

# Getting rid of their ties: the long-term evolution of elite networks and profiles in the three largest Swiss cities, 1890-2020\*

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## *Abstract*

Recently, there has been a resurgence in prosopographical studies of (national) elites. In this paper, we complement this research with a long-term perspective on urban elites from different social spheres in three Swiss city-regions. City-regions are the main geographical hubs of power and the local level often serves as an entry point for accessing elite networks at larger scales. Assessing the evolution of local elite networks’ inclusiveness is thus crucial for our understanding of past and current inequalities and power structures. Using a positional approach, we identify academic, cultural, economic and political elites in Basel, Geneva, and Zurich from 1890 to 2020. In our analysis, we first assess elites’ multi-positionality in city-regional organizations. We observe a gradual disintegration of local elite networks over the course of the 20th century and their almost complete disappearance to the present day. In a second step, we present the profiles of the core elite, i.e. the 400 actors that hold positions in two social spheres at the same time. Old Swiss men form a rather cohesive and exclusive core elite throughout the period and descendants of patrician families dominate Basel and Geneva’s (but not Zurich’s) local networks until the beginning of the 20th century. These results have implications for our understanding of the functioning of local economies and for our conception of the local level as an entry point for newcomers to elite positions.

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In the last decade, there has been a resurgence of interest in elites, in part due to the “recent dramatic role played by elites in increasing inequality”.<sup>1</sup> Cities and city-regions are hotspots in this development. They are the focal points of elite (re)production and they are the geographical settings within which inequalities manifest themselves most visibly. More generally, city-regions are the main centres of economic, political, scientific, and cultural activity in post-industrial societies.<sup>2</sup>

So far, the analysis of elite networks and profiles has mainly focused on the national level. The urban dimension has received comparatively less attention – at least in recent decades.<sup>3</sup> Moreover, studies of elite networks and profiles have often focused on short time periods or on single time points.<sup>4</sup> Yet, long-term perspectives focusing on the local level are important for our understanding of inequality and access to privileged positions. Especially in decentralized countries, the local level serves as an important entry point for careers in different spheres and for the access to elite positions at higher spatial scales. Moreover, a long-term perspective allows to assess whether the promises of a more democratic access to elite positions have been realized.

In this paper, we contribute to these research gaps by studying local elite networks in the three largest Swiss city-regions from 1890 to 2020. We ask i.) how local elite networks evolve in a long-term perspective from the end of the 19<sup>th</sup> century to the present day and we assess ii.) how the profiles of the most connected individuals in these networks change.

Switzerland is a rather specific case for studying elites. It is a highly decentralized country where the different regions were connected in a rather loose way until the end of the ancien régime. Moreover, its democratization and the introduction of mass suffrage – for the male population – took place early on. It is the only European country, where the 1848 revolutions led to the establishment of a democratic regime.

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<sup>1</sup> *Shamus Khan*, The Sociology of Elites, in: *Annual Review of Sociology* 38, 2012, pp. 361-377, here: p. 362.

<sup>2</sup> *Bas Van Heur/David Bassens*, An Urban Studies Approach to Elites: Nurturing Conceptual Rigor and Methodological Pluralism, in: *Urban Geography* 40, 2019, pp. 591-603, here: p. 592.

<sup>3</sup> Notable exceptions on the study of urban elites come from the US context in the 1960s and have triggered the “community-power” debate, see *Floyd Hunter*, *Community Power Structure: A Study of Decision Makers*, Chapel Hill 1953; *Robert Dahl*, *Who Governs? Democracy and Power in an American City*, New Haven 1961. Yet, these studies are primarily interested in policy networks and in identifying those making or influencing political decisions and less in the background of urban elites from a sociological perspective.

<sup>4</sup> *Johs Hjellbrekke/Brigitte Le Roux/Olav Korsnes et al.*, The Norwegian Field of Power Anno 2000, in: *European Societies* 9, 2007, pp. 245-273; *Felix Bühlmann/Thomas David/André Mach*, The Swiss Business Elite (1980-2020): How the Changing Composition of the Elite Explains the Decline of the Swiss Company Network, in: *Economy and Society* 41, 2012, pp. 199-226; *Jacob Lunding/Christoph Ellersgaard/Anton Larsen*, The Established and the Delegated: The Division of Labour of Domination among Effective Agents on the Field of Power in Denmark, in: *Sociology*, forthcoming.

The national elite in the new federal state was composed of both old elites from patrician families that were already powerful at the local level and new elites that rose to positions of power only after the turn of the 18<sup>th</sup> century.<sup>5</sup> Yet, a typicality of the Swiss elite is that they cumulated positions of power in different spheres, particularly in the economic and the political sphere, but also in the societal or cultural sphere. There was less differentiation and specialization across different spheres than in other countries, partly due to the principle of “militia” applied in the army and in politics, where such public tasks were performed by elites besides their main professional occupation. In the 20<sup>th</sup> century, this led to the emergence of a small, highly homogeneous and cohesive, “power elite” – male lawyers belonging to the political right and having achieved officer ranks in the Swiss military – that held the most important positions in the Swiss system in the middle of the 20<sup>th</sup> century.<sup>6</sup> These dense and closed elite networks reached their strongest cohesion in the 1970s and 1980s and then gradually started to decline as a result of internationalization and globalization processes in the business sector.<sup>7</sup>

It is an open question whether we find a similarly homogeneous and cohesive core elite in the three city-regions under scrutiny here and whether the cohesiveness of the elite networks in Swiss cities follows similar trajectories as the one at the national level. One can expect that local elites were more cohesive and integrated at the beginning of the period under scrutiny. The federal state was still in a process of integration at the end of the 19<sup>th</sup> century, whereas power relations at the local level were long established, especially so in the three city-regions that we analyse here, which have been important centres of power for centuries. We expect that local networks become continuously less integrated during the 20<sup>th</sup> century. In the beginning of the 20<sup>th</sup> century a decline of local networks might result from a shift of elites’ attention to the national level and at the end of the 20<sup>th</sup> century, local networks might be subject to the same internationalization and globalization processes as the national elite network.

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<sup>5</sup> *Mario König*, Bürger, Bauern, Angestellte, alte und neue Eliten in der sozialen Schichtung, in: *traverse* 18, 2011, pp. 104-136. The ascendance of new elites to powerful positions in the federal state was facilitated by the fact that some of the newly created cantons used to be subject territories of old cantons in the ancien régime. In these formerly subject territories, no old elite existed as it did in the old cantons. The representatives of the new cantons at the national level thus constituted a new elite that was competing and integrating with the old one (*ibid.* p. 123).

<sup>6</sup> *C. Wright Mills*, *The Power Elite*, New York 1956; *Hanspeter Kriesi*, *Entscheidungsstrukturen und Entscheidungsprozesse in der Schweizer Politik*, Frankfurt am Main 1980; *André Mach/Thomas David/Stéphanie Ginalschi et al.*, *Les élites économiques suisses au XXe siècle*, Neuchâtel 2016.

<sup>7</sup> See *William Carroll/Meindert Fennema*, *Is There a Transnational Business Community?*, in: *International Sociology* 17, 2002, pp. 393-419; *Gerhard Schnyder/Martin Lüpfold/André Mach et al.*, *The Rise and Decline of the Swiss Company Network During the 20th Century*, in: *Travaux de Science Politique* 22, 2005, and *Thomas David/André Mach/Martin Lüpfold et al.*, *De la “Forteresse des Alpes” à la valeur actionnariale. Histoire de la gouvernance d’entreprise en Suisse (1880-2010)*. Zurich 2015.

We proceed with our analysis in several steps. After a description of our data, a more detailed discussion of the city-regions of Basel, Geneva, and Zurich, and a brief discussion of the methods employed, we present the evolution of local elite networks over time. We then provide a short collective biography of the core of the local elite with a focus on core socio-demographic characteristics as well as their national and local origin. We conclude by proposing three phases of local elite evolution in Swiss city-regions.

## 1 Analysing Elites in Three Swiss City-regions, 1890-2020

This study is based on the elites of Basel, Geneva and Zurich. Adopting a local perspective is especially relevant as Switzerland is characterized by a weak federal state and remains by far the most decentralized political system in Western Europe in terms of taxation, regional infrastructures, or higher education. Swiss political and administrative structures endow local and regional authorities with significant leverage. Furthermore, economic development has revolved around regional specializations such as textiles in Eastern Switzerland, financial sector and machine-making in Zurich, private banking – and more recently the luxury watch industry – in Geneva, or the chemical and pharmaceutical industry in Basel. This polycentric configuration underscores the existence of connected, but distinct, local elites and systems of governance that contributed to the consolidation of successful “economic locations”. The three city-regions are the most populated regions of the country, rank among the most prosperous, and are characterized by their high degree of internationalization in terms of foreign population, economic activities, and cultural diversity.

Several authors have shown that until the end of the 19th century local patrician families played a crucial role in urban economic, political, cultural, and scientific development.<sup>8</sup> The *Daig* in Basel, the private bankers’ families of Geneva as well as the industrial dynasties of Zurich were very influential. Indeed, even after the formal democratisation of access to communal and cantonal authorities during the 19th century, old patrician families as well as the new rising bourgeoisie continued to monopolise local positions of power, particularly in the political and economic spheres.

The importance of local patrician families has evolved over time and can be traced back historically. In the 17<sup>th</sup> and 18<sup>th</sup> century wealthy merchants formed an increasingly exclusive

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<sup>8</sup> *Albert Tanner*, *Arbeitsame Patrioten – wohlständige Damen. Bürgertum und Bürgerlichkeit in der Schweiz 1830-1914*. Zurich 1995; *Philipp Sarasin*, *Stadt der Bürger. Bürgerliche Macht und städtische Gesellschaft Basel 1846-1914*, Göttingen 1997; *Olivier Perroux*, *Tradition, vocation et progrès. Les élites bourgeoises de Genève (1814-1914)*, Geneva 2006; *Alexis Schwarzenbach*, *Maman, tu dois lire mon livre. Annemarie Schwarzenbach, sa mère et sa grand-mère*, Geneva 2007.

patriciate that government the cities.<sup>9</sup> With the end of the ancien régime at the turn of the 18<sup>th</sup> century and certainly after the restauration period in 1830, these patrician families lost their formal prerogatives in the political control of the cities and their surrounding areas. An important question – in the light of more democratic access to elite positions – thus concerns the longevity of these patrician families in positions of power. Studies of the Dutch elite in the 20<sup>th</sup> century have shown that – despite having lost their formal prerogatives in the state in the 19<sup>th</sup> century – descendants from noble families continue to occupy important positions among the Dutch elite.<sup>10</sup> Can we still find a significant number of descendants of these patrician families in local positions of power in the three city-regions – even two centuries after they have lost their formal privileges?

