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The debate over Jewish employment structure in the *Journal for Demography and Statistics of the Jews* (1905-1931)

Nicolas Vallois¹

Abstract

The late 19th century saw the multiplication of statistical studies on Jewish populations. This literature is now known as “Jewish Statistics” or “Jewish Social Science” (JSS). This article focuses on the articles published in *der Zeitschrift für Demographie und Statistik der Juden* (*Journal for Demography and Statistics of the Jews*, ZDSJ). The ZDSJ was the main journal in JSS and appeared from 1905 until 1931.

Existing scholarship on JSS has either focused on the influence of Zionism (Hart, 2000) or eugenics and race theory (Efron, 1994). This article proposes to relate JSS to economic problems and economic theories. As suggests the intellectual profile of the main contributors to the ZDSJ, we argue that JSS was a by-product of the German historical school in economics. We then analyze how this intellectual background was applied to the main economic concern in JSS, which was the question of Jewish “occupational” or employment structure.

JEL Code: B15; C10; Z12

Keywords: Jews, Capitalism, Statistics, Empirical Economics, German Historical School, History of economics.

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Introduction

On the 27th December 1901, Max Nordau declared at the Fifth Zionist Congress in Basel :

“An exact statistical research of the Jewish People is an uppermost necessity for the Zionist movement [...]. We must know more. [...]. We need an exact anthropological, biological, economic and intellectual statistic of the Jewish People. We must have quantitative answers to the following questions : How is the Jewish People physiologically constituted ? What is the average size (of the Jew)? [...] What are the numbers related to marriage ? [...] Do the Jews have their own particular or characteristic criminality, and if so, what is it ? [...] What sort of occupations do Jews pursue ? [...] What do they eat and drink ? [...] How much income do they require for food, clothing, housing, intellectual and spiritual needs ?”

(Nordau, [1901] 1909, pp.113-114)

Nordau was not the first Jewish intellectual to call for “an exact statistical research of the Jewish People”. The application of quantitative methods to the study of the Jewish population had also been advocated by Leopold Zunz in his 1823 article entitled “Prolegomemon to a Future Statistic of the Jews” (Zunz, 1823)². Yet Nordau's discourse gave a stronger and “Zionist impulse” to this statistical enterprise. After the Zionist Congress in Basel, Nordau's speech was reprinted, circulated widely in Zionist circles (Hart, 2000, p.31-34), and was soon followed by an impressive multiplication of statistical publications about the Jewish population. This statistical literature is now known as “Jewish Social Science” or “Jewish Statistics”³ (hereafter JSS; Efron, 1994; Hart, 2000; Penslar, 2001).

If JSS had some antecedents in the 19th century⁴, its most important developments were clearly located in early 20th century Germany. In 1903, two years after Nordau's speech, German-Jewish intellectual leaders and communal institutions created in Berlin an organization meant as a gathering place for JSS: the Committee for the Establishment of a Bureau for Jewish Statistics, subsequently called “Association for Jewish Statistics” (*Verein für jüdische Statistik*, hereafter the *Verein*). In 1904, the *Verein* created a Bureau for Jewish Statistics (*Büro für Jüdische Statistik*, hereafter the *Büro*), which had affiliated branches all over Europe⁵. The *Büro* was in charge of the publication of the *Journal for Demography and Statistics of the Jews* (*Zeitschrift für Demographie*

2 It should be noted that these calls did not remain purely programmatic in the 19th century. One out of many examples: in 1871, the Israelite Synod of Augsburg conducted an important statistical study of the Jewish population in Germany, Austria-Hungary and Switzerland (Nossig, 1903b, pp.12-13)

3 In this article, we use the expressions “Jewish Social Science” and “Jewish Statistics” as synonyms. The same remark applies to “Jewish statistician” and “Jewish social scientist”.

4 Alfred Nossig even argues that Jewish statistics is actually 3000 years old, on the basis of a quotation from the Bible where Moses and Aaron are supposedly “counting” and “collecting data” about the *Bnei Israel*: they “assembled the whole congregation together, who registered themselves by clans, by fathers' houses, according to the number of names from twenty years old and upward, head by head” (Book of Moses, I. 18-19; Nossig, 1903b, pp.12-13)

5 On the institutionalization of the *Verein* and the *Büro*, see the first chapter in Hart, 2000.

und Statistik der Juden; hereafter ZDSJ).

This article focuses on the 435 articles that were published in the ZDSJ between 1905 and 1931, which we consider as a representative sample of the JSS literature of the early 20th century. JSS has received little attention in Jewish history (Hart, 2000, p.4). Existing scholarship on Jewish statistics has either focused on the influence of Zionism (Hart, 2000) or eugenics and race theory (Efron, 1994). An important concern for JSS was indeed the demographic decline of the Jewish population in Germany, and more generally in Western Europe. This concern was framed as a “problem” from the perspectives of both Zionism and race theory. Many Jewish statisticians were deeply committed Zionists and considered the strong decrease of the Jewish population in Western Europe as showing the limits of assimilation policies, and hence as an argument in favor of a large emigration to Palestine. The demographic decline was also seen as a threat to the conservation of the “Jewish race”. Jewish social scientists largely accepted race theory, turning eventually negative race-based stereotypes about Jews into positive ones (Efron, 1993).

Rather than see the writings in the ZDSJ as a collection of anthropological fantasies in early Zionism, this article proposes to relate JSS to economic problems and economic theories. Our claim is that JSS matters for historians of economic thought for two reasons. We will show first that Jewish social scientists were intellectually grounded in late 19th century German economics, and JSS can therefore be regarded as a “by-product” of the German historical school in economics. Besides economic ideas, economic *problems* were important in JSS. Jewish statisticians were particularly interested in the economic question of Jewish “occupational” or employment structure: Jews were seen as excessively concentrated in low-productive sectors, thus raising a debate over Jewish “productivization”, i.e. on whether and how an occupational shift to more “productive” sectors could occur (Kahan, 1986, p.43).

Studying JSS from the perspective of economics has two important methodological consequences in this article. First, we focus mainly on the articles published in the ZDSJ that were about “economic issues” in Jewish statistics, i.e. mostly about occupational statistics. We excluded most of the purely anthropological articles that dealt only with the question of the purity of the Jewish race. We will not ignore the fact that economic reflections in JSS were largely informed by race theory and physical anthropology. Yet we will not analyze in depth the epistemological status of race theory in JSS, nor offer a comparison with other economists of the same period.

This article is also based on prosopographic rather than biographic methods. Some contributors to the ZDSJ such as Arthur Ruppin or Felix Theilhaber were strong personalities. They were widely known in the Jewish intellectual community for their personal and controversial opinions that they expressed in various outlets outside of the ZDSJ.. It is our assumption that the

ZDSJ can nonetheless be treated as a coherent object for the historian. Individual differences between authors will not be ignored in this article, but we will focus on the way the ZDSJ and the *Büro* built a general method for JSS, elaborated both by and for a community of scholars.

The article is structured as follows. Section 1 argues that JSS can be seen as a by-product of the German historical school in economics, as suggested by both the intellectual profile of the main contributors to the ZDSJ and the academic ambition of the journal. Section 2 analyzes the way the ZDSJ contributed to the debate on Jewish employment structure and Jewish “productivization”. In the third section, we argue that the ZDSJ had two types of statistical and economic legacies. As a systematic effort of compilation and documentation, the ZSDJ provided subsequent scholars with a vast amount of “good quality” economic data on the Jews, what a contemporary economist would call a “cleaned data-set”. Contributors to the journal had also developed a strong sense of statistical reflexion on occupational categories, leading to an early reflection on precarious work and self-employment.

