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Wilhelm Heinz Schröder

Quantitative Analyses of Collective Life Histories: The Case of the Social Democratic Candidates for the German Reichstag 1898–1912

The inquiry into the Social Democratic Reichstag candidates is a segment of a comprehensive project on the collective life-histories of the functionaries of the social democratic working-class movement in Germany from 1890 to 1914[1].
Altogether four inquiries are planned:
the Social Democratic Reichstag candidates 1898 to 1912
the Social Democratic party convention delegates 1897 to 1913
the delegates to the general union congresses 1892 to 1914
the salaried personnel of the party and of the unions in the years 1914 and 1927.
The total population comprises more than 15 000 functionaries. The collection of data is on-going; the numerous problems of my investigations which principally arose in the reconstruction of historical biographies should not be discussed here. My presentation deals with two sets of problems:
- the analysis of the occupations and
- analytical approaches, particulary the comparison of „longitudinal analysis"with „cross-sectional analysis" and „individual analysis" with „aggregate analysis".

[1] This paper was presented at the QUANTUM-SSHA-Conference „Quantification and Methods in Social Science Research: Possibilities and Problems with the Use of Historical and Process-Produced Data", held in Cologne (W.Germany), 10–12th Aug. 1977. The conception of this presentation dealed only with some particular techniques and methods and does not feature any special results of my analyses; for a more detailed discussion of my results see: Schröder, Wilhelm Heinz, Die Sozialstruktur der sozialdemokratischen Reichstagskandidaten 1898–1912, in: Herkunft und Mandat, Beiträge zur Führungsproblematik in der Arbeiterbewegung, Frankfurt a. M./Köln 1976, pp. 72–96; Schröder, W. H., Probleme und Methoden der quantitativen Analyse von kollektiven Biographien, in: Best, Heinrich, and Mann, Reinhard (eds.), Quantitative Methoden in der historisch-sozialwissenschaftlichen Forschung, Stuttgart 1977, pp. 88–125; Schröder, W. H., Arbeitergeschichte und Arbeiterbewegung, Industriearbeit und Organisationsverhalten im 19. und frühen 20. Jahrhundert, Frankfurt a. M./New York 1978. – This paper was translated by Robert Dees (Washington D. C.).

Biographical data require meticulous and critical preparation of sources. In so far as official documents are available – such as family and civil status registers – the data appears to be relatively reliable. But other official documents – like trial records, arrest warrants, personal files – contain on the other hand mostly a considerable mass of misinformation. The evaluation of obituaries as they were customarily published in the Social Democratic daily newspapers appears particularly problematic. Such obituaries which most importantly present a major biographical source for the lesser known candidates, are, however, usually sketchy with regard to precise, usable data since they emphasized primarly the general, the paradigmatic, while the individual life story was treated as of secondary importance. A similar intent can be ascertained in numerous autobiographical contributions by class-conscious workers of this period[2].

The information given by the relevant functionaries themselves emphasized functional character – for example in parlimentary or intra-party manuals, in *curricula vitae* or in official address-books. Depending on the type of publication, certain biographical data would consciously be partly or wholly omitted, modified or distorted. One of the most vivid examples of this is the manipulation of details concerning occupation: often the point in time in which the person in question exercised the stated occupation and particularly the position occupied remain unclear.

The functional character of the biographical details diminished the value of the information and the quantitative basis of the attributes thereby affected. However, it allows for the elimination of contradictions and gaps within the data through comparison with and supplementation through data from other sources. Beside the narrower occupation analysis this operational imprecision impairs principally the results of the studies on inter- and intragenerational mobility[3]. On the one hand the simplifying identification of the father's profession or occupation as an indicator of social origin is not always completely convincing. On the other hand the inexactitude as well as the deficiency of the transmitted information limits the researcher to mere assumptions about origin and intragenerational mobility. First the complementary inclusion of further attributes like school education and occupational training can specify the statements about social origin.

[2] Cf. the autobiographical anthologies: Emmerich, Wolfgang (ed.), Proletarische Lebensläufe, Autobiographische Dokumente zur Entstehung der Zweiten Kultur in Deutschland, 2 vols., Reinbek 1974 and 1975; Klucsarits, Richard, and Kürbisch, Friedrich G. (eds.), Arbeiterinnen kämpfen für ihr Recht, Autobiographische Texte rechtloser und entrechteter „Frauenspersonen" in Deutschland, Österreich und der Schweiz des 19. und 20. Jahrhunderts, Wuppertal 1975.

[3] For a detailed bibliography on social mobility, social stratification, social change in history see: Wehler, Hans-Ulrich (ed.), Bibliographie zur modernen Sozialgeschichte, Göttingen 1976, pp. 96–164 and 241–261.

Take the example, well-known in Germany, of the career of the Bohemian worker Wenzel Holek, who in the course of his life changed positions and occupations frequently and even carried on several jobs at the same time[4]. It will be understood that this continuous occupational change is not functionally suited to a fixed format which sufficiently describes all variants. A multiple occupation can only be represented by reducing it to the principal occupation.

Notwithstanding the definitional difficulties of understanding what was „Arbeit" (work) and „Beruf" (profession/occupation)[5], a reduction to principal occupational positions within a career is necessary to the investigation of generational mobility. In the case of the Reichstag candidates this, for the most part, means the determination of the „trained" occupation (or „first" occupation), of the (at the time of the candidature) „exercised" occupation (or „actual" occupation) and among the salaried personnel of the working-class movement the determination of the last provable occupational position before the first employment as an employee in the working-class movement.

The indicated occupational positions in the occupation-statistics have to be combined and classified in a second step in order, on the one hand, to condense the information content of the acquired detailed results, and, on the other hand, to avoid the mere description of results. To establish comparability with the other populations, it is useful to compare the occupational statistics of the Reichstag candidates with the membership statistics of the socialist union movement and with the official occupation and trade statistics.

Without being able to go thoroughly into the general problems of cross-level analysis[6], a comparison of the Reichstag candidates can be questioned in terms of the following objections (see Tables 1, 2 and 3)[7]:

1. Even if the „trained" or „exercised" occupation can unequivocally be determined, the assignment of this occupation to the appropriate union is not always realizable. The defined occupational recruiting fields of the individual unions

[4] Holek, Wenzel (1864–1935), Lebensgang eines deutsch-tschechischen Handarbeiters, ed. by Paul Göhre, Leipzig/Jena 1909; Holek, Wenzel, Vom Handarbeiter zum Jugenderzieher, ed. by Theodor Greyerz, Jena 1921.

[5] Cf. e. g.: Daheim, Hansjürgen, Der Beruf in der modernen Gesellschaft, Versuch einer soziologischen Theorie des beruflichen Handelns, 2nd ed., Köln/Berlin 1970; Neuloh, Otto, Arbeits- und Berufssoziologie, Berlin/New York 1973.

[6] Cf. e. g.: Hummell, Hans J., Probleme der Mehrebenenanalyse, Stuttgart 1972; Scheuch, Erwin K., Entwicklungsrichtungen bei der Analyse sozialwissenschaftlicher Daten, in: König, René (ed.), Handbuch der empirischen Sozialforschung, 3rd. ed., Stuttgart 1973, Vol. 1, pp. 209–219; Pappi, Franz Urban, Aggregatdatenanalyse, in: Van Koolwijk, Jürgen, and Wieken-Mayser, Maria (eds.), Techniken der empirischen Sozialforschung, Vol. 7, München/Wien 1977, pp. 78–110.