Importantly, it can also be pointed out that new elites emerged during the 20<sup>th</sup> century. In the political sphere, the left occasionally managed to come to power and overthrow the majority at the cantonal or communal level in Basel, Geneva, and Zurich in the first half of the 20<sup>th</sup> century. The second half of the 20<sup>th</sup> century was marked by women’s accession to certain positions of power. They obtained the right to vote and stand for election in 1960 in Geneva, in 1966 in Basel, and in 1970 in Zurich. However, in the economic sphere they remain rather marginal to the present day.<sup>11</sup>

An important difference between the three city-regions is that Zurich can be considered a “territorial state” whereas the other two are “city states”. In the 19<sup>th</sup> century, the city elite was challenged by countryside elites in Zurich. This conflict resulted in the introduction of a new constitution in 1869, that included direct-democratic procedures, and to the abolition of the liberal-conservative dominance – the city-elite – and bigger participation of the “democrats” – the countryside opposition – in politics at the cantonal level. Moreover, Zurich’s cantonal territory includes a second important economic centre with its own patriciate, the city of Winterthur, which is also the sixth largest city in the country. In Basel and Geneva, patrician families did not have to compete with a countryside elite and were able to retain their power throughout the 19<sup>th</sup> century.<sup>12</sup> In sum, the three city-regions represent the most important

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<sup>9</sup> Daniel Schläppi, Patriziat, in: Historisches Lexikon der Schweiz, URL: <<https://hls-dhs-dss.ch/de/articles/016374/2010-09-27/>> [10.10.2020].

<sup>10</sup> Jaap Dronkers, Has the Dutch Nobility Retained its Social Status Relevance during the 20th Century?, in: European Sociological Review 19, 2003, pp. 81-96; Huibert Schijf/Jaap Dronkers/Jennifer Van den Broeke-George, Recruitment of Members of Dutch Noble and High-Bourgeois Families to Elite Positions in the 20th Century, in: Social Science Information 43, 2004, pp. 435-475.

<sup>11</sup> Stéphanie Ginalska, Les femmes à la tête des grandes entreprises suisses: une analyse historique des inégalités de genre. Social Change in Switzerland 7, 2016, doi: 10.22019/SC-2016-00007.

<sup>12</sup> Sarasin, Stadt der Bürger, p. 11.

economic hubs of the decentralized Swiss system – each with its specific economic sectors and organization of territory and politics.

## 1.1 Data

To document the long-term evolution of city-regional networks among elites of different social spheres, we have constructed a systematic database of local elites from 1890 until 2020. Based on positional criteria, the database includes all individuals holding leading positions in the major academic, cultural, economic, and political institutions of the three city-regions. For these local institutions, we gathered information on for seven benchmark years: 1890, 1910, 1937, 1957, 1980, 2000 and 2020. To build this database on local elites, we could partly rely on a database on Swiss *national* elites in the context of the Swiss Elite Observatory<sup>13</sup>.

For the economic sphere, we considered the regional chambers of commerce, as well as the most important companies of the leading economic sectors. This involved all the major banks (large universal banks, private banks and public owned banks) and insurance companies for the financial sector; for Basel, all the major textile (until 1937) and chemical-pharmaceutical companies; for Geneva, the major watch-making companies, as well as a few other industrial companies; and for Zurich, all the major companies from the machine industry. The total number of companies varies from 49 in 1890 to 35 in 2020. The smaller sample for the recent period is due to the strong concentration process in all economic sectors, because of mergers and acquisitions or bankruptcies. For all these companies, we included the CEO/General director and all the members of the boards of directors (BoDs) in the database.

*Table 1. Sample size by city-region and benchmark year*

	1890	1910	1937	1957	1980	2000	2020	Total
Basel	296 (381)	372 (432)	387 (455)	398 (473)	348 (440)	347 (411)	326 (348)	2474 (2810)
Geneva	272 (353)	307 (370)	343 (407)	422 (493)	410 (483)	464 (515)	471 (487)	2689 (2942)
Zurich	536 (643)	574 (701)	576 (695)	606 (744)	601 (729)	594 (668)	621 (630)	4108 (4636)
Total	1098 (1357)	1245 (1483)	1291 (1521)	1403 (1647)	1321 (1538)	1378 (1536)	1407 (1442)	9134 (10058)

*Note.* N individuals and N mandates (in parentheses). The column total for the individuals can be smaller than the addition of the different lines since some individuals can occupy positions in different city-regions in the same benchmark year.

For the political sphere, we included all the members of the cantonal (regional) and local (communal) parliaments and governments for Geneva and Zurich. In Basel, where the city's

<sup>13</sup> OBELIS, see URL: <<https://www.unil.ch/obelis/fr/home.html>> [05.01.2021].

territory fully coincides with the canton, only the members of the cantonal parliament and government were included. For the academic sphere, all full and associate professors have been included in the database up to the benchmark year of 1957 and a selection of professors (based on institutional and scientific criteria) for the benchmark years 1980, 2000 and 2020. Finally, we also included all the committee members of the three cities' art societies (see table 1 for the sample size, for more details on the composition of the sample, see table A.1 in the Appendix).

## 1.2 Method: Network Analysis & Prosopography

We proceed in two steps to answer our research questions of how local elite networks and the core elite's profiles evolved since the end of the 19<sup>th</sup> century. First, we conduct network analyses for each benchmark year and each city-region separately. The organizations in which individuals can hold positions act as nodes and individuals holding positions in two organizations at the same time represent the ties between organizations. We focus on the organizational network, since we are interested in identifying those individuals that act as “linkers” between different organizations and not so much in ties between persons from the same organization.<sup>14</sup>

First, we examine the general properties of the organizational network, its evolution over time, and similarities and differences across city-regions. This will allow us to answer our question about the evolution of local elite networks and to compare their development to our knowledge about national level evolution. Moreover, we take a closer look at the organizations that occupy central positions in the networks – assuming that more central positions indicate more influence – and on the links between specific types of organizations.<sup>15</sup> This focus will allow us to better understand changes in the network structure over time and across city-regions.

In a second step, we focus on those individuals that establish the links between the different organizations. In a recent article on the Danish national elite, Lunding et al. analyse the “effective agents in the field of power” which they define as “the agents that, via their multi-positionality, bind together various fields and act as brokers in the ongoing negotiation of the relative strength of different forms of power.”<sup>16</sup> We follow this approach and make a prosopography of those individuals that a.) hold positions in two of the four spheres (academic, cultural, economic, political) in the same benchmark year or b.) simultaneously hold three or more positions in the economic sphere. The first criterion reflects Lunding et al.'s statement

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<sup>14</sup> See *Franziska Keller*, *Analyses of Elite Networks*, in: *Heinrich Best/John Higley* (eds.), *The Palgrave Handbook of Political Elites*, London 2018, pp. 135-152, here: p. 141.

<sup>15</sup> *Ibid.*, p. 144.

<sup>16</sup> *Lunding/Hellersgaard/Larsen*, *The Established and the Delegated*, p. 6.

that the most influential individuals are those that establish links across spheres. The second criterion captures the corporate elite who sits on the BoD of different firms. This corporate elite is important for our network given that a significant number of organizations in our sample belongs to the economic sphere. For the individuals that fulfil these criteria we examine their socio-demographic profile – age, gender, education – their geographical origin – nationality and family origin – as well as their political affiliation.

## 2 The Dissolution of Local Elite Networks and the Exclusiveness of the Local Core Elite

The presentation of the results on the local elite networks proceeds in two steps. First, we focus on the network level and examine certain network characteristics. In a second step, we highlight some core commonalities and differences at the organizational level across the three city-regions.

### 2.1 From cohesive networks to disconnected elites

Figure 1 below presents the evolution of two indicators for a network's connectivity.<sup>17</sup> The first one (figure 1a) is a weighted measure of network density. It shows the number of links between organizations divided by the number of persons in the network, which yields the average number of inter-organizational links per person. First, we can see a decline of the network's connectivity over time in all three city-regions. This suggests that the local and regional level became continuously less relevant as a scale of activity for elites. Apart from this general trend, we can also see important differences between the three city-regions, particularly between Basel and Geneva on the one hand and Zurich on the other. In Basel and Geneva, we see a sharp decline in the network's connectivity from 1890 to 1910. While in 1890, the average person in the network created 0.7 links, this value drops to 0.3 in 1910. This decline is followed by a period of relative stability and moderate decline in the number of links per person until 1980 and a renewed acceleration of the decline from 2000 onwards. By contrast, the number of links per persons remained constant in the city-region of Zurich from 1890 to 1957 and only then joined Basel and Geneva's pattern of steady and accelerated decline.

The general picture of a steady decline of the connectivity between local organizations is further substantiated by figure 1b, which shows the share of persons holding more than one position in

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<sup>17</sup> Graphical representations of all the networks for each benchmark year and city-region combination can be found in figure A.1 in the appendix.



the same year. While 15-20% of the elites in the network held at least two positions in 1890 in all three city-regions, this only applies to 2-4% of elites in 2020. In figure 1b, we see fewer contrasts across the three city-regions – apart from the stark drop in Basel and Geneva between 1890 and 1910 which is not present in Zurich. Afterwards, we see relative stability in all three city-regions until 2000, followed by a strong decline since the new millennium.

A possible explanation for this steady decline of local networks over the last 130 years are the changes in the structure of the national and the international economy, since the majority of organizations in our networks are companies with their BoDs. The Swiss economy was still rather fragmented and regionalized at the end of the 19<sup>th</sup> century. The emergence of a cohesive national business elite only began at the beginning of the 20<sup>th</sup> century, when the Swiss economy started to integrate at the national level.<sup>18</sup> Strong ties between the financial and the industrial sector developed, and a small and closed business elite dominated the economic sector between 1937 and 1980. In the wake of (renewed) globalization and internationalization of business after the 1980s, this “model of elite coordination” disappeared and a more international and less nationally cohesive business elite emerged, particularly in the financial sector.<sup>19</sup>

For the local elite networks in our three cities this means that their decline in the beginning of the 20<sup>th</sup> century might be attributed to a shift in the scope of companies’ activities from the local to the national level – a development which Stettler documents for the chemical industry in Basel.<sup>20</sup> It is important to note some differences in this process, however. In the city-region of Zurich the firm network is less integrated in 1890, but its decline only begins after 1957 and intensifies only after 1980. This comparatively long period of high network integration (1910-1980) can be attributed to Zurich being Switzerland’s biggest economic and financial centre. A great deal of its firm network is thus not (only) local or regional, but national.