1. JSS as a by-product of the German Historical School

1.1. Intellectual and sociological profile of the main contributors to the ZDSJ

Jewish social scientists are usually referred to as “Jewish intellectuals”. The expression relates to a rather heterogeneous population of authors. Jewish statisticians came from different countries, had different political views and ambitions, and occupied different professions. Yet it is possible to identify some more homogenous and coherent sub-categories within this population. For each sub-category, it will be shown that German economics of the period had a major influence in the intellectual background of these authors.

To further analyze the social and intellectual profile of these authors, we classified each of the 123 contributors to the ZDSJ according to the number of published articles and published pages in the journal. The ZDSJ relied on a large number of mostly male⁶ contributors (123), but some of them were significantly more prolific and the authorship was actually quite concentrated. Out of these 123 contributors, the 31 who wrote more than 3 articles published about 70% of the total numbers of papers published in the ZDSJ, and 2/3 of the total numbers of published pages. We chose to focus on these 31 authors, whose list is given below in table 1.

⁶ Out of the 123 contributors, only six (4,9%) were female, and wrote a total number of 14 articles (3,2% of the total number of articles published in the ZDSJ).

	articles	pages	% articles	% pages
Segall, J.	56	456	12,87	17,10
Ruppin, A.	35	144	8,05	5,40
Weissenberg, S.	25	109	5,75	4,09
Blau, B.	20	74	4,60	2,78
Thon, J.	15	77	3,45	2,89
Koralnik, I.	12	99	2,76	3,71
Wassermann, R.	12	41	2,76	1,54
Goldberg, B.	9	37	2,07	1,39
Goldstein, N. W.	8	46	1,84	1,73
Rosenfeld, M.	8	49	1,84	1,84
Fishberg, M.	7	50	1,61	1,88
Kaplun-Kogan, W.W.	7	58	1,61	2,18
Knöpfel, L.	7	54	1,61	2,03
Hoppe, H.	6	26	1,38	0,98
Rabinowitsch, S.	6	48	1,38	1,80
Theilhaber, F.	6	29	1,38	1,09
Hanauer, W.	5	38	1,15	1,43
Lestschinsky, Y.	5	31	1,15	1,16
Margolin, S.	5	29	1,15	1,09
Weldler, N.	5	25	1,15	0,94
Auerbach, E.	4	27	0,92	1,01
Becker, R.	4	14	0,92	0,53
Brutzkus, B.	4	27	0,92	1,01
Cohen, A.	4	24	0,92	0,90
Elkind, A.D.	4	22	0,92	0,83
Haas, T.	4	33	0,92	1,24
Philippsthal, H.	4	25	0,92	0,94
Paul-Schiff, M.	4	14	0,92	0,53
Sanders, J.	4	11	0,92	0,41
Sofer, L.	4	22	0,92	0,83
Trap, C.	4	29	0,92	1,09
Total	303	1768	69,66	66,32
Total for the whole <i>Zeitschrift</i>	435	2666	100	100

Table 1. List

of the 31 most important contributors to the ZDSJ (number of published papers >3)

We then retrieved biographical information for each of these authors from the main encyclopedias and biographical lexicons (Winninger, 1925; Herlitz and Kirschner, 1930; Hundert, 2008; Skolnik, 2007) and additional sources from the secondary literature. We did not find any information for 6 of these 31 authors and ended up with a sample of 25 authors, out of which only one was female (Sara Rabinowitsch). These 25 authors were classified into the following

categories:

	physicians/doctors	economists/statisticians		lawyers	total
		Non-academic	academic		
number	12	9	2	3	25
percentage	48	36	8	12	100

Table 2. Social-professional profiles of the main contributors to the ZDSJ

It should be noted that each author could belong to several of these categories: as we will explain later, an author could be both a physician/doctor and an economist/statistician. The two main professions in our classification are physicians/doctors and economists/statisticians, which provided about one half (48%) of the total number of authors.

The group of doctors includes authors that were usually described in their biographical entries as being both “physician and physical anthropologists” (e.g., Maurice Fishberg, in Skolnik, vol. 7, p.60, 2007). These authors had medical responsibilities as doctors and therapists but were also interested in anthropology. They played an important role in the collection of statistical material about Jewish populations all over the world. Authors such as Samuel Weissenberg traveled extensively and amassed data for anthropological studies of the Jews throughout the world (Skolnik, vol.20, 2007, p.738). The statistical studies were frequently commissioned by official authorities: for instance, Maurice Fishberg worked as an anthropological consultant for the US Bureau of Immigration (Skolnik, vol. 7, 2007, p.60)⁷. Some of these doctors enjoyed a considerable public and academic recognition for their anthropological works⁸.

The second most important occupation among these authors was economist/statistician. Only two of these economists/statisticians (Arthur Cohen and Boris Brutzkus) had academic careers. The vast majority of them had non-academic positions either in public administration or in Jewish communal and social-welfare institutions⁹. Though they were recognized as economists and statisticians by the German Administration and occasionally employed as such, most of these authors did not enjoy academic recognition. Jacob Segall, who was the editor of the ZDSJ between 1923 and 1931 and the most important contributor to the journal (56 articles), worked for instance

⁷ Other example: Arkadius Elkind worked for an Imperial German scientific society and collected anthropological material in Poland (Wininger, 1925, vol.2, p.163)

⁸ Fishberg served as vice president of New York Academy of Science in 1909-1911 (Skolnik, vol. 7, 2007, p.60); even in Tsarist Russia, Weissenberg won in 1895 a gold medal by the Moscow Society for Natural Sciences for his anthropometric research on Russian Jews (Skolnik, vol.20, 2007, p.738). Hugo Hoppe, a Berlin physician, was recognized as a scientific authority on alcoholism and criminality (Hart, 2000, p.118).

⁹ In particular, the Jewish organizations meant to implement “economic reforms” of the Jewish population, such as the Jewish Colonization Association or the ORT (Society for Handicraft and Agricultural Work among the Jews of Russia), in which some of these authors could be employed as statistical and economic experts (e.g., Boris Brutzkus).

as a doctor (and belonged thus to both categories of “doctors” and “economist/statistician”). During and after WW1, he directed the German Office for War Statistics, then participated in the 1920's in the foundation of the leading social-welfare institution for German Jews (*Zentralwohlfahrtsstelle der deutschen Juden*; Herlitz and Kirschner, vol.5, 1930, p.340). This professional profile actually reflected the way JSS was financed: both the ZDSJ and the *Büro* were largely dependent upon the contributions from Jewish private individuals and communal institutions (Bloom, 2011, p.74; see also Hart, 2000).

3 contributors also worked as lawyers or practiced law (Blau, J. Thon, Ruppin), a seemingly less important profession among Jewish statisticians. Yet it should be noted that the distinction between each professional category in our classification is not clear-cut. Segall was known as a statistician, economist, and demographer but worked as a doctor; conversely, Ruppin practiced law before becoming director of the *Büro* and editor of the ZDSJ. What matters to us here is the intellectual profile of these authors rather than exact proportions of their socio-professional status.