[7] The membership statistics of the German Social Democratic unions (Table 1) from: Ritter, Gerhard A. and Tenfelde, Klaus, Der Durchbruch der Freien Gewerkschaften zur Massenbewegung im letzten Viertel des 19. Jahrhunderts, in: Ritter, Gerhard A, Arbeiterbewegung, Parteien, Parlamentarismus, Göttingen 1976, pp. 99–100.

Table 1: Cross-Level Comparison of Occupations

1	2	3	4	5	6	7
1	Metal Workers	101	15.0	14.9	12.3	4.6
2	Woodworkers	98	14.5	12.2	5.9	7.7
3	Shoemakers	48	7.1	3.5	2.2	6.1
4	Printers	46	6.8	7.5	1.1	26.8
5	Building Workers	40	5.9	6.7	8.9	2.8
6	Tobacco Workers	30	4.5	5.8	1.8	12.0
7	Taylors	23	3.4	3.1	3.5	3.4
8	Textile Workers	20	3.0	6.8	10.7	2.4
8	Sales Workers	20	3.0	0.3	6.6	0.2
10	Miners	16	2.4	2.0	7.4	1.0
11	Painters	15	2.2	2.7	1.1	9.3
12	Transport Workers	13	1.9	2.6	1.7	5.8
13	Carpenters	12	1.8	3.6	1.4	9.7
14	Sculptors	10	1.5	1.2	?	?
14	Bookbinders	10	1.5	1.5	0.7	7.6
14	Operatives, Work. (Gen.)	10	1.5	2.6	8.5	1.2
17	Brewers, Millers	9	1.3	2.9	2.2	4.9
17	Saddlers	9	1.3	0.6	0.5	4.7
19	Lithographers	8	1.2	1.6	0.4	15.5
20	Paperhangers, Decorators	7	1.0	0.3	0.2	5.3
21	Bakers, Confectioners	5	0.7	0.6	2.1	1.1
21	Glass Workers	5	0.7	0.9	0.8	4.5
21	Glovers, Leather Workers	5	0.7	2.6	0.8	12.4
24	Clerical Workers	4	0.6	0.1	?	?
24	Potters	4	0.6	1.4	0.5	10.0
24	Farm Workers	4	0.6	–	–	–
27	Butchers	2	0.3	?	?	?
27	Hairdressers, Barbers	2	0.3	0.3	0.4	2.4
27	Gardeners	2	0.3	0.1	–	0.7
27	Porcelain Workers	2	0.3	2.8	0.6	15.8
31	Coopers	1	0.1	1.6	0.3	20.9
31	Slaters, Tilers	1	0.1	0.6	0.3	8.5
31	Waitors	1	0.1	0.7	3.9	0.7
31	Hatters	1	0.1	1.1	0.3	12.6
31	Quarrying Workers	1	0.1	1.8	1.6	4.2
31	Musicians	1	0.1	–	?	?
–	Academic/Bourgeois Occ.	62	9.2	–	–	–
–	Unknown	24	3.9	–	–	–
Total		673	100.0%			

1 = Candidates: No. Rank Occupation (Freq. Distribut.)
2 = Candidates: assigned Unions/Occupations (Offic.): Name of Occupation
3 = Candidates: Absol. Freq. 1898–1912
4 = Candidates: Relat. Freq. 1898–1912

5 = Unions: Union's Percentage 1895 (All Unions = 100) (n = 255 521)
6 = Official Statistics: Occupation's Percentage 1895 (All Occupations = 100) (n = 6 810 666)
7 = Unions/Official Statistics: Percentage of organized workers within the recruiting field of the union 1895
Classification: 48 German craft, industrial, and general unions in 1912

Table 2: Frequency Distribution of the „First" Occupation 1898–1912 (Classification: Industrial Branches)

Industrial Branch	Election 1898	Election 1903	Election 1907	Election 1912
Metal	37 13.2 %	42 13.1 %	55 16.4 %	59 16.1 %
Building	13 4.6 %	31 9.7 %	29 8.6 %	45 12.3 %
Textile	8 2.9 %	9 2.8 %	9 2.7 %	6 1.6 %
Trade/Transport	11 3.9 %	14 4.4 %	16 4.8 %	18 4.9 %
Mining	1 0.4 %	4 1.2 %	7 2.1 %	5 1.4 %
Clothing/Shoes/Leather	38 13.6 %	35 10.9 %	39 11.6 %	41 11.2 %
Woodworking/Furnishing	50 17.9 %	59 18.4 %	55 16.4 %	61 16.7 %
Food/Drinking/Tobacco	25 8.9 %	24 7.5 %	23 6.8 %	23 6.3 %
Quarrying/Glass/Pottery	4 1.4 %	4 1.2 %	7 2.1 %	6 1.6 %
Printing/Paper	30 10.7 %	30 9.3 %	27 8.0 %	27 7.4 %
Other Occupations	63 22.5 %	69 21.5 %	69 20.5 %	75 20.5 %
Total	280 100.0 %	321 100.0 %	336 100.0 %	366 100.0 %

Election 1898: 280 socialist candidates for 395 areas
Election 1903: 321 socialist candidates for 395 areas
Election 1907: 336 socialist candidates for 397 areas
Election 1912: 366 socialist candidates for 397 areas

Table 3: Frequency Distribution of the „Actual" Occupation 1898–1912 (Classification: Adapted Stratification)

Stratum	Election 1898	Election 1903	Election 1907	Election 1912
Unskilled/Semiskilled Workers	2 0.7 %	3 0.9 %	0 0.0 %	0 0.0 %
Skilled Workers/Sales Craftsmen/ Clerical Workers	26 9.3 %	31 9.7 %	16 4.7 %	6 1.6 %
Working-Class Movement Employees	148 52.9 %	203 63.2 %	249 73.9 %	310 84.7 %
Trade Unions	24 8.6 %	39 12.1 %	68 20.2 %	99 27.1 %
„Secretariat of Workers"	7 2.5 %	21 6.6 %	29 8.6 %	34 9.3 %
„Party Secretariat"	3 1.1 %	6 1.9 %	23 6.9 %	40 10.9 %
Party Editors/Writers	63 22.5 %	71 22.1 %	57 16.9 %	67 18.3 %
Party Employees	33 11.8 %	39 12.1 %	44 13.0 %	39 10.7 %
Co-operative Employees	7 2.5 %	18 5.6 %	17 5.1 %	17 4.5 %
Health Insurance Employees	11 4.0 %	9 2.8 %	11 3.2 %	14 3.9 %
Little Tradesmen/Producers/ Middle Officials	91 32.5 %	72 22.4 %	57 16.9 %	35 9.6 %
Farmers	1 0.3 %	0 0.0 %	0 0.0 %	0 0.0 %
Academic/Bourgeois Occupations	10 3.6 %	10 3.1 %	14 4.2 %	15 4.1 %
Unknown	2 0.7 %	2 0.6 %	0 0.0 %	0 0.0 %
Total	280 100.0 %	321 100.0 %	336 100.0 %	366 100.0 %

often overlapped despite agreements with each other over suitable boundaries – e. g. the fields of an intrasectoral industrial union vs. a multisectoral occupational or branch union[8].