By contrast, the continued and intensified dissolution of local elite networks at the end of the 20<sup>th</sup> century might be explained by internationalization and globalization dynamics affecting the large regional companies in all three city-regions. Carroll and Fennema argue that these dynamics can be attributed to a growing disinterest of firms in having a voice in the local or the national political sphere because their scope of activity has internationalized and their ability to exit local and national markets and relocate hence grew substantively.<sup>21</sup>

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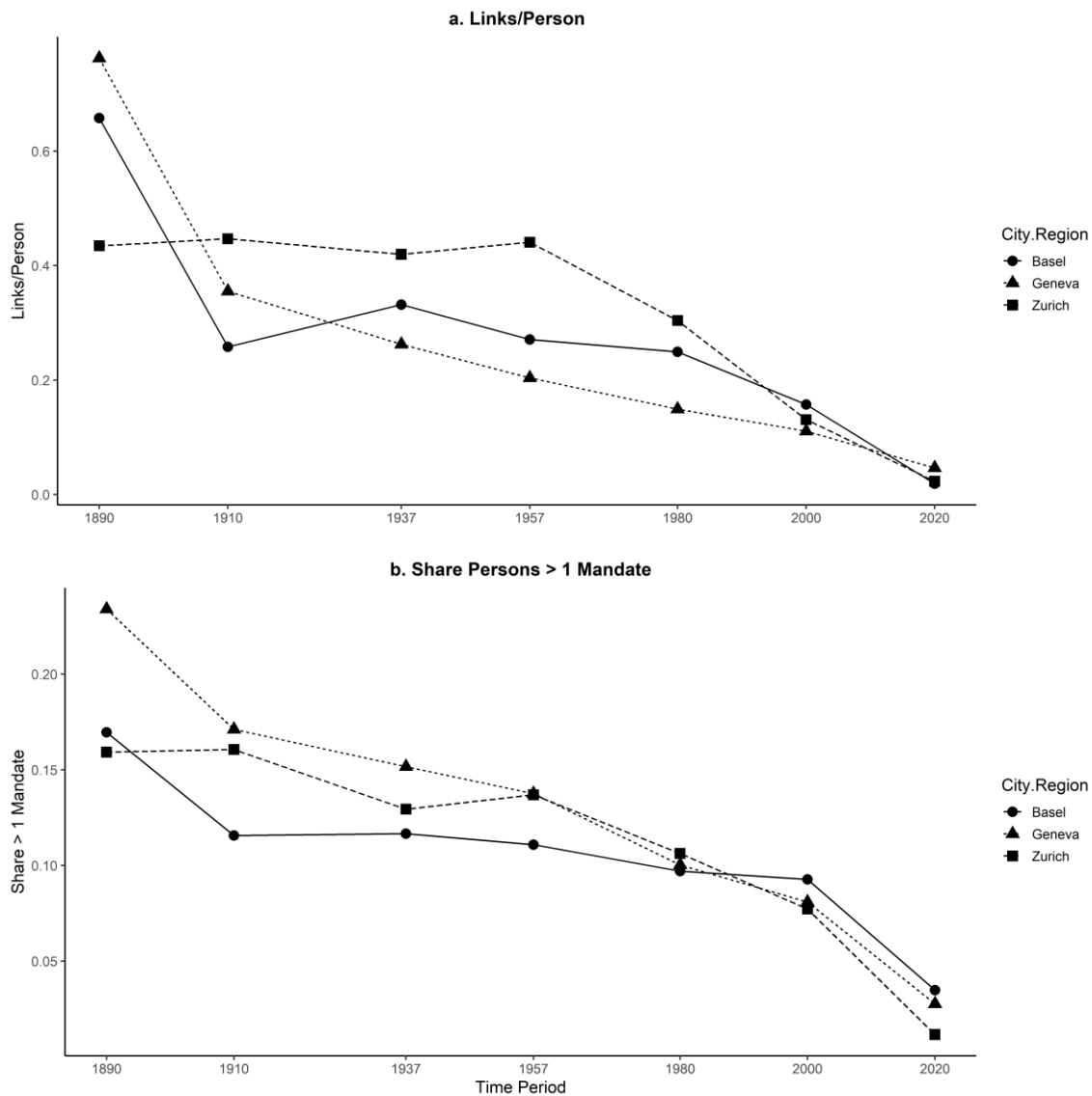
<sup>18</sup> For more details see *Schnyder/David/Mach et al.*, Swiss Company Network.

<sup>19</sup> *Eric Davoine/Stéphanie Ginalski/André Mach et al.*, Impacts of Globalization Processes on the Swiss National Business Elite Community: A Diachronic Analysis of Swiss Large Corporations (1980-2010), in: *Research in the Sociology of Organizations* 43, 2015, pp. 131-163.

<sup>20</sup> *Niklaus Stettler*, Chemische Industrie und politische Elite in Basel, 1900-1923, in: *Swiss Journal of Sociology* 19, 1993, pp. 135-151, here: p. 141.

<sup>21</sup> *Carroll/Fennema*, Transnational Business Community. Yet, it is important to note that while the boards of directors of large companies like Novartis and UBS are not connected to local institutions, the top managers of

Figure 1: Evolution of Network Properties



At the organization level, we also find similar patterns across the three city-regions over time. When we look at the ten most central organizations in each city-region/benchmark year network, i.e. those organizations with the highest number of links per member, we find that organizations from the economic sphere clearly dominate the network in all city-regions and across the whole period (see tables A.2-A.4). This is not surprising insofar as most of the organizations included in our sample belong to the economic sphere. Universities, political institutions, and organizations from the cultural sector only make up for three or four organizations in each cohort, depending on the city-region. Universities in particular are rather marginal in the overall network and never appear among the ten most central institutions in any city-region at any time, despite their significant number of members and hence possibilities to

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UBS Switzerland or Novartis Switzerland often are present in local chambers of commerce, for example. These persons are not included in our sample, since they are not in the directors' boards of the mother company.

establish links. Moreover, political institutions predominantly create links among themselves (through the practice of dual mandate holding at the communal and cantonal level, see Geneva and Zurich) and less so with other sectors. A notable exception are the relatively strong ties between cantonal parliaments and publicly owned banks (Kantonalbanken, an equivalent to the German Landesbanken) in all three city-regions from the beginning of the period until the year 2000.<sup>22</sup>

Turning back to the economic sector, the strong presence of private banks in 1890 in the city-regions of Basel and Geneva is noteworthy.<sup>23</sup> Yet, the private banks quickly lose importance in the beginning of the 20<sup>th</sup> century as important actors in the city-regional networks at the expense of public and large universal banks, which establish strong ties with industrial companies and act as the latter's creditors (see textbox 1). Finally, the role of the local chambers of commerce in the organizations' network deserves some attention. Business associations are among the ten most central actors in all benchmark years and city-regions (except Zurich in 1957). Moreover, they are important "brokers" in the network. This is indicated by their high betweenness centrality (see tables A.2-A.4). The higher this value, the more an organization connects otherwise detached parts of the network. The chambers of commerce thus seem to act as a meeting place where members of different parts of the network, mostly from the economic and political sphere, get together and exchange.

In sum, the network analysis shows a presence of very dense *regional* networks at the beginning of the period, a first decline between 1890 and 1910, followed by a period of relative stability until 1980. Since the new millennium, we find a very clear disintegration of the network. This trend can mostly be attributed to a disintegration of the local or regional business network. In all three city-regions, the network is dominated by economic organizations, followed by political institutions. Universities – as important talent forges and as suppliers of high-skilled workers for the regional economy – occupy a rather marginal position in the network.

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<sup>22</sup> BKB in Basel, CEG and Banque de Genève (1890-1910, went bankrupt in 1931) and since 2000 BCGE in Geneva, ZKB in Zurich.

<sup>23</sup> Private banks in Basel: Bank Sarasin, Banque von Speyr, Ehinger; in Geneva: Hentsch & Cie., Pictet & Cie., Lombard-Odier; in Zurich: Bank Leu.

### Textbox 1: Three banking systems and their impact on the local networks

The structure of the local financial centers, and particularly the positions of private banks, exhibit some important spatial and temporal differences. The first two benchmark years (1890 and to a lesser extent 1910) are characterized by the central position of private banks in the network for Basel and Geneva (see figure A.1 on networks and tables A.2-A.4 on centrality of organizations). These old institutions, most of them already founded before 1800, were controlled and directed by old wealthy patrician families. This situation was very similar in Basel (Bank Ehinger, Von Speyr and Sarasin) and Geneva (Hentsch, Lombard-Odier and Pictet) until the beginning of the 20<sup>th</sup> century. Other banks (SBS, Bank in Basel, C&W Bank, Depositenbank for Basel and Union financière de Genève, UFG, Banque du commerce, Banque de prêts et dépôts for Geneva) were largely the emanation of these private banks. The situation profoundly changed during the first half of the 20<sup>th</sup> century. While in 1890 the banking structure was characterized by its fragmentation and specialization in different specific bank activities, explaining the large number of banks, a process of concentration took place with smaller banks being absorbed by bigger ones or disappearing due to bankruptcies.

One important difference distinguishes Basel and Geneva: whereas the private banks of Basel created two larger institutions (SBS in 1872 and Basler Handelsbank, BHB in 1862, dealing with bigger operations like credits to industrial companies) that progressively took over some of the private units, in Geneva, the most important private banks (the quatuor: Hentsch, Pictet, Lombard-Odier and Mirabaud) never delegated too much power to larger financial institutions (for a rich and detailed analysis, see Mazbouri).<sup>24</sup> The SBS which absorbed different smaller banks (such as Bank in Basel in 1907, Bank von Speyr in 1912, Depositenbank BS in 1897 as well as the Zürcher Bankverein in 1895), has become a large universal bank dealing with all banking activities and a central actor between 1937 and the 1980s in the city-regional network and at the national level, before it merged with UBS in 1998. Such an evolution never took place in Geneva, since no large universal banks emerged in this region, and Genevan private banks concentrated their activities exclusively on private wealth management. According to Mazbouri, this diverging evolution can be explained by two factors: 1) the lack of local industrial demand in Geneva, contrasting with the rise of the chemical-pharmaceutical industry in Basel, and 2) the importance of revenues generated by private wealth management in Geneva, mainly due to their French clients.<sup>25</sup> After the concentration process in the banking sector during the beginning of the 20<sup>th</sup> century, Basel started to look much more like Zurich.

The situation was very different in Zurich in the absence of strong private banks at the end of the 19<sup>th</sup> century. Credit Suisse, already founded in 1856, as a large universal bank, and Bank in Winterthur (founded in 1862, UBS from 1912 onwards), both founded mainly by industrialists, and not private bankers, have already become dominant financial actors by the end of the 19<sup>th</sup> century. These differences can explain the lack of formal connections between the financial and the industrial sector in Geneva. Here, ties between banks and industrial companies are largely absent, with a few exceptions, whereas the large universal banks in Basel and Zurich developed important connections during the most part of the 20<sup>th</sup> century with industrial companies in both regions.

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<sup>24</sup> *Malik Mazbouri*, L'émergence de la place financière suisse, 1890-1913, Lausanne 2005; *Malik Mazbouri*, La banque privée comme métaphore: „vieille banque“ et „nouvelle banque“ en Suisse 1800-1930, in: *Revue suisse d'histoire* 70(1) 2020, 93-115 and 70(2), 2020, 286-306.

<sup>25</sup> *Mazbouri*, *Banque privée*, p.293.

## 2.2 A homogeneous and exclusive core elite

We now turn to those individuals that establish links between organizations from two different social spheres or that occupy very prominent positions in the economic sphere. For the whole period, 405 individuals fulfil these conditions. Table 2 gives an overview of the connections across spheres that the linkers in our network establish.

Not surprisingly, the most frequent combination is the one between the economic and the political sphere – accounting for 40 to 65% of the linkers depending on the benchmark year. The second most frequent category are linkers that occupy three or more positions in the economic sphere in the same year, varying from 11 to 35%. Mirroring the marginal role of universities in the organizations' network, we find a very weak presence of university professors among the core elite. In 1890, 15% of the linkers holding a political mandate are professors but this share diminishes sharply at the beginning of the 20<sup>th</sup> century. This initial strength of academic-political links can be attributed to the city-regions of Basel and Geneva, where several professors were also elected MPs at the cantonal or the local level.<sup>26</sup> Yet, the underrepresentation of the academic sphere among the core elite of the network is evident for the later benchmark years. In the overall sample (see table A.1), academic positions make up for 21% of all positions, but professors only account for 12% of the linkers sample (adding up the three columns that include the academic sphere in table 2). The opposite is the case for the cultural sphere. In the overall sample, positions in the cultural sphere account for a mere 3% of the sample, whereas 13% of the linkers hold a mandate in the cultural sphere. In contrast to academic elites, cultural elites are thus overrepresented among the linkers.<sup>27</sup> The weak presence of professors among the core elite might partly be explained by the fact that professorships are full-time mandates that leave less space for additional involvements than board memberships or mandates as lay politicians at the local and the regional level.