Our argument is that each of these three professional categories included authors whose intellectual background was largely influenced by the economics and statistics of the German tradition, known as the “German Historical School” (hereafter GHS¹⁰). The vast majority of economists and lawyers had followed curriculum in German Universities. Due to the interdisciplinary nature of the German social sciences in the late 19th century, it can be reasonably hypothesized that most of these authors had at least some courses in political economy, under the various labels the discipline was taught (*Nationalökonomie, Volkswissenschaft*). Statistical courses were also increasingly important in university curriculum at the end of the 19th century (Grimmer-Solem, 2003 p.49). The case of Ruppin illustrates this close relationship between economics, statistics, law, political science and other disciplines belonging to what was sometimes referred to as “sciences of the state” (*Staatswissenschaften*): Ruppin first obtained a law degree, but then continued to pursue a doctorate in *Nationalökonomie* at the University of Halle; the subject of his dissertation was pure economic theory (Thünen's theory of value and its relationship to the Theory of Marginal Utility), under the supervision of Johannes Conrad, editor of the influential *Jahrbücher für Nationalökonomie und Statistik* (hereafter JNS).

Segall also wrote a doctoral dissertation in political economy under the supervision of Georg von Mayr, another prestigious economist and statistician (Segal, 1908). The fact that both Segall

10 We will not discuss here the issue of whether the GHS was really a “school of thought” in the history of economics. It can indeed be argued that GHS was not a coherent and unitary community of scholars. For a reference on this debate, see Pearson, 1999; Caldwell 2001; Pearson, 2001; Grimmer-Solem, 2003, pp.19-34. As far as JSS is concerned, the most influential and important authors of the GHS were Wilhelm Roscher, Werner Sombart, Georg von Mayr and Johannes Conrad. We will explain later on what did JSS precisely inherit from GHS at the theoretical and methodological level.

and Ruppin had doctorates in political economy is worth noting, because they were key actors in the *Büro*: they edited more than the half (53%) and themselves wrote about 20% of the total number of articles published in the ZDSJ. The ZDSJ also published doctoral dissertations in political economy, on topics pertaining to JSS^{11,12}. Even non-German Jewish social scientists had usually studied in Germany, due to the severe restrictions toward the admission of Jewish students in tsarist Russia¹³.

Physicians and physical anthropologists were probably less familiar with the economics of the GHS, but had indirect exposure to it through the new interdisciplinary paradigm of racial hygiene or eugenics, mostly taught and diffused in German universities as “Social Hygiene” (*Sozialhygiene*) or “Social Medicine” (*Sozialmedizin*). Basically, the methods of *Sozialmedizin* consisted in approaching medical diseases as consequences of social and environmental causes, and thus relied heavily on statistics and field surveys. Theilhaber's dissertation on the incidence of the cancer of the uterus among Jews, Protestants and Catholics combined medicine and confessional statistics (Efron, 1994, p.143). Interdisciplinarity and the rise of statistics in German universities thus explains individual trajectories such as Segall's, who was trained and worked as a doctor, but was also a recognized specialist of demography and statistics, which were important branches of German political economy.

One could object that despite this exposure to the methods of the GHS, almost no Jewish social scientist became an academic economist in a German university. An obvious explanation for this fact was discrimination against the Jews, and antisemitism, which was widely current in the German academic community of the early 20th century (Lindenfeld, 2009, pp.283-284; Ringer, 1990, pp.135-136). Conditions became increasingly adverse for Jews in German academia before and during our period of interest (early 20th century). Fritz Ringer's sociography of German academics between 1863 and 1938 indicates that the German universities were relatively open to both admission of Jewish students and recruitment of Jewish professors in the decade 1870-1880, but Jews were progressively evicted in the late 19th century. In 1909-1910, Jewish professors were overrepresented as “instructors” (*Privatdozent*), i.e. the lowest grade of professorship in the German academic system¹⁴: they represented 12% of the *Privatdozent* but only 3% of the full professors (Ringer, 1992). Jewish instructors had indeed to be recommended by (usually non-Jewish) full

11 This was possible because doctoral dissertations were shorter than today's standards, and could sometimes be only 30 pages long (Grimmer-Solem, 2003, p.47-48).

12 Josef Unna's, from the University of Frankfurt, in two parts (Unna, 1925, 1926); Erwin Baron's, from the University of Rostock (Baron, 1927); Segall's dissertation was also published by the *Büro* as a special outlet (Segall, 1908).

13 A few examples: Sara Rabinowitsch (6 articles) was born in Berezin (now Bielorussia, formerly in the Russian Empire) but graduated in Germany in 1902 as a doctor of social sciences (Skolnik, vol. 17, 2007, p.39); Boris Goldberg was from Lithuania and studied in Hanover; Kaplun-Kogan was born in Yalta and studied also in Russia; born in Ukraine, Jakob Lestschinsky attended universities in Bern and Zürich.

14 *Privatdozent* were usually not paid by their University, but remunerated only through the private fees students had to pay to attend the lectures.

professors for advancement. Discrimination against recruitment of Jewish professors was not the result of explicit policies, but relied mostly on the personal biases of the German academics, i.e. unofficial and informal processes¹⁵. As far as physicians and doctors are concerned, anti-Jewish discrimination explains why many of these authors were relegated to the less prestigious medical domains (e.g., Theilhaber was a specialist of sexual diseases and dermatology, Efron, 1994, pp.142-145).

An important exception to this discriminatory pattern was Arthur Cohen¹⁶. Cohen had a very classical trajectory in the German academic community: he obtained a doctorate in political economy under the supervision of Brentano in München, started to work as a *Privatdozent* in 1906 in the Technological University of München (*Technische Hochschule*) and became extraordinary professor (*ausserordentlicher Professor*) 6 years later (Wininger, 1925, p.561). The case of Cohen suggests that recruitment as academic economists or social scientists was not impossible for Jewish social scientists, despite the strong anti-Jewish discrimination. It can reasonably be argued that Ruppin, for instance, could have had an academic career, since he seemed to have strong support from his influential supervisor Johannes Conrad¹⁷.

Yet pursuing an academic career in Germany was probably not conceivable for the vast majority of Jewish social scientists. They had one foot outside the German academia, and one foot inside, because of their academic training. But what matters to our argument is that German “mandarins”, i.e. the prestigious professors who owed their status to educational qualifications (Ringer, 1990, pp.5-6) were taken as models for Jewish statisticians. Particularly influential for the contributors to the ZDSJ was Georg von Mayr, an economics professor in München, known as a specialist of population statistics. As already mentioned, Mayr supervised Segall's thesis. He was also regularly cited as an inspirational source by Jewish statisticians¹⁸.

There was more than occasional references and thankful notes. Jewish social scientists

15 The fact that discrimination against the Jews in the university was not illegal is precisely the reason that Werner Sombart gives in the sixth chapter of *Die Zukunft der Juden* to justify restriction toward the admission of Jews in public professions, particularly in the Army and the University. Recruitment in these professions always depends on the personal judgments of colleagues, but according to Sombart, it is impossible to measure objectively the scientific abilities of an individual. Hence the law cannot prevent recruitment from being grounded in personal antisemitic biases. In Sombart's perspective, discrimination against the Jews is therefore not unfair, because it is not illegal. Sombart even argues that such discrimination is actually beneficial for the Jews, who are already over-represented in Universities (Sombart, 1912, pp.71-87). These arguments from Sombart are a good illustration of how widespread and socially accepted was anti-Jewish discrimination in the German academic community.