2. An individual could work successively in various industrial sectors and thereby within different union recruiting fields even without occupational change simply by changing the place of work. This was particulary common among unskilled workers, who could work in many different industrial sectors and thereby also be organized, into individual unions. But this applies just as well for a skilled woodworker, who actually should have been assigned to the wood workers union, but in fact – as the corresponding membership statistics make plain – was employed in the metal industry and consequently was organized in the German metal workers union[9].
3. Without concrete information on actual organizational membership, the numerous workers who changed occupations, cannot be clearly assigned to a specific occupation category. These cases hypothetically will be assigned to the union to which they probably belonged on the basis of their occupational training. This applies all the more to the numerous self-employed and salaried personnel of the working-class movement, who as a rule maintained their membership in the union of their former occupation. Unions with multi-sectoral recruiting fields – as for example the factory workers union (General Union of Operatives) – would through this method of classification be badly underrepresented statistically. Only when the membership in such an union is indicated by the life-histories of the candidates does a corresponding assignment follow. An unskilled textile worker, for example, ordinarily is assigned to the textile and not to the factory workers union[10].
4. The difficulties of comparison of the membership statistics of the unions with the official statistics of the German census of occupations in regard to the degree of organization of union recruiting fields was recently discussed[11]. Similar concerns also apply to the use of indications of occupation as simplified social stratum and class criteria (see Table 3). The necessity of compiling comparable statistics, as a rule, leads to the use of a static social stratum or class model and to

[8] Already the first trade-unions-congress (1868) of the socialist „Deutscher Arbeiterschaftsverband" tried to define such boundaries; but nearly every following congress had to discuss new corrections of the boundaries; cf.: Barthel, Paul, Handbuch der deutschen Gewerkschaftskongresse, Dresden 1916, pp. 192–217.

[9] In 1913 e. g. there was one percent of the members of the German metal workers union (1913: 0.55 Mill. members) non-metal-workers, cf.: Jahrbuch des Deutschen Metallarbeiterverbands 1913, Stuttgart 1914, p. 43.

[10] For example August Brey (1864–1940), the leader of the general union for operatives (unskilled and semiskilled workers), worked first as a skilled shoemaker (his „trained" occupation) within the „Handwerk", later he changed and worked as an operative within the industry (his occupational position before the first employment as an employee of the union).

[11] Cf.: Ritter, Durchbruch, pp. 99–100.

the neglect of the historical dimension, which actually requires a dynamic model for the adequate depiction of historical change.

Taking into account the father's occupation and the early birth dates of the oldest Reichstag candidates, the time period of my investigation of the candidate analysis encompasses more than a century. In the course of this century, however, social and economic functions, ascribed status etc. of the traditional professions/occupations changed or ceased to exist, while numerous new occupations/professions came into being and restructured the traditional social strate. This change is documented most clearly in the traditional separation of the professions/occupations along the lines of the legal status of the self-employed. These categories increasingly lost their meaning as relatively clear status criteria at the latest with the social and economic change of the German „Handwerk" and trade and with the general introduction of freedom of choice of occupation, and lived from then on primarily as elements of ideology.

However, in the case of the working-class movement the legal right of self-employment was of special social and political importance in the early period of the movement. This right of self-employment permitted those workers who had been fired or boycotted for political reasons to continue promoting the activities of the working-class movement[12]. Nevertheless, there is no patent recipe for the crux of the cross-level analysis problems; the researcher is limited to adapting the stratum criteria of his own investigation to the fixed classification of comparative historical statistical publications. The necessity of having to compare also led the official statistics of the German Reich to only rarely deviate from the method of survey practiced since 1875 and 1882. Thereby the German Reich statistics steadily lost its capability to adapt to and validly measure historical change using dynamic categories of the observable phenomena.

Methodology

The theoretical approaches (e. g. organization theory, work and conflict theory) followed in the framework of the whole project cannot be presented here[13]; but the delimination of the individual fields of inquiries according to different groups of functionaries allows at least the positional approach of historical elite-research to be recognized[14]. Without taking up the controversial discussion over the content of

[12] Cf.: Schröder, Sozialstruktur, pp. 85–88.

[13] Cf.: Schröder, Arbeitergeschichte.

[14] For the elites-studies cf. e. g.: Eldersveld, Samuel J., Political Parties, A Behavioral Analysis, Chicago 1964; Valen, Henry, and Katz, Daniel, Political Parties in Norway, A Community

the concept „elite", the classification of most partial investigations in the framework of empirical research of elites – for lack of a correspondingly defined scientific field – appears justified. The investigated functionary groups in the figurative sense – taken as a whole – can be described as „functional elites" within the working-class movement. In keeping with this methodological positioning, questions are posed as to the social profile, the selection and circulation as well as the power structure of the investigated functionary groups. Thereby precisely in the realm of the working-class movement the question of the elites as „index of the social structure"[15] acquires a central meaning.

The disadvantages of this method of positional analysis are sufficiently known. They arise for the most part through the simplifying assumption that formal and actual power structures are identical and that the formal authority to which a position will be attributed is identical to the actual exercise of power of the position holder. While the contemporary research of elites at least can serve as supplementary and corrective of the other two methods (decision-making approach and reputational approach), the historian remains limited mostly to the positional approach merely for lack of sources. The observation of historical decision-making processes and actual power structures is possible only with great difficulties, and the interviewing of historical participants is rarely possible.

In this sense the more narrow selection process, for example, which finally led to the nomination of the Reichstag candidates can be reconstructed only in cases in which the conflicts were so spectacular as to break out into public view[16]. Otherwise the accounts of the actual nomination process moved on an ideal-typical level or the accounts are only hypothetical in nature as a mediate result of the analysis.

An historical analysis of the personnel change and/or of the structural change of the candidate group cannot be realized in a dynamic approach. That is, there exists no possibility of following the historical development continuosly over a period of time. A certain number (at least two) chronologically successive static points in time must be produced and compared with each other. In such a methodology im-

Study, Oslo/London 1964; Zapf, Wolfgang, Wandlungen der deutschen Elite, Ein Zirkulationsmodell deutscher Führungsgruppen 1919–1961, München 1965; Zapf, Wolfgang (ed.), Beiträge zur Analyse der deutschen Oberschicht, München 1965; Scheuch, Erwin K., Führungsgruppen und Demokratie in Deutschland, in: Die Neue Gesellschaft, 13. Jg. (1966), pp. 356 ff.; Ammon, A., Eliten und Entscheidungen in Stadtgemeinden, Die amerikanische „Community-Power"-Forschung und das Problem ihrer Rezeption in Deutschland, Berlin 1967; Barnes, Samuel S., Party Democracy. Politics in an Italian Socialist Federation, New Haven/London 1967; Ludz, Peter Ch., Parteielite im Wandel, Funktionsaufbau, Sozialstruktur und Ideologie der SED-Parteiführung, 3rd. ed., Köln/Opladen 1970; Zoll, Rainer (ed.), Gemeinde als Alibi, München 1972; Witjes, Claus, Gewerkschaftliche Führungsgruppen, Berlin 1976.

[15] Cf.: Zapf, Wandlungen, p. 207.