What is the socio-demographic profile of these – predominantly economic and political – elites? Not surprisingly, the typical linker in our sample is male and well into the second half of his professional career.<sup>28</sup> Previous studies have shown that women are still a very marginal group in the boards of Swiss firms and that Switzerland is a strong laggard when it comes to women's ascendance to top positions.<sup>29</sup> Yet, it is impressive that only 9 (!) out of 405 linkers are women–

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<sup>26</sup> See also *Stettler*, *Chemische Industrie*, p. 139.

<sup>27</sup> As a caveat for this (and all further analysis), we emphasize that the data for 2020 cannot be analyzed with prosopographical methods, since only 5 persons satisfy our selection criteria. This reflects the virtual inexistence of ties between organizations in the three city-regions today.

<sup>28</sup> A separate analysis by city-region has not yielded any meaningful deviations from the overall sample. For the sake of simplicity, we thus report only aggregated numbers for all three city-regions.

<sup>29</sup> *Ginalski*, *Inégalités de genre*.

especially given that the local elite can serve as an entry point for higher-level elite networks in a decentralized system such as Switzerland. Until 1980, not a single woman has been part of the group of linkers – which is likely related to the very late introduction of women’s suffrage in federal politics in 1971 and to legal restrictions regarding women’s work.<sup>30</sup>

*Table 2. Linkers: combination of spheres*

Year	3 spheres	Acad, Cult	Acad, Econ	Acad, Poli	Cult, Econ	Cult, Poli	Econ	Econ, Poli	Total
1890	2 (2.0)	3 (3.1)	1 (1.0)	15 (15.3)	3 (3.1)	2 (2.0)	18 (18.4)	54 (55.1)	98 (100.0)
1910	1 (1.3)	1 (1.3)	0 (0.0)	5 (6.6)	3 (3.9)	3 (3.9)	13 (17.1)	50 (65.8)	76 (100.0)
1937	0 (0.0)	0 (0.0)	1 (1.7)	1 (1.7)	4 (6.8)	4 (6.8)	18 (30.5)	31 (52.5)	59 (100.0)
1957	0 (0.0)	0 (0.0)	6 (8.2)	6 (8.2)	5 (6.8)	5 (6.8)	23 (31.5)	28 (38.4)	73 (100.0)
1980	0 (0.0)	0 (0.0)	5 (8.6)	2 (3.4)	5 (8.6)	4 (6.9)	20 (34.5)	22 (37.9)	58 (100.0)
2000	0 (0.0)	0 (0.0)	1 (2.8)	0 (0.0)	5 (13.9)	4 (11.1)	4 (11.1)	22 (61.1)	36 (100.0)
2020	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (40.0)	0 (0.0)	0 (0.0)	3 (60.0)	5 (100.0)
Total	3 (0.7)	4 (1.0)	14 (3.5)	29 (7.2)	27 (6.7)	22 (5.4)	96 (23.7)	210 (51.9)	405 (100.0)

*Note.* Percentages in parentheses; Acad=Academic, Cult=Culture, Econ=Economic, Poli=Politics.

With respect to education, the percentage of university educated linkers increases over time – but stays rather stable between 1937 and 1980 at around 65%.<sup>31</sup> In contrast to the general population, where the expansion of tertiary education is a phenomenon of the 1960s, we witness a sharp increase from 1890 to 1937 among the linkers. This is an indication that the average member of our elite grew up in a rather well-off family with sufficient financial resources to pursue higher education.<sup>32</sup> At the same time, the offspring of wealthy industrial families often did not go to university at the end of the 19<sup>th</sup> century. Rather, they made a commercial apprenticeship in the company of their father’s friends, then worked abroad for some years to gain experience which they could then use when they ascend to the directorate of their family’s company.

Apart from the socio-demographic profile, we want to shed light on the geographical origins of the linkers in our sample. A first way to do so is an individual’s nationality. Almost all core

<sup>30</sup> Until 1976, Swiss women needed the written permission of their husband when they wanted to take up paid labour.

<sup>31</sup> A caveat when interpreting these numbers is the substantive amount of missing information for some years – especially for 1890.

<sup>32</sup> Unfortunately, we so far have only rather incomplete data on the incomes and fortunes of the elites in our database.

elite members are of Swiss nationality; only 6 out of 405 linkers do not have a Swiss passport.<sup>33</sup> The evolution of the share of foreigners in the overall sample of academic and economic elites takes a decidedly different path. Here, the share of foreigners reaches a first peak in 1910 with an average of 30% percent non-Swiss professors and 12% non-Swiss board members. From 1937 to 1980, the share of foreigners drops substantively in the economic sector ( $\leq 5\%$ ). This is a development that is linked to the practice of limiting the stock acquisitions by foreign shareholders and the active exclusion of foreigners from Swiss firms' BoD. Among university professors, a reduction of foreigners is also evident in this period, albeit not as pronounced as in the economic sector. From 1980 onwards, the share of foreigners has increased substantially again, both in the economic and in the academic sphere. The quasi-absence of foreigners among the linkers shows that they remain weakly involved in local networks.

Can this exclusion of “outsiders” be traced further? More precisely, is the exclusion happening based on national citizenship or is there also a more local component to it? To assess this question, we examine a person's family origin. We divide the linkers into two groups. Those who patrilineally belong to a family that held citizenship rights in one of the three cities<sup>34</sup> before the year 1800 and those whose families obtained a city's citizenship rights after 1800 or not at all. The year 1800 serves as the cutoff point because it marks the end of the *ancien régime* and the beginning of the Napoleonic Helvetic republic. During the *ancien régime*, there was a clear divide between those with full citizenship rights in the three cities and those with reduced or no citizenship rights. Only those with full citizenship rights could participate in city politics. In his book on the high bourgeoisie of Basel at the turn of the century, Sarasin uses the criterion of holding citizenship rights before 1800, to distinguish old, well-established, families from “newcomers”.<sup>35</sup> He finds that these old patrician families still dominated Basel's upper class at the end of the 19<sup>th</sup> century. We follow his approach here and combine information on a person's place of origin, i.e. the place where s/he was historically granted social and political rights, with data from the register of Swiss surnames. The latter gives information on whether a certain family name has been registered as having citizenship rights in a certain municipality and if so, since when this has been the case.<sup>36</sup>

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<sup>33</sup> To a certain extent, this can be explained by the fact that only Swiss nationals can hold political office. The canton of Geneva has introduced the active voting rights for non-Swiss at the local level in 2005. However, foreigners can still not present themselves for public office which prevents them from access to political elite positions. Foreigners are thus excluded from holding positions in the political sphere which reduces their chances of establishing ties between organizations from different spheres.

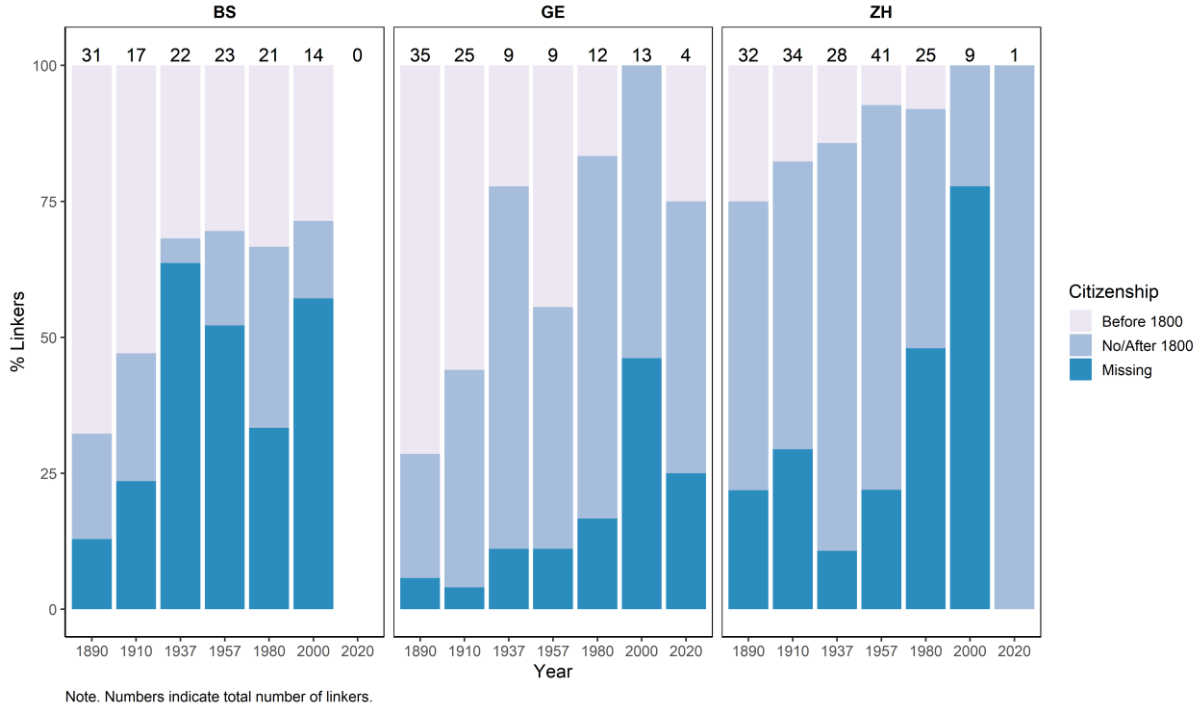
<sup>34</sup> Or in the city of Winterthur, the second big city in the city-region of Zurich.

<sup>35</sup> Sarasin, *Stadt der Bürger*, p. 103.

<sup>36</sup> The register of Swiss surnames can be found here: <<https://hls-dhs-dss.ch/famn/?lg=e>> [05.01.2021]. It must be noted, that for certain city-region/benchmark year combinations, a substantive number of information is missing

Figure 2 presents the percentage of descendants from patrician families across the three city-regions and over time. We can see that in 1890 both in the city-region of Basel and Geneva, roughly 70% of the linkers are descendants from patrician families and in 1910 they still account for more than 50% of the linkers. Their presence shrinks drastically between 1910 and 1937, but then remains constant (Basel) or fluctuates (Geneva). In both city-regions, individuals from families with a long local tradition still reach significant proportions until recently. This continued presence of patrician families among the core elite in Basel and Geneva can be explained by their long-lasting presence in two important economic sectors: private banks in Geneva and the chemical-pharmaceutical industry in Basel, where patrician families remained important actors in the BoDs throughout the 20<sup>th</sup> century.