16 The other academic economist/statistician in our sample is Boris Brutzkus. He occupied a less prestigious position than Cohen, mostly outside Germany: he started as a lecturer in Russia, then worked in the Russian Scientific Institute in Berlin, and ended up as a professor in Israel.

17 Conrad pushed Ruppin to participate to the Krupp prize, an academic competition on social Darwinism; Ruppin entered the competition and took the second prize (Bloom, 2007, p.335). Ruppin also wrote several articles in Johannes Conrad's JNS in 1902.

18 See for instance the foreword in Theilhaber's *Der Untergang Der deutschen Juden* Theilhaber, 1911a); Arthur Cohen wrote a special article in the ZDSJ for Mayr's 70th birthday on his statistical legacy (Cohen, 1911)

obviously tried to work and organize themselves as German academic economists. The institutional organization of the *Verein*, with the *Büro* in Berlin in charge of the publication of the ZDSJ, and affiliated offices throughout Europe, corresponded to the basic organizational model of political economy in the GHS. Statistical bureaus were indeed “key non-university research institutions of relevance to the mode of production of historical economics”; their connections by a network of numerous links allowed the dissemination of their methods (Grimmer-Solem, 2003, pp.62-67). Like the *Büro* in JSS, the important task of these statistical offices was to edit and publish affiliated journals¹⁹. The typical career path for a German economist was to combine academic teaching and the practices of official statistics (Tooze, 2001, p.50): beside academic positions, Mayr also directed the Statistical Office of the Bavarian State and funded its affiliated review²⁰. When Segall, former student of Mayr, was editing the ZDSJ, he was therefore occupying a very similar position to his mentor, though it was transposed into the Jewish intellectual field. Even if Jewish statisticians were mostly excluded from German academia, there was undoubtedly an academic and scientific ambition in the ZDSJ.

1.2. A scientific ambition : the ZDSJ as a statistical platform

In his 1903 foreword to the first publication of the *Verein*, Alfred Nossig explained the purpose and objective of the association. According to Nossig, the main task of the *Büro* and its affiliated branches was the “processing and editing” (*verarbeitung*) of statistical sources. Such sources could be found either in “raw material” (typically, official results from public censuses) or from secondary sources, i.e. statistical data that had already been edited and published in other outlets (e.g., academic reviews, private research from communal institutions, publication of various scientific institutes) (Nossig, 1903b, p.16). The term *verarbeitung* has to be understood as “preparatory work”: the *Büro* was meant to provide clean statistical data on the various Jewish populations, that could then be “worked out” for future research. After three years of editorship, Ruppin also claimed that the main objective of the ZDSJ had been to provide to the specialists the reliable yet hard-to-find statistical data, so that Jewish statistics would not be any more a “science of the secret” (*Geheimwissenschaft*; Ruppin, 1907, p.177).

To fulfill this objective, the *Verein* published in 1903 (one year before the first issue of the ZDSJ) a systematic “Jewish statistical bibliography”, that listed the existing statistical sources on

19 For instance, for the Prussian Office, the *Zeitschrift des Königlich Preussischen Statistischen Bureau*; or the *Zeitschrift des Statistischen Bureau des Königlich Sächsischen Ministerium des Innern* for the Saxon office.

20 The *Zeitschrift des Königlich Bayerischen Statistischen Bureau*

Jewish populations (Verband, 1903). This bibliographic work was continued in the subsequent publications of the ZDSJ. The journal was indeed organized in three parts: beside “articles” *per se* (*Abhandlungen*), the “statistical archives” (*Statistisches Archiv*) were short notices that indicated to the reader the recent publication of new statistical sources (e.g., outcome of a recent census), occasionally with one or a few statistical tables.

The task of *verarbeitung* was necessary because of the huge growth in the number and quantity of statistical sources in the years preceding the creation of the journal. This was due in particular to the introduction and improvement of the modern periodic census in most European countries and America in the second half of 19th century (Porter, 1986, p.17). In Germany notably, after the unification of German States into a single nation state in 1871, general censuses took place in four, and then five year intervals (Michel, 1985; Gehrman, 2012). Another important “raw” statistical source for JSS was the 1897 Russian census, which was the first general census in the Russian Empire (Cadiot, 2005). It played a decisive role in the development of JSS²¹, because the majority of Jews lived in Russia and Eastern Europe at the time, and it therefore allowed to increase significantly the reliability and accuracy in the estimation of the total Jewish population (Ruppin, 1911, pp.35-36).

Yet JSS needed statistical data not only on the general populations of these countries, but specifically on the Jewish minorities. In other words, it needed confessional statistics, i.e. statistical variables had to be sorted out according to the different religious faiths. It required that the question about individual confessions had been asked in the census (and their answers recorded). This was the case in most German censuses. No other country in the world provided so much statistical information on religious confessions, and Jewish statisticians considered Germany as the place where confessional statistics were the richest and of the best quality (Segall, 1912b; Simon, 1930).

Even when confessional statistics were available, the task of *verarbeitung* was still needed. As Segall pointed out, State confessional statistics usually lacked continuity: for instance, data about different localities, or between different variables, or between different time lapses, were published in separate volumes (*Bänder*) or issues (*Hefte*). The first purpose of the articles published in the ZDSJ was to bring together these scattered pieces of information (Segall, 1910b; see also Nossig, 1903b). The *Büro* also published separate outlets (*Veröffentlichungen des Büros für Statistik der Juden*) that were focused on a specific region or a specific question (for instance, Segall's dissertation about the Jewish population in München). Another problem was that confessional statistics were not detailed enough, and more information could be needed. For instance, in a 1931

21 About Russia, the Jewish Colonization Association (ICA) also instituted in 1898-1899 a large-scale study about the economic states of Jews. The results were published in 1904 (ICA, 1904).

article, Jacob Lestschinsky regretted that the Polish census of 1921 did not separate data for each big Polish city; thanks to his relationship with the director of the Lodz statistical institute, Lestschinsky was able to provide the information for Lodz (which was an important center of the Jewish population in Poland (Lestschinsky, 1931).

This kind of “insider information” was frequently provided in the ZSDJ. The *verarbeitung* of Jewish statistics therefore involved personal knowledge and familiarity with State officials in charge of statistics and censuses in the various countries. Establishing such connections with administrations was an important purpose of the *Büro*. Directors and members of State statistical offices were invited to and regularly did contribute to the ZDSJ²². As previously argued, Cohen, in a 1914 programmatic article, wrote that the journal was meant to bring together the “producers” of statistics (States, Empires, communal institutions) and “consumers” (scholars, reformers, politicians). These two communities should not be separated, because the “production” might not correspond to the “demand”, and statistics should be produced for their future users (Cohen, 1914).