[16] Cf. e.g. the case of Paul Göhre (member of the German „Reichstag": 1903, 1910–1918): Heine, Wolfgang, Demokratische Randbemerkungen zum Fall Paul Göhre, in: Sozialistische Monatshefte, 8 (1904), pp. 281–291.

precisions must be tolerated, since short term change in the unobserved periods in-between cannot be identified, such that the comparison of the net movement possibly can result in ungrounded or imprecise explanations of structural change or of stability. The closer to each other those momentary points of analysis are, the more exact and differentiated can such structural processes of change be traced on the basis of the construction of operational factors. If the points of survey in time are sufficiently close and regular, than ultimately time-series as well as longitudinal analyses is possible[17].

The delimitation of the positional elite „Reichstag candidates" to be investigated anticipates a series of methodological decisions:

1. The Reichstag elections took place in the rule every four or five years (1898, 1903, 1907, 1912). The positional elite „Reichstag candidates" remains therefore not continuosly determinable, rather constituted itself exclusively for the electoral campaigns. The „lifetime" of the group was limited to the few months or weeks before the election; the „group-lifetime" therefore does not describe the variable „time" as a continuum, but rather as a regulary repeated period of time. Ultimately, the impossibility of surveying continuous data even in this limited time period requires the compression of the „group-lifetime" to the point in time of the election, resulting in the decision for cross-sectional analysis.
2. Four elections accordingly mean four points of survey and four cross-sectional analyses. In order to be able to ascertain the change within the structure of the Reichstag candidates group, these four cross-sectional analyses must be compared with each other.

   The first methodological defiency is that an important preliminary decision for the procedure of cross-sectional analysis cannot be problematized at all: the determination of the „optimal" spaces between the points in time of the cross-sections. At least for all analytical questions which go beyond the more narrow election analysis, one must carefully check to what degree the proposed analytical cross section on the time axis can validly measure the change. The second methodological defiency is that the population for the inquiry does not remain constant over the course of the four elections but changes in each election by relatively high rates. Not only do these transformations create numerous difficulties in analytical comparison, but also these changes in the population complicate statements on the rank of the position criterian „Reichstag candidates". For example, does the overrating of the electoral success within the Social Democratic Party find its equivalent in an equally high evaluation of the Reichstag candidacy and their personal representatives? Did candidacy represent a high reputational status that was recognized by the party? Did candidacy presuppose a certain career in the party or in the unions? To what degree did candidacy have influence later on the professional career as a salaried functionary in the organiza-

[17] For the general problems of time-series and longitudinal analyses see e. g.: Dierkes, Reinolf, Die Analyse von Zeitreihen, in: Van Koolwijk, Jürgen, and Wieken-Mayser, Maria (eds.), Techniken, pp. 111–169.

tions of the working-class movement? What happened to those candidates who were not renominated? In short: the inquiry of the life-histories of those candidates who were no longer or were not yet nominated is just as important as the investigation of those who were either renominated or were nominated for the first time.

This preliminary decision for carrying out cross-sectional analysis will also be favored through the use of SPSS[18], which is tailored to the comparison of cross-sectional analysis in the above mentioned sense. This preliminary decision simultaneously means deciding against an analysis of the individual biographies evaluated within their own context, and in favor of the dissection of the biographies, and then evaluation of the aggregated mass of single data independent of their original context. The goal of my inquiry is to work out a collective biography of the group of Reichstag candidates. The subject of investigation of this collective biography consists of the sum of the individual life-histories.

The first procedure of comparatively evaluating these individual life-histories consists of individual analysis which at least through the SPSS performance is not explicitly provided for. The individual analysis examines each individual life-history separately for recognizeable individual correlations and courses of events and compares those individual results with the other life-histories. Not until the end are these individual results eventually aggregated. The second procedure consists of the aggregate analysis[19] which is facilitated by SPSS. The aggregate analysis breaks up the individual connections and separates the life histories into individual data which are then compares and/or aggregated with the individual data of other life-histories. The criticism which is often made up by historians against the aggregate analysis, that man did not exist as a group or as a carrier of aggregated single data, but rather as a whole individual, can be rebutted precisely with the aid of individual analysis.

For analysis of collective life histories there exists therefore, a pressing need to write a program package which fulfilles the differentiated requirements of biographical individual analysis, particularly:

1. Only one complete coding of the data onto cards, not a separate coding for every cross-sectional analysis;
2. Freefield format with variable record-lengths which is reconciled as close as possible to the usual form of biographical presentation;
3. Structuring into different fields of data and accounts dimensioned by time which allows the optional cross-sectional-analysis for all variables dependent on time;
4. Possibilities of comparison of individual sequences and connections.

[18] Cf.: Nie, Norman H., et al., SPSS, Statistical Package for the Social Sciences, 2nd ed., New York 1975; Beutel, Peter, et al., SPSS, Statistik-Programm für die Sozialwissenschaften (Kurzbeschreibung Programmversion 6), Stuttgart/New York 1976.

[19] For a discussion within a general context see e. g.: Pappi, Franz Urban, Aggregatdatenanalyse, pp. 78–110.

Of course, the research cannot wait for the development of such a program package. In the following I offer no replacement for such a package, but describe several assisting operations on the basis of SPSS. The conscious limitation to the discussion of possibilities of SPSS reflects not only the experiences that I have personally had with SPSS, but rather the comprehensive availability of SPSS. This program has been implemented in almost all the German university computer centers and is used by the majority of historians in Germany[20].

The starting point of my reflections is the so called „configuration-frequency-analysis" (CFA), as was developed by J. Krauth and G. A. Lienert and which is available in a few computer centers in Germany[21]. The CFA certainly presents a considerable improvement over existing multivariate analysis procedures. In contrast to the other procedures (like factor-, path-, cluster-analysis and multiple regression) the CFA presents a parameter-free procedure and presupposes no distribution forms whatsoever. Without wanting to go any deeper here into the various performances of the CFA, the CFA permits the construction of attributes-configurations; that is, the combination of various classes of determined attributes into a configuration, by which assessments of certain configuration frequencies will be made easier through the printing of expected probabilities of those configurations. At least two reasons support the adaption of important elements of the CFA by SPSS-users:

1. Historical data are surveyed to a large extent only at nominal-scale level, and therefore are not utilizable with the customary multivariate analysis procedures which presuppose a higher scale-level[22]. This caveat applies particulary to data from life-histories.

[20] For the distribution of SPSS in W. Germany see: Beutel, Peter, et al., SPSS, p. 163.

[21] See: Krauth, Joachim, and Lienert, Gustav Adolf, KFA, Die Konfigurationsfrequenzanalyse und ihre Anwendung in Psychologie und Medizin, Freiburg/München 1973; Roeder, Burkhard, Die Konfigurationsfrequenzanalyse nach Krauth und Lienert, in: KZfSS, 26(1974), pp. 819–844; an applied example for CFA with historical data: Best, Heinrich, Die quantitative Analyse inhaltlicher und kontextueller Merkmale historischer Dokumente, in: Best, Quantitative Methoden, pp. 162–205.

[22] For a theoretical and empirical comparison of two recently suggested models (HARDER's DO and GOODMAN's ECTA) and the development of both models as an new approach see: Küchler, Manfred, Multivariate analyzing of nominal-scaled data, in: ZfS 5 (1976), pp. 237–255.