Figure 2. Local citizenship rights (before/after 1800)



What is clear is that the descendants of patrician families continue to be part of the core elite of these two city-regions – even two centuries after they formally lost their prerogatives in the city-state. This is in line with findings of Dronkers and Schijf et al. who show that descendants from noble families continue to play an important role among the Dutch elite throughout the 20<sup>th</sup> century. They argue that this group thrives to a significant degree on its “symbolic capital”,

(up to 80% for the city-region of Zurich in 2000). However, it is likely that persons with missing information belong to the group of those who do not have citizenship rights before 1800, since the families that do are not abundant and their names are rather well-known. The percentage of those who do have patrician family origins should thus be correct.



i.e. the reputation that is attached to family name and origin, and hence are less dependent on personal qualities and achievements.<sup>37</sup>

For the city-region of Zurich, a different picture emerges. Here, patrician families “only” make up 25% of the core elite in 1890 and this number gradually declines until patrician families are not involved in the core elite anymore in 2000. Zurich’s core elite thus seems to have been more open to newcomers than the one of Basel and Geneva. Or rather, the long-established families of Zurich faced higher pressures for sharing their power. This is also Sarasin’s interpretation.<sup>38</sup> He argues that the patrician families in Basel could keep their grip on the city throughout the 19<sup>th</sup> century, because they did not face competition from countryside elites in cantonal politics. This was the case in Zurich, where a conflict between the city and the countryside elite dominated the second half of the 19<sup>th</sup> century (which also transformed the political space of the canton (see below)). Given that the canton of Basel was divided in two in 1830 – a city-part and a country-part – the patrician families could maintain their dominance in the city part. This explanation can be extended to Geneva, which is also a city-state. There, the old elite neither faced the same pressure to “open the city gates” as in Zurich.

The presence or absence of patrician families from the core elite also seems to coincide with the density of the local networks discussed above. In the city-regions of Basel and Geneva, the number of links per person is higher than in Zurich in 1890 but lower thereafter until 1980 (see figure 1). One explanation for this might be that the long-established families in Basel and Geneva were still very successful at co-optation in 1890 and 1910 but could not fence off their competitors anymore afterwards and hence the ties across organizations decline. In Zurich, by contrast, this process already took place in the middle of the 19<sup>th</sup> century and competitors have been successfully integrated in the core.

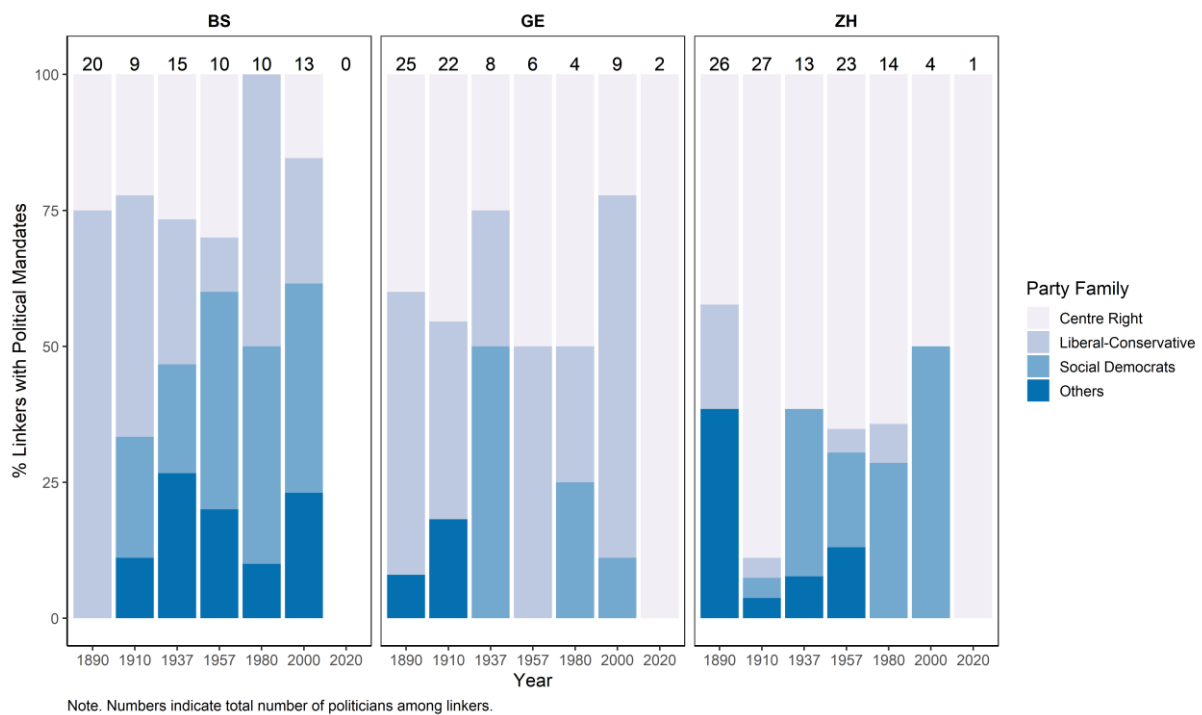
Such an interpretation can be further consolidated by looking at the political power distribution. Figure 3 shows the percentage of linkers with a political mandate that belong to three major party families in the three city-regions. Liberal-conservative parties comprise the members of the old patrician elite. They were critical of the nation-state’s integration and advocate strong decentralization. The centre-right party family includes the parties that are in favour of the federal state and comprise the new bourgeois elite, emerging during the 19<sup>th</sup> century. Finally, the social democratic party family includes all parties that are associated with the workers’ movement on the left.

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<sup>37</sup> *Dronkers*, Dutch Nobility; *Schijff/Dronkers/Van den Broeke-George*, High-Bourgeois Families. For a discussion of the notion of symbolic capital see also *Michel Pinçon/Monique Pinçon-Charlot*, *Sociologie de la bourgeoisie*, Paris 2003, pp. 22-26.

<sup>38</sup> *Sarasin*, *Stadt der Bürger*, p. 11.

Figure 3. Partisanship of political mandate holders



We can see that the liberal-conservatives were clearly the strongest party both in Basel and Geneva in 1890, whereas they were more marginal in Zurich.<sup>39</sup> Here, the centre-right dominates the political scene in 1890.<sup>40</sup> In all three city-regions, we witness the rise of left linkers from 1910 to 1937 – a period in which the local parliaments of all three cities were in the hands of the socialists. In the 20th century, the centre-right dominates the elite core in Zurich, whereas liberal-conservatives can maintain an important role in Basel and Geneva. Towards the end of the century, social democrats gain renewed access to the shrinking core elite of the three city-regions. Again, this is linked to a more general increase of their political strength in the three city-regions since the 1980s.

In sum, the profiles of the core elite of Basel, Geneva and Zurich remained remarkably stable throughout the last 130 years. In all three city-regions, the typical linker is more than 50 years old, male, university-educated and a Swiss national. Moreover, in the city-regions of Basel and Geneva, he is also likely to belong to a patrician family that already was in power during the ancien régime – even if the very central position and overrepresentation of old patrician families

<sup>39</sup> In Basel and Geneva, the liberal-conservative parties remained important and independent from the centre-right parties throughout the 20th century, and only merged with the Free-democratic party (centre-right) at the beginning of the 21st century, while in Zurich the liberal-conservative faction joined the Free-democratic party early on.

<sup>40</sup> Again, an important caveat concerns missing information for Zurich in 1890. For this benchmark year, we do not have the political affiliation of 40% of political mandate holders (10 out of 26 individuals). Moreover, the results for the year 2020 again are not very meaningful, since they only concern 2 (Geneva) or 1 individual (Zurich).

has progressively declined during the 20<sup>th</sup> century. That long-established families still play an important role in the city-regions of Basel and Geneva is also indicated by the strong position of “their” parties, the liberal-conservatives, in the political realm. The only clear transformation and opening of the elite core that we could witness concerns the inclusion of socialists.

### 3 Conclusion: Three phases of local elite evolution

The starting point of this article was the observation that comparative and long-term studies of urban elites and elite networks are rare. Our analysis of local elites in the city-regions of Basel, Geneva, and Zurich reveals a continual disintegration of formal ties between occupants of positions of power from 1890 to 2020. At the same time, the profile of core elite members remains remarkably stable throughout the last 130 years.

We can distinguish three different periods in the evolution of elite networks and profiles. First, for the period from 1890 to 1910 our analysis clearly shows the existence of a dense regional network, connecting the major local organizations of the economic, political, academic as well as cultural spheres in the three city-regions. This period is marked by the central and hegemonic position of descendants from old patrician families, who largely monopolize and cumulate power in various social spheres. This is particularly true for Basel and Geneva, with the central role of private banks, and less so for Zurich. These results confirm previous studies by Swiss historians, such as Tanner, Sarasin for Basel, and Perroux for Geneva.<sup>41</sup> At the same time, this period is also characterized by a first “internationalization” of members of the local elite at large in the academic and the economic sphere.

Second, after a first decline in the density of the networks for Basel and Geneva between 1890 and 1910, the networks remain relatively stable until 1980, particularly in Zurich. During this period, the core elite is very homogenous in terms of age, gender, and nationality. At the same time, we witness a decline of descendants from old patrician families and the inclusion of socialists among the core elite. For questions of inequality and elite renewal, these findings have mixed implications. On the one hand, the clear decline of old patrician families and the ascendance of some socialists to the core elite shows that there is a certain elite renewal. On the other hand, women and foreigners remain excluded. Such a systematic exclusion of certain groups is problematic, since the local level can serve as an important entry point to elite networks at higher levels – particularly in decentralized systems such as Switzerland.

Third, and finally, since 1980, we witness an accelerated reduction of the formal ties between urban elites. This development mirrors the evolution of the national company network since the

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<sup>41</sup> *Tanner*, *Arbeitsame Patrioten*; *Sarasin*, *Stadt der Bürger*; *Perroux*, *Elites bourgeoises de Genève*.

1990s.<sup>42</sup> Large local companies have progressively grown during the 20<sup>th</sup> century, and their scale of operations has moved far beyond the regional level – in a first step to the national and then to the international level. While these multinational companies remained largely controlled by Swiss corporate elites until the 1980s, this has changed since the 1990s, when their top managers and BoDs have become increasingly international with fewer connections to their local environment. Starting with a clear localization of their activities in the three city-regions during the 19<sup>th</sup> century, it seems that the top-level of these large multinational companies do not need, or do not give priority, to entertain formal ties with other local organizations nowadays. The changing importance multinational companies attribute to locations where they have their seat needs further investigation.

Before concluding, we briefly highlight some limitations of our positional approach to elite identification and of the quantitative analysis. First, and most importantly, the mere focus on elite positions and multipositionality does not reveal the concrete actions and informal interactions of these individuals. We can assume that members of the same organization or governing body – such as a BoD of an enterprise – regularly interact, share common interests, and try to advance these shared interests. Yet, it is beyond the scope of this paper to assess the validity of this assumption, as this would require a more qualitative and in-depth assessment of the behaviour of a much smaller group of persons.

A second caveat concerns the nature of the positions included in our analysis. Several represent full time occupations, such as being a university professor, a government member, or an executive director of a company. As a result, holding two positions at the same time might be rather challenging for some individuals due to time constraints. Consequently, we probably somewhat underestimate the cohesiveness of local elites across different social spheres by our focus on formal positions of power. Moreover, this underestimation of elite cohesiveness might increase over time, due to the professionalization of certain positions and the additional time constraints associated with this development. A university professor in 1890 probably had more leeway to engage in other activities than a university professor in 2020. Still, most positions in our sample are not full-time positions, e.g. being a board member of an enterprise, a cultural association, or a regional chamber of commerce, or being a local or regional lay or militia politician.