In most countries, there was however no confessional statistics (notably in the US, in France, England, Belgium), and this was regarded as one of the most important problems faced by JSS (Nossig, 1903b, p.17). We will see in section 3 how the contributors to the ZDSJ were nonetheless able to at least partially overcome this difficulty for non-confessional statistical censuses. Beside public censuses, confessional statistics could also be provided by private statistical inquiries, which were historically the earliest manifestations of JSS (Penslar, 2001, p.217). Hence an essential task of the *Büro* was to stimulate the production of these alternative statistical sources, that could be elaborated either from large-scale communal institutions privately funded (e.g., the ICA study mentioned above) or small-scale investigations (e.g., anthropological studies from doctors). Apart from the articles dedicated to the *verarbeitung* of existing “raw” statistical materials, the ZDSJ also contained more programmatic and methodological papers that encouraged their readers to edit their own statistics (Dreyfuss, 1906). A repeated claim was also that Jewish communal institutions should be more oriented toward the production of reliable statistical data about their members and their organizations (Segall, 1910b). Last but not least, the *Verein* occasionally asked public administrations to run special field surveys²³.

The ZDSJ operated therefore as a “statistic platform”: it called for the production of more statistical inputs, processed and edited the various existing inputs, and provided “cleaned” data for future research. It seems that the *Büro* was mostly successful in this role in its first years, notably

22L. Knöpfel, director of the Central Statistical Office of the State of Hesse ; Cordt Trap , director of the Statistical Office in Kopenhagen; Erich Simon from the Prussian Statistical institute

23The *Büro* asked for instance in 1904 the Prussian Ministry of Education to run a survey about the relative educational performance of Jewish and christian pupils. The demand was refused and the study was run subsequently by the *Büro* itself, on a much smaller scale than the initial project (Ruppin, 1906c).

under the editorship of Ruppin (1904-1907). The war caused important difficulties, with the interruption of most public censuses and the modification of national borders, as Bruno Blau, successor of Ruppin as editor of the ZDSJ, complained in a 1919 article entitled “The Future of Jewish Statistics” (Blau, 1919). Later on, the problem was aggravated by the budgetary restrictions in most German statistical institutions that introduced important delays in statistical publications. The *Verein* also suffered from the concurrence of new Jewish research institutions, notably the Yiddish Scientific Institute (YIVO), funded in 1925, and had more and more trouble getting funding. The problem was acknowledged by Segall (1930a), who regretted that lack of financial resources could not allow the *Büro* to continue its pre-war activity, as reflected by the slowdown in the publication frequency of the journal²⁴.

Despite its post-war decline, the ZDSJ undoubtedly had academic and scientific ambitions. The journal was clearly conceived so as to look similar to the major German economic reviews of the GHS: the *Jahrbuch für Gesetzgebung, Verwaltung und Volkswirtschaft im Deutschen Reich*, known as “Schmoller's *Jahrbuch*”; the JNS, and the *Zeitschrift für die gesamte Staatswissenschaft* (Grimmer-Solem, 2003. pp.75-86). Both the ZDSJ and these German academic journals were involved in the same type of *verarbeitung* process on similar sources. For instance, the 1895 German occupational census had been the object of articles in the JNS (Scheel, 1898), in Schmoller's *Jahrbuch* (Kollmann, 1899a-b, 1900a-b-c) and in the ZSDJ (Segall, 1911a-b-c-d). In the same spirit of bringing together the producers and consumers of statistical knowledge, these articles contained long and careful descriptions of the census procedures and its mode of administration.

An important difference though between the ZDSJ and the two other reviews was that its articles were significantly shorter. The JNS article was 17 pages long; the paper in Schmoller's *Jahrbuch* was published in 5 different parts, for a total number of 371 pages! This was a regular feature of these academic journals, which published very long articles (more than 100 pages was no exception) and tended to grow in terms of volume throughout the years (Grimmer-Solem, 2003. pp.75-86). Table 3 below gives more information about the average size of the papers published in the ZDSJ:

number of pages per article	1-3	4-10	11 and more	total
articles	90	301	44	435
percentage	20,69	69,20	10,11	100,00

Table 3. Length of articles published in the ZDSJ

²⁴Started as a monthly review, the ZDSJ was published every two months after the war, then every three months (Segall, 1930a)

As this table shows, the vast majority (about 90%) of articles in the ZDSJ were less than 10 pages long. This is associated with a more restrictive ambition. As has been said, the main objective of the ZDSJ was to edit and publish statistical tables, with some explanations on how to “use” these data. Of course, these explanations were not free of value judgments, as we shall see later in greater detail, but the various contributors strove not to express directly their opinions about the observed trends. In contrast, in the article published in Schmoller's *Jahrbuch*, after observing for instance that the industry now occupied the largest part of the German population, Kollmann could then spend 2 pages answering the question of whether this evolution was desirable for German society (Kollmann, 1899a).

This does not mean that Jewish statisticians were not interested in social reform. Contributors to both the ZDSJ and (non-Jewish) German economic reviews were committed both to reforms and the social improvement of the Jewish and German populations. This political role was explicitly assumed by Jewish social scientists (Nossig, 1903b; Segall, 1910b). There was also a close connection between the ZDSJ and other German-Jewish journals oriented toward social welfare and reform, such as the *Jüdische Wohlfahrtspflege und Sozialpolitik*²⁵. Lack of commitment toward social reform was precisely an argument against the “Science of Judaism” (*Wissenschaft des Judentums*; Cohen, 1914)²⁶, the prior generation of scholars who had initiated the scientific and historical study of the Jews and Judaism in the early 19th century (Dinur, 2007)

Like most German economists of the period, Jewish social scientists saw no contradiction between scientific objectivity on the one hand, and commitment toward social reform on the other. As Cohen argued, politics had to be based on a reliable and objective method, and this method was precisely statistics, the science of the modern state (Cohen, 1911). Cohen also criticized in a subsequent article the metaphor of statistics as a “young girl”, to whom everyone was speaking according to their own interests in order to seduce her. Cohen preferred the image of statistics as a “lady”, who invites everyone to her table, on the condition that nobody asks for his “favorite dish”; one could therefore approach statistical knowledge with a “pure heart” (Cohen, 1914, p.151; for a similar argument, see Cohen, 1905).

Such images were part of what Hart calls the politics and “rhetoric of objectivity and universality” in JSS (Hart, 2000, pp.53-55). An essential part of this rhetoric was the idea that JSS was in the service of all Jewry, and not merely a fraction. This was important because, as was

²⁵For instance, I. Koralnik, the last co-editor of the ZDSJ, was a regular contributor to both journals.

²⁶The *Wissenschaft des Judentums* was also commonly criticized as “cultural Judaism” (*Kulturjudentum*), i.e. for its excessive focus on the religious, cultural, and ideological dimensions of Jewish history. On the contrary, JSS was meant to study the concrete and material aspects that were much more relevant for social reform (Cohen, 1914).

mentioned earlier, Zionists had a large influence in the creation of the *Verein*. Out of the 25 most important contributors to the ZDSJ (cf. section 1.1.), almost half of them (12) were committed Zionists. In his 1903 introductory article, Nossig acknowledged the role of Zionism and renewal of the “Jewish national conscience” (*jüdische Bewusstsein*) in the development of JSS, but also stressed the importance of objectivity: JSS had to serve the whole Jewish community, including the vast majority of non-Zionist Jews, and even humanity and science in general (for similar arguments, see also Nossig, 1903b; Verband, 1907). An associated argument was that JSS as an objective scientific endeavor could be worthy of interest for non-Jewish populations having similar socio-economic structures (Simon, 1930). Such ideas were of course at least partially rhetorical. Yet it was true that the users of JSS were not exclusively Zionists; non-Zionist philanthropic activists displayed in particular a great interest in the economic components of JSS (Penslar, 2001, p.217); Jewish and non-Jewish scholars were also important consumers of that knowledge, as we shall see later in greater detail.