[23] This phobia represents one of the most important problems for teaching quantitative methods on University. Up to now the didactics of quantification has been rather neglected; as a first step for solving this problem the QUANTUM-Action-Group „Didactics of Quantification" (DidQuant) has been established, cf.: QUANTUM Information, No. 2 (May 1977), p. 11, and 4 (Oct. 1977), p. 4.

2. A simplified CFA with assistance from SPSS leads not only to a spectacular demonstration effect of multivariate connections through the emergence of certain types of configurations, but also helps to reduce the still ineradicable statistics-phobia of German history students[23] and to bring about recognition of the necessity of such procedures.

The CFA according to Krauth and Lienert, however, starts from a static model and still does not signify any decisive progress for the analysis of life-histories. Only by addition of elements from the CFA and from time-series analysis can we make any progress. The CFA presupposes the following classification standards for the codes of the variables:

1. *Unambiguousness* – the code of a variable can be attributed to each object
2. *Exclusivity* – only one single code of a variable applies for each object
3. *Completeness* – each object must own a code of the variable

However, the postulate of completeness can rarely be fulfilled with historical data, so one would do better to speak of a typologization rather than a classification. In addition there are:

4. *Chronology* – the positions of the configuration must be chronologically ordered.
5. *Thematic Homogeneity* – the position series must fulfill the conditions that the position sequence only follows the development of *one* phenomenon over time.

To recapitulate, the new configuration-sequence-analysis (CSA) can be defined as a „time-ordered sequence of configuration positions for the observation of a single phenomenon in the course of time"[24].

I have chosen an example from bureaucracy research from my area of investigation to demonstrate the simplified CFA or the CSA. The prevalent stereotype of the research on the history of the German working-class movement is that the Social Democratic movement organizationally consolidated itself between 1890 and 1914 and developed an overgrown bureaucracy[25]. Accordingly one traces numerous developments within the workers movement back to this bureaucratization; the catchword „bureaucratization" serves generally as an unreflected explanation for negative developments.

Taking Max Weber's bureaucracy model as a basis for our analysis, „bureaucracy" can be nailed down and measured by means of 11 main characteristics[26]. Of these

[24] For definitions of „time-series" see: Dierkes, Analyse, p. 111.

[25] Cf. the minimum-number of working-class-employees:
party/trade unions: 659 (1903), 1871 (1907) and 3297 (1912)
co-operative soc.: 7081 (1903), 12783 (1907) and 26402 (1912)
for the complete statistics see: Fricke, Dieter, Die deutsche Arbeiterbewegung 1869–1914, Berlin (DDR) 1976, pp. 741, 776.

[26] Cf.: Weber, Max, Wirtschaft und Gesellschaft, 5th ed., Tübingen 1972, pp. 120–130, 541–579 and 825–837; for a discussion on Weber's approaches cf. e.g.: Mayntz, Renate, Max Webers Idealtypus der Bürokratie und die Organisationssoziologie, in: Mayntz, Renate (ed.), Bürokratische Organisation, Köln/Berlin 1971, pp. 27–35.

characteristics, however, at best only half can be found in the life-histories of the holders of bureaucratic positions. Next to the main occupational activity and the fixed pay for the exercise of official functions stands one of the most important attribute of bureaucratization – according to Max Weber – the formation of fixed sequential career patterns with institutionalized steps of higher and lower ordered bureaucratic positions.

To see how I have examined the characteristic „career patterns" for my population, please inspect Tables 3 and 4 and Figures 1, 2, 3 and 4. The prevalent methodology for cross-sectional analysis requires, that the attributes of each case from the historical time perspective of every cross-sectional analysis must be examined for its specific form and for its sequence in time. The variable „Position Union Employee" would be answerable, with regard to the life-history of the candidate, either in the form of a dummy-variable (yes/no) or ordered according to time (e. g. „earlier", „at the time of candidacy", „later"). However, this says very little about the sequence of the positions of union employees. The question of kind, form and course of career patterns remains unanswered.

The various career stations of the variable „sequence" will be punched in consecutively with the respective particulars of the occupied position and the year of the beginning and end of tenure. Thereby a variable record-length is possible. Particularly with the help of the SPSS-Compute-Card the whole position-codes can be combined into the position-sequence-variable which can have a maximum of 12 position-columns. The sequences can be clearly documented through a simple frequencies-run. However, indication of the probabilities to expect – as with CFA – is lacking here. Nevertheless, the possibility exists in principle to determine each year of the time-period as a section of a cross-sectional analysis and not only the year of the elections. In this manner one can produce time-series for particular attributes by juxtaposition of periodical cross-sectional analyses. All variables which can be preserved in a time span are suitable for such configurations. Configuration-combinations with static individual attributes – like place of birth (see Figure 4) – can be realized at will.

My results on the development of career patterns within the working-class movement organizations, however, can be summarized as follows. Contrary to the prevalent research stereotype, only the beginnings of a bureaucratic development are to be found, a fixed and differentiated career pattern did not exist. Not even the emergence of the „party secretaries" as a clear goal-position constitutes a career pattern. The results of these analyses on bureaucracy perhaps will help to revise Robert Michels' well-known bias concerning the bureaucracy and oligarchy within the Social Democratic working-class movement in Germany before World War I[27].

[27] Cf.: Michels, Robert, Zur Soziologie des Parteiwesens in der modernen Demokratie, 1st ed., Leipzig 1911 (reprint of the 2nd ed., Stuttgart 1957); Michels, Robert, Die deutsche Sozialdemokratie, Parteimitgliedschaft und soziale Zusammensetzung, in: Archiv für Sozialwissenschaft und Sozialpolitik 23 (1906), pp. 471–556. – For a description and a critical discussion on the approaches of Michels see: Pfetsch, Frank, Robert Michels als Elitentheoretiker, in: Politische

Table 4: Configuration-Sequence-Analysis (Computed by SPSS)

Code

columns	format	variable	
o1 – o2	F2.0	Beginning First Position (Year)	
o3 – o4	F2.0	Finish First Position (Year)	
o5	F1.0	First Position	
o6 – o7	F2.0	Beginning Second Position (Year)	
o8 – o9	F2.0	Finish Second Position (Year)	
1o	F1.0	Second Position	... Six Positions

SPSS-Procedure

Compute Sequenz = (Posit 1*10**5) + (Posit 2*10**4) + (Posit 3*10**3) + (Posit 4*10**2) + (Posit 5*10) + Posit 6

Frequencies General = Sequenz ...

Configuration-Tableau: The Case of Trade Unions Employees

Configuration-sequence	Total Populat.	Election 1898	Election 1903	Election 1907	Election 1912
1	86=67.2 %	8=61.5 %	27=61.5 %	35=68.6 %	59=64.1 %
10709	1	1	0	0	0
12	6	0	2	2	5
123	1	0	0	0	1
13	7	3	2	3	2
1313	1	0	0	0	1
1351	1	0	1	1	1
138	1	0	0	0	1
14	14	0	2	3	13
15	3	0	1	1	3
156	1	0	0	1	0
16	1	0	0	0	1
17534	1	0	0	1	1
1794	1	0	0	1	1
18	1	1	1	1	1
19	1	0	0	1	1
195	1	0	1	1	1
Total	128=100 %	13=100 %	36=100 %	51=100 %	92=100 %

Vierteljahresschrift 7 (1966), pp. 208 ff.; Ebbighausen, Rolf, Die Krise der Parteiendemokratie und die Parteiensoziologie, Eine Studie über Moisei Ostrogorski, Robert Michels und die neue Entwicklung der Parteienforschung, Berlin 1969; Röhrich, Wilfried, Robert Michels. Vom sozialistisch-syndikalistischen zum faschistischen Credo, Berlin 1972.