Finally, one might argue that the changing social prestige associated with a position in a certain period limits diachronic comparison. We can expect that part of the motivation to hold a certain

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<sup>42</sup> *Davoine/Ginalschi/Mach et al., Globalization Processes; David/ Mach/Liipold et al., Forteresse des Alpes.*

position also has to do with social prestige. Generally, local positions of power probably carried a higher prestige in 1890 than in 2020 and hence persons with a high social status want to occupy these positions in 1890 but not any more in 2020. Consequently, the cohesiveness of the network would be higher in 1890 due to the prestige of positions. Yet, the positions we are looking at, as well as the formal functions they have in society, remain the same throughout the period. Therefore, changes in social prestige of local elite positions might be another explanation for why we see a disintegration of local elite networks.

Notwithstanding these limitations, we can clearly observe a growing gap and disconnection between the central activities of elites of different social spheres, especially between the business world on one side and the regional political life on the other in the last 130 years. This sectionalization and detachment might have important consequences for regional power structures. On the one hand, it might be easier for newcomers to enter the stage and make their voice heard in local politics. On the other hand, this detachment might make it more difficult to engage in collective action and solve regional crises together.

# Appendix

Table A.1. All mandates by sphere

Year	Basel				Geneva				Zurich				Total			
	Aca	Cul	Eco	Pol	Total	Aca	Cul	Eco	Pol	Total	Aca	Cul	Eco	Pol	Total	
1890	67	15	149	135	366	66	5	125	155	351	60	9	207	359	635	
	(18.3)	(4.1)	(40.7)	(36.9)	(100.0)	(18.8)	(1.4)	(35.6)	(44.2)	(100.0)	(9.4)	(1.4)	(32.6)	(56.5)	(100.0)	
1910	92	14	173	142	421	88	7	113	159	367	87	17	193	388	685	
	(21.9)	(3.3)	(41.1)	(33.7)	(100.0)	(24.0)	(1.9)	(30.8)	(43.3)	(100.0)	(12.7)	(2.5)	(28.2)	(56.6)	(100.0)	
1937	130	13	153	148	444	109	6	105	180	400	99	17	228	324	668	
	(29.3)	(2.9)	(34.5)	(33.3)	(100.0)	(27.3)	(1.5)	(26.2)	(45.0)	(100.0)	(14.8)	(2.5)	(34.1)	(48.5)	(100.0)	
1957	153	15	149	143	460	139	14	130	198	481	129	20	228	329	706	
	(33.3)	(3.3)	(32.4)	(31.1)	(100.0)	(28.9)	(2.9)	(27.0)	(41.2)	(100.0)	(18.3)	(2.8)	(32.3)	(46.6)	(100.0)	
1980	98	16	152	139	405	129	25	128	198	480	111	23	226	334	694	
	(24.2)	(4.0)	(37.5)	(34.3)	(100.0)	(26.9)	(5.2)	(26.7)	(41.2)	(100.0)	(16.0)	(3.3)	(32.6)	(48.1)	(100.0)	
2000	94	12	143	143	392	128	22	167	194	511	116	19	170	342	647	
	(24.0)	(3.1)	(36.5)	(36.5)	(100.0)	(25.0)	(4.3)	(32.7)	(38.0)	(100.0)	(17.9)	(2.9)	(26.3)	(52.9)	(100.0)	
2020	105	0	115	107	327	120	18	152	194	484	131	0	160	321	612	
	(32.1)	(0.0)	(35.2)	(32.7)	(100.0)	(24.8)	(3.7)	(31.4)	(40.1)	(100.0)	(21.4)	(0.0)	(26.1)	(52.5)	(100.0)	
Total	739	85	1034	957	2815	779	97	920	1278	3074	733	105	1412	2397	4647	
	(26.3)	(3.0)	(36.7)	(34.0)	(100.0)	(25.3)	(3.2)	(29.9)	(41.6)	(100.0)	(15.8)	(2.3)	(30.4)	(51.6)	(100.0)	

Note. Aca=Academic, Cul=Culture, Eco=Economic, Pol=Politics.

Figure A.1: Organizations Networks (1890-2020)

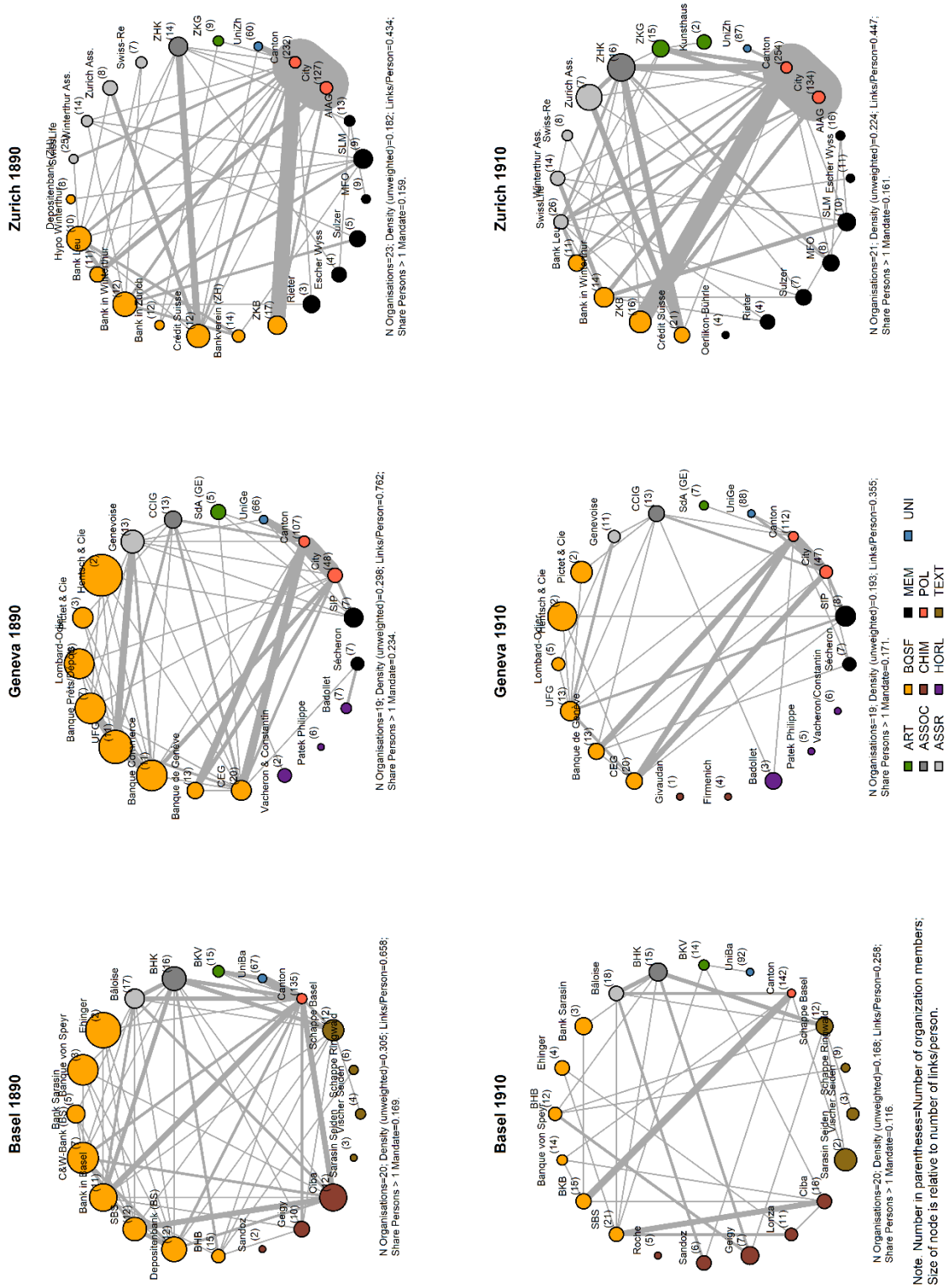
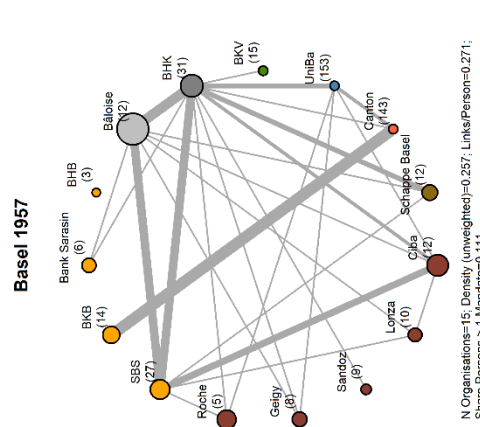
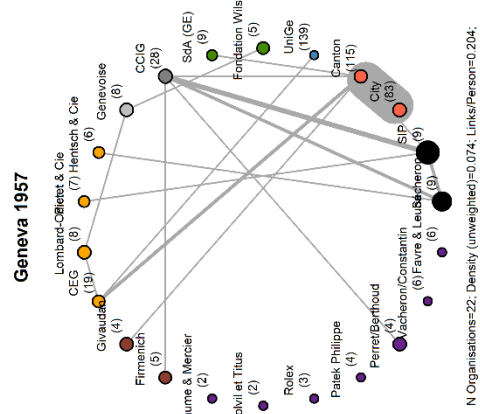
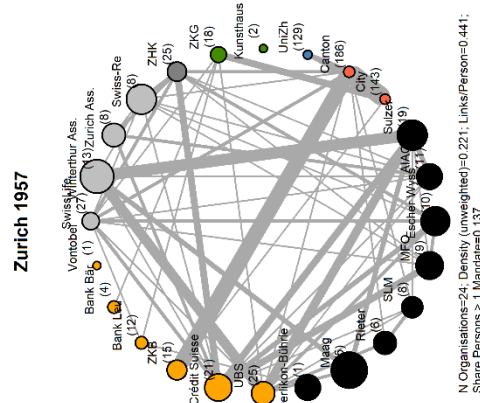
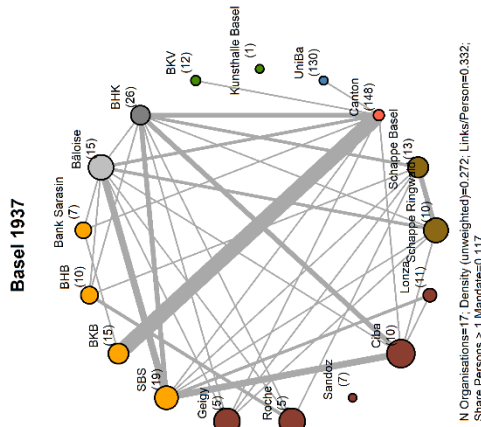
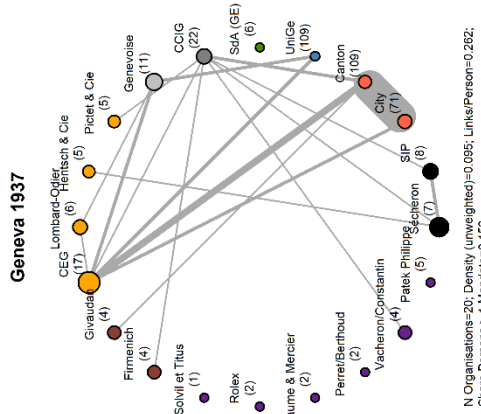
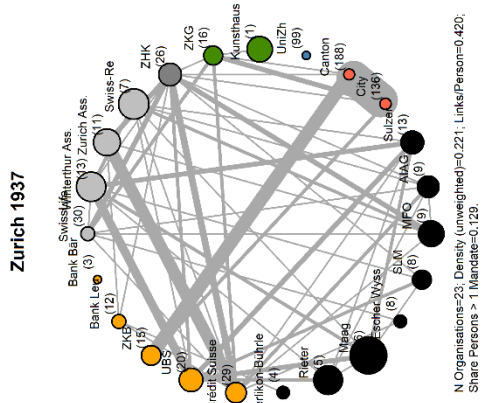