More substantially, the ZDSJ effectively operated so as to smooth out the personal convictions of its contributors about the present and future of world Jewry. This can be clearly instantiated through the individual cases of Ruppin and Theilhaber. Both authors were known as influential representatives of the so-called literature of “dissolution and disintegration” (*Auflösungsliteratur*) in German-Jewish society of the early 19th century (Hart, 2000, p.144). In 1904, Ruppin published *Die Juden der Gegenwart*²⁷, in which he argued that the Jewish population suffered from a severe demographic decline. Ruppin worried in particular about the recent fall in Jewish birthrates, and assimilationist tendencies which were visible through the rise of mixed marriages, baptisms and conversions to Christianity. In his 1911 book entitled *Der Untergang der deutschen Juden*²⁸, Theilhaber made a similar case, specifically about German Jews, pointing out the medical and racial risks associated with assimilation of Jews into the modern capitalist society.

Both books were highly controversial and generated passionate debates. Ruppin's for instance was harshly reviewed in the German Jewish liberal press, while being favorably received among Zionists (though he was not yet a Zionist at the time (Efron, 1994, p.168). Though based on statistical data, Ruppin's and Theilhaber's arguments were rooted in Romanticist and volkish images. Concentration in large cities was associated in particular with degeneration, i.e., with modern, capitalist economic life, while rural agricultural occupations were idealized²⁹ (Hart, 2000, pp.84-87; Efron, p.148)³⁰.

27Translated in English into “The Jews in the modern world”.

28 *The Demise of German Jews*

29Ruppin was advocating for a return of the Jewish economic system to agriculture, a classical idea in early Zionism (Ruppin, 1911, pp.242-260).

30This preoccupation over cultural decomposition and commercialism was actually quite common in German academia

When one reads Ruppin's and Theilhaber's articles in the ZDSJ, one is struck by their dispassionate and almost neutral tones, compared to their respective books³¹. The repeated claims in the ZDSJ that JSS should not highlight "moral factors" but rather "purely economic determinants" (Koralnik, 1931) were not a deliberate rhetoric, but were dictated by the form of the journal: short articles, prioritizing publication of statistical tables over interpretation and speculation. There were a few exceptions and the ZDSJ also occasionally published some more morally engaged articles;³² but one cannot question the scientific ambition of the journal, and the commitment of its editors toward objectivity and neutrality. In the first years of the *Verein*, Ruppin criticized Nossig, then director of the association, for his "propagandist approach" and his use of JSS as an "apologetic and defensive weapon in the struggle against anti-Semitism" (Bloom, 2007b, p.188; see also Bloom, 2001). Ruppin was yearning instead for knowledge and expert research; it seems that the issue of the dispute was favorable to Ruppin, since he left his imprint on the ZDSJ during its three-year editorship, while Nossig left the *Verein* a few years later and never published an article thereafter. We will see now how this academic and scientific ambition translated into a new approach in Jewish economic history.

at the time, which was characterized by an elitist reaction toward "democratic mass civilization" (Ringer, 1990, p.220). Interestingly, Max Nordau, the Zionist leader whose discourse was quoted in the introduction of this article, was mostly known for his book entitled *Degeneration (Entartung)*, in which Nordau criticized the degeneration in modern art, particularly the French one.

³¹Out of many examples, Ruppin points out for instance in a 1905 article a relative decrease in Jewish birthrates in Prussia; he then suggests a plausible "cultural" or social explanation (intentional restriction of procreation) that he admits to favor, but refuses to go beyond because "what matters is only to expose numerical data" (Ruppin, 1905b). Similar precautions toward moral interpretation were frequent. Segall wrote for instance that statistics on marriages do not allow to measure the "ethical worth" of a nation (Segall, 1908, p.20).

³²See in particular Heinrich Silbergleit's 1927 article on the Jewish population in Berlin, which was very typical of the *Auflösungsliteratur* (Silbergleit, 1927)

2. Statistics against economic prejudice : from *Schachergeist* to Jewish intellectuality

2.1. Economics in JSS: the question of Jewish occupational structure and the “productivization” debate

Economic questions in the ZDSJ were mostly treated through the perspective of “occupational” or employment statistics³³ (*Berufsstatistik*). The first reason for this is that Jewish social scientists did not have many other economic statistics. Occasionally, they could figure out the state of wealth and poverty among Jews through statistics provided by Jewish communal institutions, for instance on individual contributions to the community (e.g. Thon, 1907a) or about people in need of charity assistance (e.g., Fishberg, 1908), yet these data were restricted to particular regions or cities.

But the main reason for the priority of occupational statistics was that the central economic concern for Jews at the time was precisely the (old) question of Jewish occupational structure. This question had been an ancient preoccupation for Western societies long before the rise of JSS. Jews were said to be over-represented in commercial activities, and an intense discussion developed in the 17th-18th centuries about Jewish commerce and its beneficial or detrimental effect on Christian society (Karp, 2008). Both Jewish and non-Jewish reformers argued that more Jews should be brought into “productive” activities, i.e. industrial and agricultural.

The economic historian Arcadius Kahan suggests that this “productivization debate” probably goes back to “the notion of the Physiocrats that farming is productive and trade is nonproductive” (Kahan, 1986, p.43). This might be true, but it should be noted that Jewish statisticians did not actually have a coherent theory or set of values about “what is a productive economic sector”. Contributors to the ZDSJ were mostly dedicated to the mere description of occupational tables (cf. supra); their brief comments reveal that most of them shared the early Zionist ideal of “economic regeneration” through “return to agriculture” (cf. infra), while industry was associated with economic modernity. But the basic point of departure for all these reflections was rather the perception that Jewish employment structure was “abnormal”, overcrowded in commercial branches, and thus needed an occupational shift. It very rarely entailed a general theory of “productivity”.

Yet the debate was not purely empirical and was also framed by economic ideas. Consistent with our hypothesis of JSS as a “by-product” of the GHS, we will see that as far as economic questions are concerned, Jewish social scientists were actually much more influenced by German

³³Both expressions will be used here as synonyms.

economists than by Physiocracy. We present here briefly the contributions of Wilhelm Roscher and Werner Sombart, which were the two main economic-historical references for the contributors to the journal. In his 1875 article, Roscher argued that during the Middle Ages, Jews were more economically mature and had been able to serve as “commercial support” to non-Jewish European populations. Yet once a commercial Christian bourgeoisie had appeared in the late Middle Ages, Jews had been gradually replaced and suffered from economic degradation, along with political persecutions (Roscher, 1875). Roscher's model of “displacement” was influential among JSS, notably Jacob Lestschinsky (Hart, 2000, p.215). More generally, it motivated the perception that over-concentration in small commerce was detrimental to the Jews, because this sector was no longer at the forefront of economic modernity.

Sombart expressed his ideas about the economic role of Jews in his influential 1911 book on *The Jews and Modern Capitalism*, though most of his insights were already developed in the various editions of his main work, *Modern Capitalism*. Like Roscher, Sombart thought that the Jews had contributed decisively to modern economic life, but he did not agree about the idea of “displacement”. On the contrary, he saw a profound affinity between modern capitalism and the “Jewish spirit” (Sombart [1911], 1962). As we shall see later in greater detail, Jewish social scientists had some reservations about Sombart's writings on the Jews but considered them, on the whole, important contributions to Jewish economic history.

