node to another.

24 Clustering coefficient of graph: the indicator has several interpretations, in this treatise, we mean by this notion the proportion of triads (completely interconnected triple node-system).

25 About indicators see Stanley Wasserman/Katherine Faust, Social Network Analysis: Methods and Applications, Cambridge 1994.

26 Degree: number of edges per node.

27 Cf. Linton C. Freeman, Centrality in Social Networks I: Conceptual Clarification, in: Social Networks 1/3 (1979), 215–239. Mathematically this index number shows the normalized sum of the shortest paths from a point to all other nodes. As a value of the index we will get a number between 0 and 1; the higher it is, the more central actor is the person.

28 This index signals in how many per cent of the cases the shortest path between two arbitrarily chosen nodes runs through a given node.

29 Cf. Ronald S. Burt, Structural holes and good ideas, in: American Journal of Sociology 110 (2004), 349–399.This index reveals how much the ego is in a structural hole position, and how much its elimination would increase distances within the graph. It can assume values between 0 and 1; the less its value, the more important the role of the person from the point of view of the graph's connectivity.

30 Sík, Aczélhálóban.

31 Zoltán, Legenda, 9–10.

32 For the cluster classification of all participants see Annex.

33 Nodes and edges are represented without weights on the figure.

34 A Principal Component analysis was performed using the variables 'number of hunting relationships' and 'number of game shot'. The second principal component corresponded to the contrary of the two variables; those who hunted a lot got high scores but never became central figures of the network.

35 Zoltán, Legenda, 63.

36 Pál Erdős/Alfréd Rényi, On random graphs, in: Publicationes Mathematicae 6 (1959), 290–297.

37 Albert-László Barabási/Réka Albert, Emergence of scaling in random networks, in: Science 286 (1999), 509–512.

38 Duncan J. Watts/Steven H. Strogatz, Collective dynamics of 'small world' networks, in: Nature 393 (1998), 440–442.

39 With such a low number of nodes the scale-free network does not exhibit specific characteristics yet and it does not differ notably from random networks.