Figure A.1: Continued

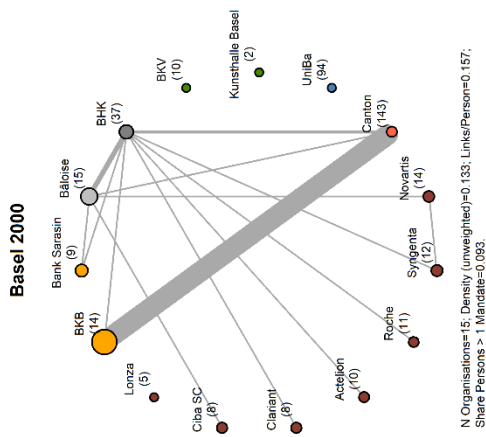
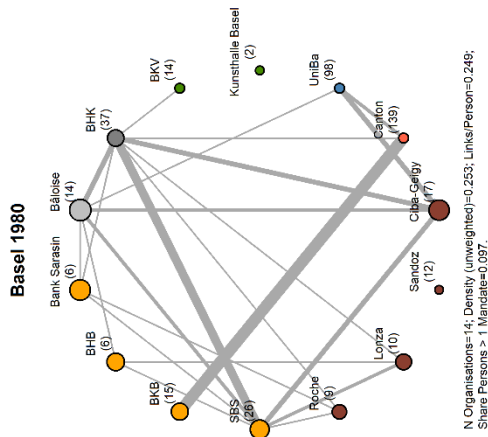
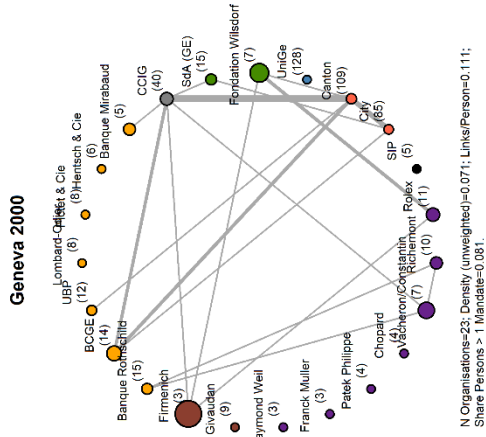
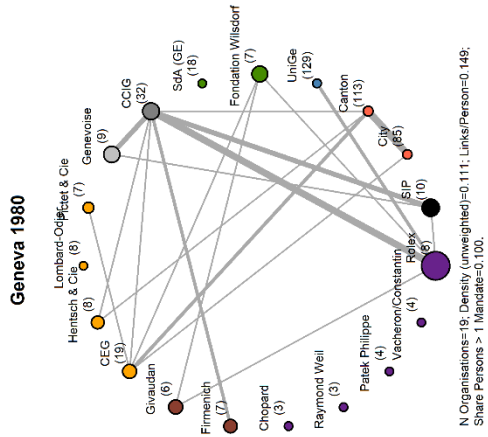
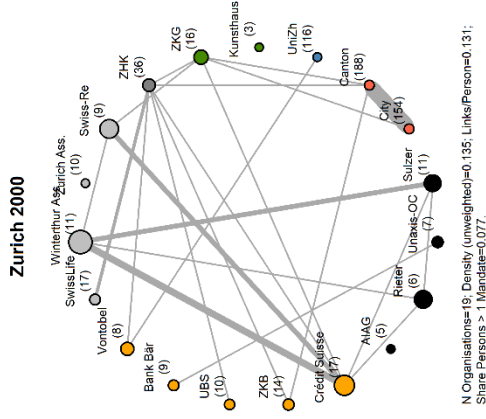
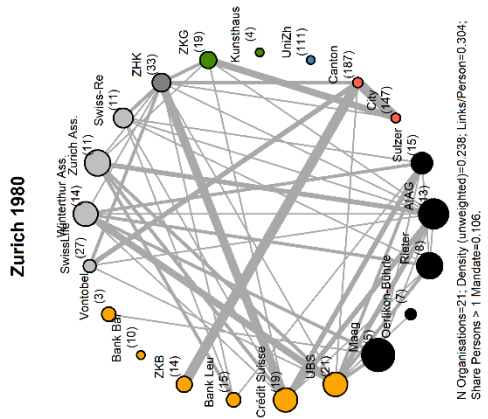


Note. Number in parentheses=Number of organization members;  
Size of node is relative to number of links/person.

- ART
- ASSOC
- ASSR
- BQSF
- CHIM
- HORL
- MEM
- POL
- TEXT
- UNI



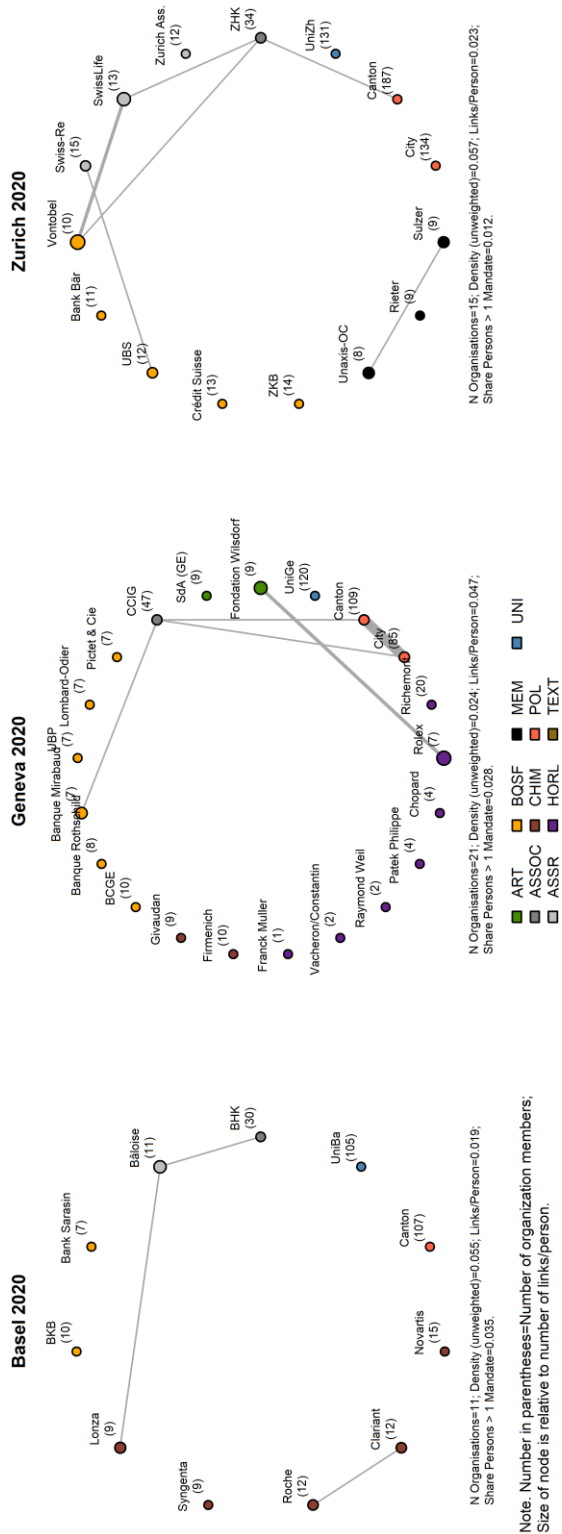
Figure A.1: Continued



- ART
- BQSF
- ASSOC
- ASSR
- CHIM
- HORL
- MEW
- POL
- TEXT
- UNI

Note: Number in parentheses=Number of organization members;  
Size of node is relative to number of links/person.

Figure A.1: Continued



Note. ART=Art societies, ASSOC=Business association, ASSR=Insurance, BQSF=Banking, CHIM=Chemical industry, HORL=Watch-making industry, MEM=Machine industry, POL=Political institutions, TEXT=Textile industry, UNI=University.

Table A.2. Centrality of Organizations (Basel 1890-2020)

1890						1910					
Name	Type	M	D	D/M	B	Name	Type	M	D	D/M	B
Ehinger	BQSF	2	4	2.0	0.01	Sarasin Seiden	TEXT	2	2	1.0	0.08
C&W-Bank (BS)	BQSF	7	12	1.7	0.01	BHK	ASSOC	15	11	0.7	0.18
Banque von Speyr	BQSF	3	5	1.7	0.02	Geigy	CHIM	7	5	0.7	0.00
Bank in Basel	BQSF	11	16	1.5	0.12	Schappe Basel	TEXT	12	8	0.7	0.24
Ciba	CHIM	12	17	1.4	0.01	Bank Sarasin	BQSF	3	2	0.7	0.06
Depositenbank (BS)	BQSF	12	15	1.3	0.07	BKB	BQSF	15	8	0.5	0.06
BHK	ASSOC	16	19	1.2	0.03	Sandoz	CHIM	6	3	0.5	0.00
SBS	BQSF	12	14	1.2	0.05	Bâloise	ASSR	18	9	0.5	0.15
Schappe Basel	TEXT	12	12	1.0	0.23	Ciba	CHIM	16	8	0.5	0.12
Bâloise	ASSR	17	15	0.9	0.05	Ehinger	BQSF	4	2	0.5	0.02

1937						1957					
Name	Type	M	D	D/M	B	Name	Type	M	D	D/M	B
Ciba	CHIM	10	11	1.1	0.12	Bâloise	ASSR	12	16	1.3	0.16
Geigy	CHIM	5	5	1.0	0.10	BHK	ASSOC	31	25	0.8	0.45
Roche	CHIM	5	5	1.0	0.01	Ciba	CHIM	12	9	0.8	0.04
Bâloise	ASSR	15	14	0.9	0.18	SBS	BQSF	27	17	0.6	0.06
Schappe Ringwald	TEXT	10	9	0.9	0.03	Roche	CHIM	5	3	0.6	0.12
SBS	BQSF	19	16	0.8	0.05	BKB	BQSF	14	7	0.5	0.00
Schappe Basel	TEXT	13	9	0.7	0.04	Schappe Basel	TEXT	12	5	0.4	0.01
BKB	BQSF	15	10	0.7	0.00	Geigy	CHIM	8	3	0.4	0.09
BHK	ASSOC	26	16	0.6	0.04	Bank Sarasin	BQSF	6	2	0.3	0.06
BHB	BQSF	10	5	0.5	0.01	Lonza	CHIM	10	3	0.3	0.02