Sombart's and Roscher's views were different, but both authors shared the thesis of “essentialism”, i.e. the claim that Jews *as a single entity* could be identified for the specific role they played in economic history. This was related to their understanding of economic history as being structured by successive and well-identified “stages” (a non-monetary economy, pre-capitalism, capitalism). Such a framework allowed Sombart and Roscher to build a meta-narrative of economic history (Oelsner, 1962), and the alleged commercial function of the Jews was essential to this narrative.

Sombart's and Roscher's essentialist vision of Jewish economic history was based on far-reaching generalizations and thus filled with empirical flaws and self-contradictions. It is beyond the limits of this article to review these errors³⁴ and what matters here is the difference between Sombart's and Roscher's methods and JSS. Due to their focus on medieval history, Sombart and Roscher could not rely on statistical data to prove their argument. Sombart was actually quite reluctant about statistical methods³⁵. Though they were largely influenced³⁵ by these important

34 For a detailed critique of Sombart's and Roscher's views on Jewish economic history, see Oelsner, 1959, 1962.

35 In the first pages of *The Jews and Modern Capitalism*, Sombart argued that beyond the problem of data availability, statistical methods were excessively focused on large groups and thus unable to grasp the role played by “exceptional individuals”. His “genetic method” allowed to move beyond these limits of statistics and to analyze the Jewish “spirit” (Sombart [1911], 1962, pp.7-8). On Sombart's aversion to statistics and quantification, see also Sombart, 1930 ; and its

authors of the GHS (cf. supra), Jewish social scientists therefore changed the way this question over Jewish commercialism was treated.

2.2. From essentialism to statistical interdependence: occupational statistics and the methods of JSS

Jewish statisticians were important participants in the “productivization debate” and were thus interested in the question of Jewish contribution to commerce. The question was similar to Roscher's and Sombart's above mentioned essays, but the method was different. Apart from a few exceptions³⁶, Jewish social scientists did not base their arguments on meta-narratives about medieval economic history, but rather on recent statistics.

Yet one could argue that JSS was also “essentialist”, in the sense that it consisted in collecting statistics specifically on the Jewish population, thus allowing it to characterize the essence of “Jewry” in statistical terms. This is basically what Amos Morris-Reich argues in his article on “Arthur Ruppin's concept of race”. Ruppin was known for his strong adherence to race theory and his belief in the superiority of particular races; but according to Morris-Reich, what was racist in Ruppin's works were not such arguments grounded in statistical data, but essentially the statistical method itself: “statistics does not teach us about the racial aspects of the Jews but is itself the racial explanation” (Morris-Reich, 2006, p.16).

It is true that JSS was largely motivated by the idea of characterizing in statistical terms the essence of the Jewish race, as Efron argues in his book on “Jewish doctors” that were strong “Defenders of the race” (Efron, 1994). As Efron shows, such an ambition pursued ambivalent goals: this statistical enterprise was meant to defend the anthropological “worth” of the Jewish race (against antisemitic claims frequently found in race theory), but also demonstrate its present degeneration (Efron, 1994). These two aspects were also effective as far as economic questions were concerned in JSS. In the ZSDJ, articles on the employment structure (*Berufsgliederung*) of the Jews usually started with this type of table:

interpretation in Ringer, 1990, p.224.

36 See in particular Ruppin's 1931 article on “The economic fight of the Jews”, in which Ruppin provides a general economic history of the Jews without statistical data. . Another important exception is Lestschinsky's 1913 article on “The Psychology of Jewish immigrants”, that we will discuss in greater details in the next subsection.

Es sind berufszugehör. zu	Christen	Juden	Von je 1000 Berufszugehör. dies. Berufs-klasse sind		V. j. 1000 Chr. s. berufszug.	V. j. 1000 Jud. s. berufszug.
			Christ.	Jud.		
Land- u. Forstwirtschaft	13 568 793	139 810	990	10	544	114
Industrie . .	6 649 714	351 212	950	50	268	287
Handel u. Verkehr .	2 067 762	535 247	794	205	83	437
Öfftl. Dienst u. freie Berf.	2 630 884	198 442	929	70	105	162
Im ganzen	24 917 153	1 224 711			1000	1000

Figure 1. Jewish employment structure in Austria according to the 1900 occupational census (*Berufszählung*) (Ruppin, 1905e, p.2)

Most employment censuses (*Berufszählung*) were based on a similar classification of economic activities between agriculture (*Land und Forstwirtschaft*), industry, commerce and transport (*Handel und Verkehr*), civil service and liberal professions (*Öffentliche Dienst und freie Beruf*). Eventually, subsequent tables could detail the subcategories for each sector. The basic method consisted in comparing the Jewish and non-Jewish occupational structures. Almost invariably, such tables showed that Jews were largely over-represented in the commercial sector (here in Austria, 43,7% compared to only 8,3% for Christians), while being under-represented in the agricultural³⁷. As Segall argued, the first and obvious result of most occupational censuses was that Jewish employment structure diverged significantly from the rest of the population (Segall, 1912c) and was heavily concentrated in commerce and transport (Segall, 1908) or in specific semi-industrial branches, typically the garment industry in Russia (Koralnik, 1925). On the basis of such statistics, Jewish social scientists regularly agreed on the “abnormal state” (*abnormal Lage*) of Jewish employment structure (see for instance Ruppin, 1906b, about the outcomes of the 1897 Russian census), frequently perceived as a sign of economic degeneration.

Perceptions of economic abnormality were not motivated by a prior theory of economic normality, i.e. by a theory of which “productive” sectors Jews should occupy. Jewish concentration in commerce or in the garment industry was said to be *excessive* because it was associated with unfavorable economic conditions and poverty. Statistical essentialism thus related economic

³⁷ The statistic for Jewish participation to agriculture is here relatively high (11,4%) compared to other countries at the same period, where the same statistics was rarely above 2-3%. The relative importance of Jewish agriculture in Austria was mostly concentrated in Galicia, as we shall discuss later on.

degeneration with misery, thereby also leading Jewish social scientists to use JSS for apologetic purposes. For instance, in his 1908 article on “The poverty among Jews in New York”, Fishberg criticized the antisemitic claim that Jews were “economic parasites”. Statistics from the US Immigration Office showed that Jewish migrants -mostly from Russia- were significantly poorer than other migrants to America, while statistics provided by Jewish charities proved that, relatively, they less often asked for assistance and adapted quickly to their new economic situation (Fishberg, 1908).

In his moral rehabilitation of (mostly Russian) poor Jews, Fishberg used the important yiddish word *Luftmenschen*, literally “an air person” or “a human being in the air, a term popularized by Max Nordau in his 1901 speech to describe the “specifically Jewish phenomenon wherein grown people, in decent enough health, wake up each morning with the hope of some miracle coming to pass that would furnish them some way to get through the day, and who marvel every evening, either out of blind faith or superstition, at the very wonder of the fact that they managed to find a bit of bread for themselves and their kinfolk” (Nordau [1901] 1909, p.117). In Eastern Jewish popular culture, the idea of *Luftmensch* was associated with some kind of idealism (*Luftmenschen* believe naively in economic miracles), poverty, lack of fixed occupation, but also imagination (*Luftmenschen* were nonetheless able to make a business out of anything, out of “air”) (Lederhendler, 2009, pp.133-134).