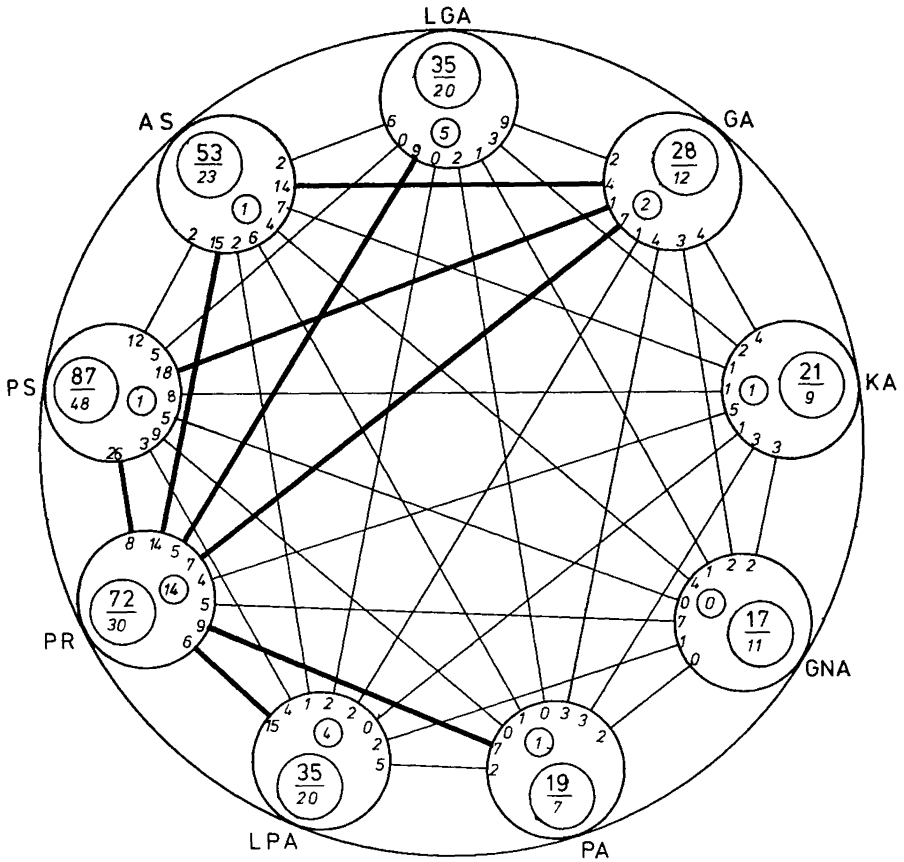
In closing, allow me to express the hope that through a methodological reorientation of the analysis of collective life-histories the one-sided bond of question formulation will be broken from the empirical research of elites and a more comprehensive formulation will be established.

Abbreviations

Abbrev.	Code	Meaning
KA	0	„Kein Arbeiterbeamter" (the candidate had not been employee of working-class movement up to 1914)
GA	1	„Gewerkschaftsangestellter (Lokal und Regionalebene)" (trade union employee with local and regional functions)
LGA	2	„Gewerkschaftsangestellter (Leitungsfunktion)" (trade union employee with leading functions)
AS	3	„Arbeitersekretär" (generally a trade union employee with most important local functions: representative of all local unions and chief of an office for advertising the workers)
PS	4	„Parteisekretär" (party secretary)
PR	5	„Parteiredakteur, Parteischriftsteller, Berichterstatter" (party editors, writers, authors, reporters)
LPA	6	„Parteiangestellter (Leitungsfunktion)" (party employee with leading functions)
PA	7	„Parteiangestellter (ohne Leitungsfunktion)" (party employee without leading functions)
GNA	8	„Genossenschaftsangestellter" (Co-operative employee)
KA	9	„Krankenkassenangestellter" (health insurance employee)

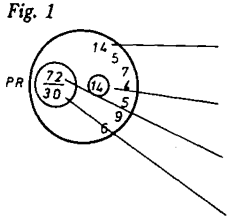
Example: Meaning of sequence-configuration „123"
„123" describes the carreer of a working-class movement employee: first he was occupied as GA (First Position), then he was occupied as LGA and finally he was occupied as AS (Last Position).

Fig. 1: Frequency Distribution of all Pairs of Direct and Indirect Configuration-Sequences[a]



[a] cf. Explanation; the configuration-sequences were computed as follows:
(Position=P) P1/P2, P1/P3, P1/P4, P1/P5, P1/P6, P2/P3, P2/P4, P2/P5, P2/P6, P3/P4, P3/P5, P3/P6, P4/P5, P4/P6, P5/P6

Fig. 1



Frequency of sequence-position „PR":
14 „Arbeitersekretäre" had become editor/writer within their later career
Frequency of self-recruitment:
14 editors/writers had become again „PR" within their later career
Total Frequency of all direct and indirect Sequences with the special positions:
there are 72 sequences with „PR"
Total Frequency of „Last positions":
within 30 configuration-sequences the last position of career is „PR"

Fig. 2: Frequency Distribution of the Sequence „First Position/Last Position"

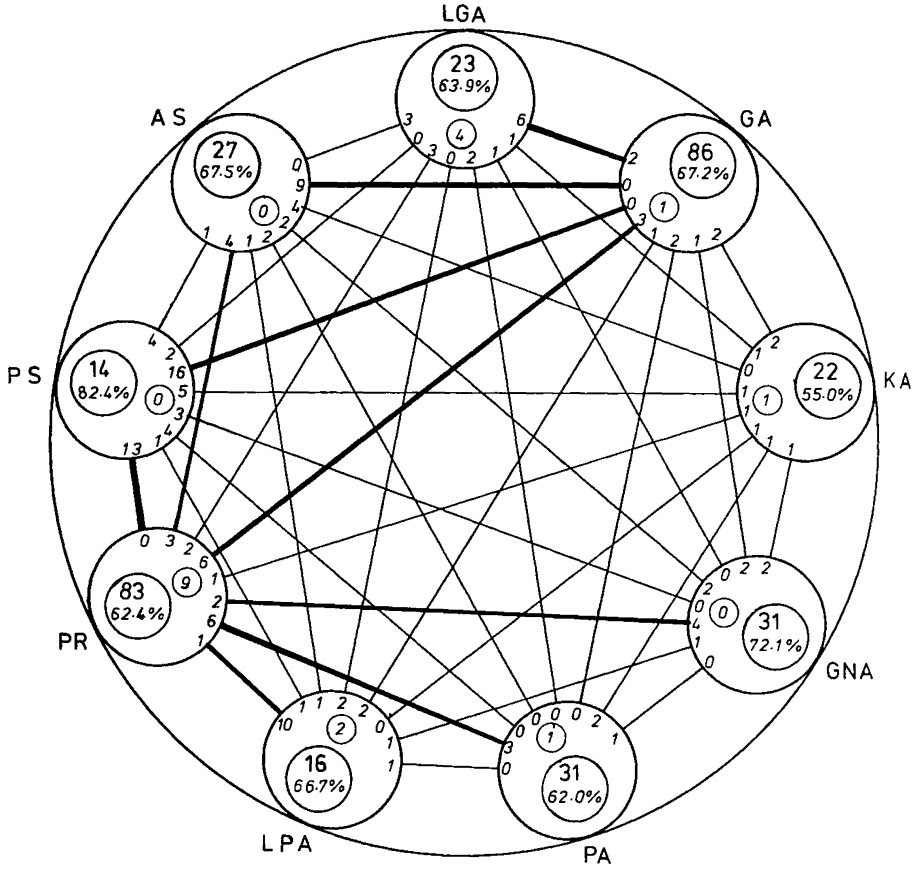
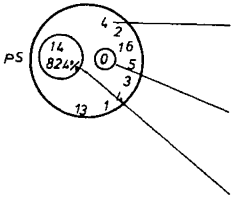