1980						2000					
Name	Type	M	D	D/M	B	Name	Type	M	D	D/M	B
Bâloise	ASSR	14	10	0.7	0.13	BKB	BQSF	14	13	0.9	0.00
Bank Sarasin	BQSF	6	4	0.7	0.12	Bâloise	ASSR	15	7	0.5	0.14
Ciba-Geigy	CHIM	17	11	0.6	0.00	BHK	ASSOC	37	11	0.3	0.35
SBS	BQSF	26	15	0.6	0.02	Bank Sarasin	BQSF	9	2	0.2	0.11
BHB	BQSF	6	3	0.5	0.05	Syngenta	CHIM	12	2	0.2	0.05
BKB	BQSF	15	7	0.5	0.00	Novartis	CHIM	14	2	0.1	0.03
BHK	ASSOC	37	16	0.4	0.33	Ciba SC	CHIM	8	1	0.1	0.00
Lonza	CHIM	10	4	0.4	0.05	Clariant	CHIM	8	1	0.1	0.00
Roche	CHIM	9	3	0.3	0.03	Canton	POL	143	15	0.1	0.00
Canton	POL	139	10	0.1	0.14	Actelion	CHIM	10	1	0.1	0.00

2020					
Name	Type	M	D	D/M	B
Bâloise	ASSR	11	2	0.2	0.02

*Table A.2. Centrality of Organizations (Basel 1890-2020)*

Lonza	CHIM	9	1	0.1	0.00
Roche	CHIM	12	1	0.1	0.00
Clariant	CHIM	12	1	0.1	0.00
BHK	ASSOC	30	1	0.0	0.00
Syngenta	CHIM	9	0	0.0	0.00
Novartis	CHIM	15	0	0.0	0.00
UniBa	UNI	105	0	0.0	0.00
BKB	BQSF	10	0	0.0	0.00
Bank Sarasin	BQSF	7	0	0.0	0.00

*Note.* M=Members D=Degree; D/M=Degree/Members; B=Betweenness. 10 most central organizations based on D/M. For 2020, the last five ranks are not to be interpreted, since none of these organizations has established any links.

Table A.3. Centrality of Organizations (Geneva 1890-2020)

1890						1910					
Name	Type	M	D	D/M	B	Name	Type	M	D	D/M	B
Hentsch & Cie	BQSF	2	5	2.5	0.06	Hentsch & Cie	BQSF	2	3	1.5	0.01
UFG	BQSF	11	21	1.9	0.02	Pictet & Cie	BQSF	2	2	1.0	0.00
Banque Commerce	BQSF	11	19	1.7	0.13	SIP	MEM	8	7	0.9	0.04
Banque Prêts/Dépôts	BQSF	7	12	1.7	0.03	UFG	BQSF	13	11	0.8	0.12
Lombard-Odier	BQSF	3	5	1.7	0.04	Badollet	HORL	3	2	0.7	0.00
Genevoise	ASSR	13	15	1.2	0.23	CEG	BQSF	20	13	0.7	0.02
Pictet & Cie	BQSF	3	3	1.0	0.01	Banque de Genève	BQSF	13	8	0.6	0.06
CEG	BQSF	20	19	1.0	0.33	CCIG	ASSOC	13	8	0.6	0.16
SIP	MEM	7	6	0.9	0.03	Sécheron	MEM	7	3	0.4	0.03
CCIG	ASSOC	13	10	0.8	0.13	City	POL	47	19	0.4	0.00

1937						1957					
Name	Type	M	D	D/M	B	Name	Type	M	D	D/M	B
CEG	BQSF	17	12	0.7	0.23	SIP	MEM	9	7	0.8	0.11
Sécheron	MEM	7	4	0.6	0.07	Sécheron	MEM	9	5	0.6	0.07
Genevoise	ASSR	11	5	0.5	0.00	CCIG	ASSOC	28	8	0.3	0.17
SIP	MEM	8	3	0.4	0.00	City	POL	83	22	0.3	0.00
CCIG	ASSOC	22	8	0.4	0.38	Genevoise	ASSR	8	2	0.3	0.07
Lombard-Odier	BQSF	6	2	0.3	0.03	Givaudan	CHIM	4	1	0.3	0.00
City	POL	71	21	0.3	0.00	Lombard-Odier	BQSF	8	2	0.3	0.12
Givaudan	CHIM	4	1	0.3	0.00	Perret/Berthoud	HORL	4	1	0.3	0.00
Firmenich	CHIM	4	1	0.3	0.00	Canton	POL	115	28	0.2	0.38
Vacheron/Constantin	HORL	4	1	0.3	0.00	CEG	BQSF	19	4	0.2	0.22

1980						2000					
Name	Type	M	D	D/M	B	Name	Type	M	D	D/M	B
Rolex	HORL	8	9	1.1	0.13	Firmenich	CHIM	3	3	1.0	0.11
SIP	MEM	10	5	0.5	0.04	Fondation Wilsdorf	ART	7	4	0.6	0.06
CCIG	ASSOC	32	15	0.5	0.18	Vacheron/Constantin	HORL	7	3	0.4	0.09
Genevoise	ASSR	9	4	0.4	0.00	BCGE	BQSF	14	5	0.4	0.01
Fondation Wilsdorf	ART	7	3	0.4	0.17	Rolex	HORL	11	3	0.3	0.00
Givaudan	CHIM	6	2	0.3	0.00	CCIG	ASSOC	40	10	0.3	0.19
CEG	BQSF	19	6	0.3	0.24	Richemont	HORL	10	2	0.2	0.00
Firmenich	CHIM	7	2	0.3	0.00	Banque Mirabaud	BQSF	5	1	0.2	0.00
Hentsch & Cie	BQSF	8	2	0.3	0.00	Banque Rothschild	BQSF	15	2	0.1	0.00
Pictet & Cie	BQSF	7	1	0.1	0.00	SdA (GE)	ART	15	2	0.1	0.03

Table A.3. Centrality of Organizations (Geneva 1890-2020)

2020					
Name	Type	M	D	D/M	B
Rolex	HORL	7	2	0.3	0.00
Fondation Wilsdorf	ART	9	2	0.2	0.00
Banque Mirabaud	BQSF	7	1	0.1	0.00
City	POL	85	7	0.1	0.00
Canton	POL	109	7	0.1	0.00
CCIG	ASSOC	47	3	0.1	0.02
Givaudan	CHIM	9	0	0.0	0.00
Pictet & Cie	BQSF	7	0	0.0	0.00
Lombard-Odier	BQSF	7	0	0.0	0.00
Firmerich	CHIM	10	0	0.0	0.00

Note. M=Members D=Degree; D/M=Degree/Members; B=Betweenness. 10 most central organizations based on D/M. For 2020, the last four ranks are not to be interpreted, since none of these organizations has established any links.

Table A.4. Centrality of Organizations (Zurich 1890-2020)

1890						1910					
Name	Type	M	D	D/M	B	Name	Type	M	D	D/M	B
Hypo Winterthur Bank in Winterthur	BQSF	10	12	1.2	0.26	ZHK	ASSOC	16	22	1.4	0.18
Crédit Suisse ZHK	BQSF	12	14	1.2	0.03	Zurich Ass.	ASSR	7	9	1.3	0.00
SLM	BQSF	12	13	1.1	0.10	ZKB	BQSF	16	16	1.0	0.00
ZKB	ASSOC	14	11	0.8	0.40	Bank in Winterthur	BQSF	14	12	0.9	0.05
Rieter	MEM	9	7	0.8	0.20	SLM	MEM	10	7	0.7	0.12
Sulzer	BQSF	17	13	0.8	0.00	ZKG	ART	15	10	0.7	0.12
Bank Leu	MEM	3	2	0.7	0.01	Bank Leu	BQSF	11	7	0.6	0.04
Escher Wyss	MEM	5	3	0.6	0.00	MFO	MEM	8	5	0.6	0.04
	BQSF	11	6	0.5	0.07	Sulzer	MEM	7	4	0.6	0.15
	MEM	4	2	0.5	0.00	Crédit Suisse	BQSF	21	12	0.6	0.09

1937						1957					
Name	Type	M	D	D/M	B	Name	Type	M	D	D/M	B
Maag	MEM	6	10	1.7	0.01	Maag	MEM	5	8	1.6	0.00
Swiss-Re	ASSR	7	9	1.3	0.07	Winterthur Ass.	ASSR	13	19	1.5	0.00
Winterthur Ass.	ASSR	13	16	1.2	0.05	Sulzer	MEM	19	24	1.3	0.01
Rieter	MEM	5	6	1.2	0.03	Swiss-Re	ASSR	8	10	1.3	0.19
Zurich Ass.	ASSR	11	12	1.1	0.00	Escher Wyss	MEM	10	12	1.2	0.00
MFO	MEM	9	9	1.0	0.03	MFO	MEM	9	10	1.1	0.05
Kunsthhaus	ART	1	1	1.0	0.00	Crédit Suisse	BQSF	21	23	1.1	0.02
UBS	BQSF	20	18	0.9	0.00	Oerlikon-Bührle	MEM	1	1	1.0	0.00
Sulzer	MEM	13	11	0.8	0.01	AIAG	MEM	11	11	1.0	0.07
ZHK	ASSOC	26	22	0.8	0.36	UBS	BQSF	25	22	0.9	0.18

1980						2000					
Name	Type	M	D	D/M	B	Name	Type	M	D	D/M	B
Maag	MEM	5	7	1.4	0.09	Winterthur Ass.	ASSR	11	9	0.8	0.01
AIAG	MEM	13	16	1.2	0.17	Crédit Suisse	BQSF	17	11	0.6	0.14
Rieter	MEM	8	8	1.0	0.03	Swiss-Re	ASSR	9	5	0.6	0.04
Zurich Ass.	ASSR	11	11	1.0	0.01	Rieter	MEM	6	3	0.5	0.03
Winterthur Ass.	ASSR	14	13	0.9	0.03	Sulzer	MEM	11	5	0.5	0.00
UBS	BQSF	21	19	0.9	0.20	ZKG	ART	16	5	0.3	0.17
Crédit Suisse	BQSF	19	17	0.9	0.02	Vontobel	BQSF	8	2	0.3	0.08
Sulzer	MEM	15	11	0.7	0.03	ZHK	ASSOC	36	8	0.2	0.31
Swiss-Re	ASSR	11	7	0.6	0.03	Unaxis-OC	MEM	7	1	0.1	0.00
ZHK	ASSOC	33	19	0.6	0.23	ZKB	BQSF	14	2	0.1	0.00

Table A.4. Centrality of Organizations (Zurich 1890-2020)

2020					
Name	Type	M	D	D/M	B
Vontobel	BQSF	10	3	0.3	0.00
SwissLife	ASSR	13	3	0.2	0.00
Unaxis-OC	MEM	8	1	0.1	0.00
Sulzer	MEM	9	1	0.1	0.00
ZHK	ASSOC	34	3	0.1	0.03
UBS	BQSF	12	1	0.1	0.00
Swiss-Re	ASSR	15	1	0.1	0.00
Canton	POL	187	1	0.0	0.00
Rieter	MEM	9	0	0.0	0.00
UniZh	UNI	131	0	0.0	0.00

Note. M=Members D=Degree; D/M=Degree/Members; B=Betweenness. 10 most central organizations based on D/M. For 2020, the last two ranks are not to be interpreted, since none of these organizations has established any links.