Fig. 2:



Frequency of configuration-sequences if the last position is equal with the special position:
4 „Arbeitersekretäre" (= First Position) finished their career as „Parteisekretäre"

Frequency of self-recruitment:
There ist no „Parteisekretär", who began as a „Parteisekretär" and finished the career (the configuration should have at least 3 positions) again as „Parteisekretär"

Frequency of immobile „Parteisekretäre" (only one position of career):
14 candidates began as „Parteisekretäre" and remained „Parteisekretäre"

Fig. 3: Configuration-Sequence of Trade-Unions-Employees („First Position" = „GA")

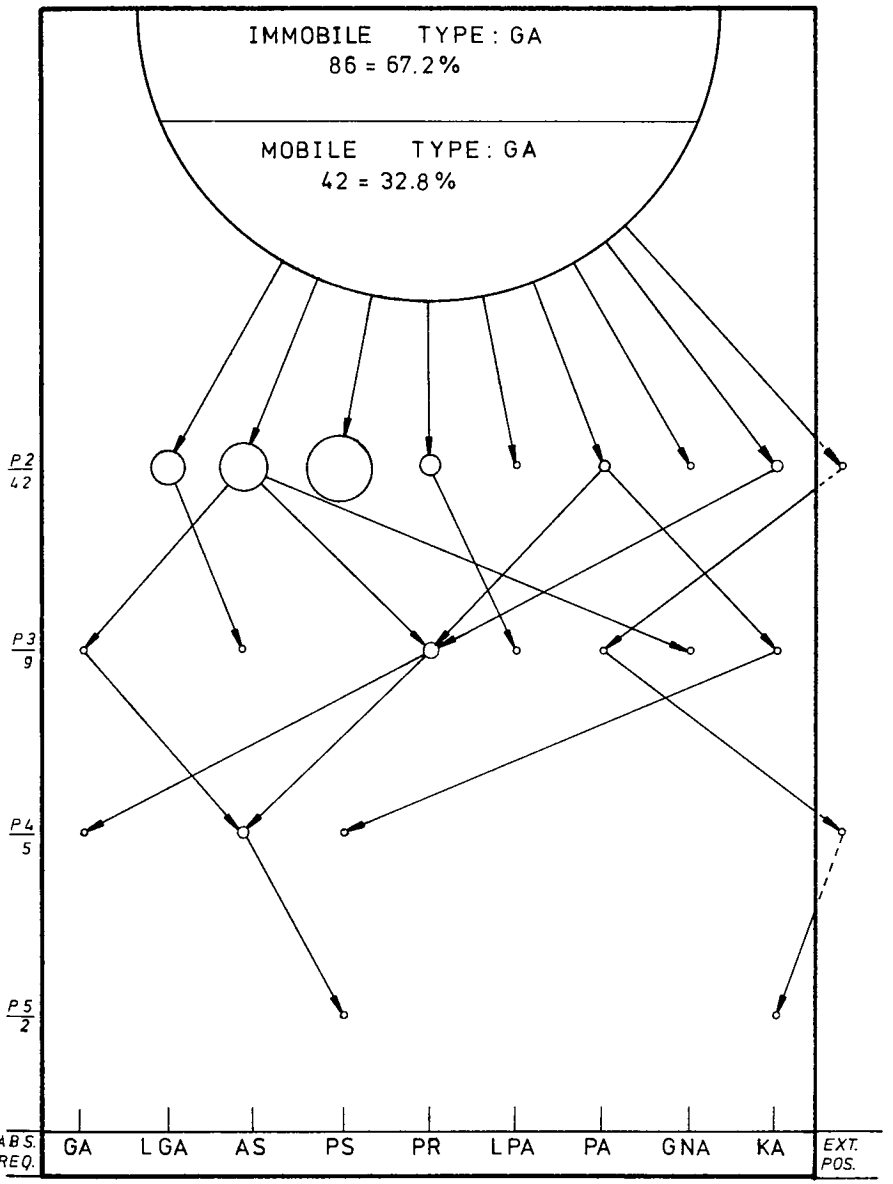


Fig. 3:

14 mm

⌀ diameter of circle = number of cases

Position 1: 14 „Gewerkschaftsangestellte" (GA) became „Parteise-

P1/P2 kretäre" (= 2. Position)

Fig. 4: All Candidates, Candidates 1898 and Candidates 1912 Compared by the First Year of Career-Entrance

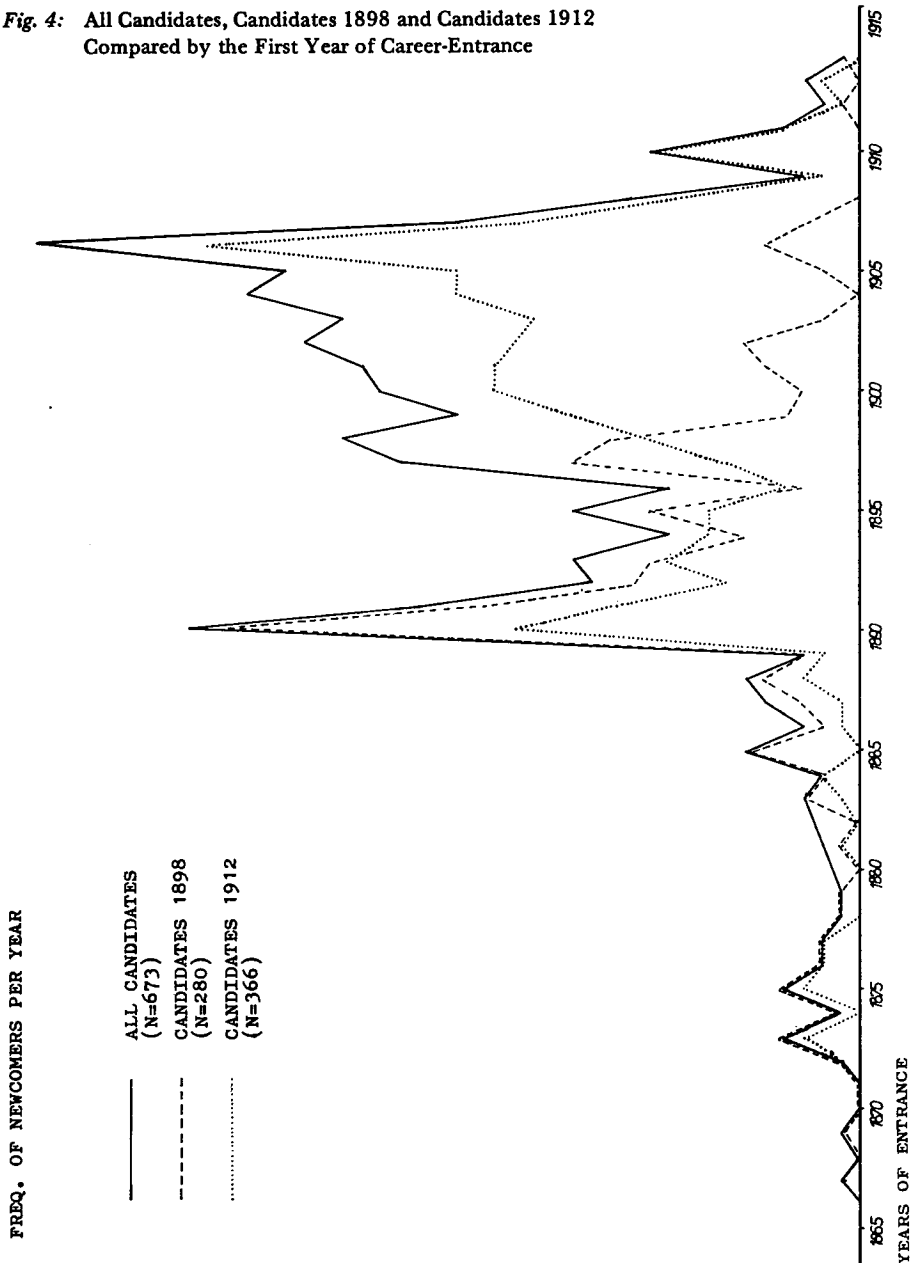
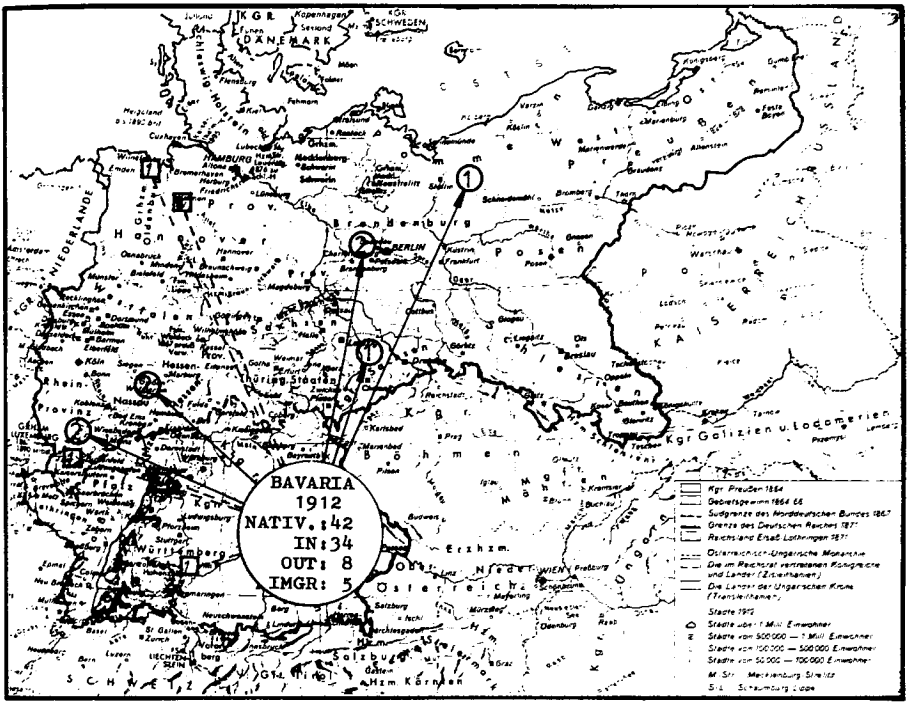


Fig. 5: Regional Mobility (Place of Birth vs. Place of Residence)
The Case of the Bavarian Candidates 1912

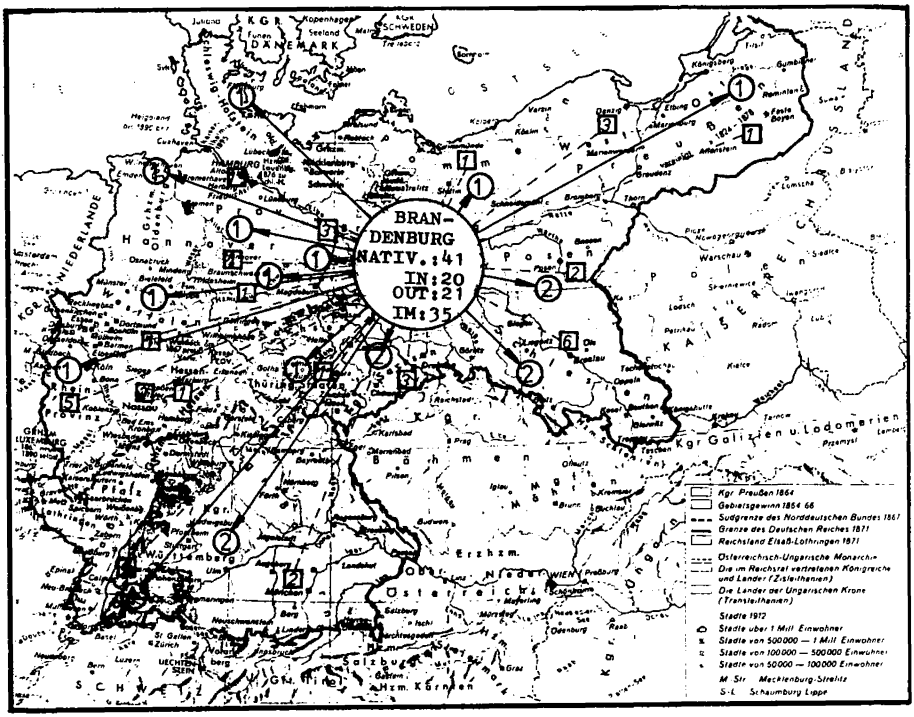


Map from: F. W. Putzger, Historischer Weltatlas, 98th ed., Berlin 1974, p. 97 (Mitteleuropa 1866–1914)

Explan.: 42 candidates were borne in Bavaria. 34 Bavarian candidates lived still in the region of their birth. Only 8 Bavarians were mobile and worked in other regions of Germany. Only 5 Non-Bavarian candidates lived in Bavaria.

○ Freq. of Bavarian „emigrants" per region
□ Freq. of Bavarian „imigrants" per region

Fig. 6: Regional Mobility (Place of Birth vs. Place of Residence)
The Case of the Brandenburg Candidates 1912



Explan.: 41 candidates were born in Brandenburg (centre: Berlin).
20 candidates lived still in the region of their birth.
21 Brandenburg candidates were mobile and worked in other German regions.
But 35 Non-Brandenburg candidates lived in Brandenburg.

○ Freq. of Brandenburg „emigrants" per region
□ Freq. of Brandenburg „imigrants" per region