The figure of the *Luftmensch* allowed for a double refutation of antisemitic claims that Jews were useless and unproductive parasites: first, *Luftmenschen* were poor and did not unduly live off of the productive wealth amassed by the non-Jewish population. For instance, in a 1907 article, Jakob Thon points out the importance of the unemployed in the occupational structure of Jews in Galicia, which was interpreted as a sign of “*Luftmenschkeit*”, i.e. misery and poverty (Thon, 1907). But *Luftmenschen* were also seen as “good” poors: despite their poverty, they were innovative and creative in their particular way of making a living out of nothing; hence they could easily be turned into more productive workers. Such a defense of *Luftmenschen* and particularly Jewish migrants were frequent in the ZDSJ, notably in Segall's articles. Segall explicitly assumed this defensive and apologetic tone; JSS could prove the economic worth of Jewish migrants and thus refute the antisemitic attacks on them (in Russia but also in Germany) and allow for socio-economic reforms in their best interest (Segall, 1910b).

In a similar apologetic tone, some articles in the ZDSJ documented the various economic discriminations that *Ostjuden* were suffering from in Russia. In a 1908 article, Boris Brutzkus showed that restrictive measures within the Pale of Settlement³⁸ had significant effect on Jewish

38 In Tsarist Russia, the enforcement of the Pale of Settlement prohibited for most Jews to reside outside of a limited

occupational structure and explained why most Jews were occupied in these regions in overcrowded sectors (Brutzkus, 1908). Amin (1911) documented the various restrictive policies toward Jewish immigration all over the world.

Apologetic arguments clearly distinguished the essentialism of the ZSDJ from Sombart's. Sombart's economic history of the Jews was mainly a history of Western Jews. The poverty of *Ostjuden* was missing from Sombart's narrative³⁹, while it was clearly one of the most important concerns of Jewish social scientists. They later on also documented the economic degradation of Russia after the Revolution (Brutzkus, 1924a-b-c; Koralnik, 1925, 1927), and provided statistics about the economic effects of pogroms on Jewish properties and migrations (Koralnik, 1923, 1927). Occupational statistics could also sometimes refute the essentialist assumption that Jews were merchants, not peasants. For instance, in Galicia, 17,7% of the Jewish population worked in the agricultural sector (Thon, 1907b)⁴⁰. Similarly, Segall pointed out the importance of Jewish handicraft in Germany (1912c). Last but not least, “war statistics” were an essential piece in this apologetic use of JSS in the ZDSJ. Though we will not further develop our analysis here because the domain is beyond that of occupational statistics, we shall here just briefly mention that providing statistics about Jewish participation to the war effort was regarded by Blau, second editor of the journal, as a central mission of the *Verein* (see his article on “The mission of Jewish statistics after the war”); in 1922 the *Verein* published as a separate outlet Segall's essay on The German Jews as Soldiers in the War, in which Segall concluded that Jews participated similarly to non-Jews to the war effort (Segall, 1922).

Providing statistical data to refute economic prejudice was clearly seen as an important mission of JSS. According to Nossig, first director of the *Verein*, Jewish statistics could disprove that Jews were “a greedy and avaricious [*habgierige*] Nation” (Nossig, 1903b, p.8). Yet as mentioned earlier (cf. supra), this “propagandist approach” toward JSS was opposed by Ruppin, and in our opinion does not reflect the overall ambition of the ZDSJ. The basic methodological principle of most articles on economic questions was indeed to consider the structure (*Zusammensetzung*), i.e. the interdependence between occupational, social, and demographic variables, rather than solely focus on each dimension separately. In his 1905 article on the Jewish employment structure in Austria, from which we extracted figure 1, Ruppin provided after the table on occupation structure

territory (the Pale of Settlement) on the Western fringe of the Empire, with a few very limited exception for some merchants, soldiers and craftsmen. It was a significant limitation of mobility for Russian Jews (Kahan, 1986, p.35).

39 These remarks apply for *The Jews and Modern Capitalism* and for *Modern Capitalism*. It should be noted however that Sombart's 1912 book on *Die Zukunft der Juden* contains a chapter on the Jewish misery, mostly dedicated on *Ostjuden* (Sombart, 1912, pp.12-32).

40 Yet Thon also notes that most Jews employed in Galician agriculture were not actually peasants, but occupied specific positions in the neighboring branches of commerce, such as grain trade for instance (Thon, 1907b).

the following table:

Es sind	in absoluten Zahlen		von je 1000	
	Katholik.	Juden	Kath.	Juden
Selbständige	3 885 617	235 775	163	193
Angestellte	380 770	42 681	16	35
Arbeiter	3 966 180	81 455	167	67
Tagelöhner	989 082	31 567	41	26
Mithelfende Familienmitglied. .	3 859 297	54 532	162	44
Nicht berufstätige Angehörige	10 268 297	762 358	432	622
Hausdienerschaft . .	447 385	16 343	19	13
			1000	1000

Figure 2. Jewish social structure (*Sozialegliederung*) in Austria according to the 1900 occupational census (Ruppin, 1905e, p.4)

This table detailed the various socio-economic positions that Jews and non-Jews could hold: self-employed (*selbständig*), employee (*Angestellte*), worker (*Arbeiter*), day laborer (*Tagelöhner*), helping family member (*Mithelfende Familienmitglied*), unoccupied or unemployed members (*nicht berufstätige Angehörige*), domestic servants (*Hausdienerschaft*). We will analyze in greater detail this classification in section 3, but for now we can consider that most occupational census at the time provided similar tables on social structure (*Sozialegliederung*), with a few minor differences in categories (notably, the “unemployed” categories was frequently referred to as “*nicht erwerbstätig*”, i.e., not gainfully employed). In this article, Ruppin was actually less interested in the above- mentioned result that Jews were over-represented in commerce and transport than in the relatively lower Jewish rate of gainful employment: Jews without occupations amounted to 62,2% of the whole Jewish population, compared to 43,2% for the Christian population. Ruppin then spent most of this article providing an hypothesis for this result: according to Ruppin, Jewish high rates of unemployment were due to demographic factors (the Jewish population was older), to the relatively less importance of women's employment among Jews, and was finally also related to the occupational structure: Jews, relatively, participated less in agriculture and construction, and in these sectors there was a naturally stronger participation of other family members to the work of the head of the family (i.e. stronger than in commerce notably) (Ruppin, 1905e).

Beside Jewish concentration in specific economic sectors, many articles in the ZDSJ also observed that a significantly more important part of the Jewish population was unoccupied, or

occupied in the “self-employed” category and sought to offer explanations similar to Ruppin's based on demographics, occupational structure, and importance of women's employment (see for instance Ruppin, 1908a, Segall, 1910d, 1912c; Tennenbaum, 1919). Another frequent interpretation consisted in relating the concentration of Jews in commerce to their concentration in large cities (e.g, Segall, 1908; Korálnik, 1930b). Contrary to an essentialist approach of JSS, the observation that most Jews were occupied in commerce was therefore not conceived as an “essential” and durable feature of the Jewish population, but rather a part of a general socio-economic structure, i.e. what a contemporary economist would call a “dependent” variable that had to be explained by “independent” variables (social structure, women's employment, urban concentration, demographic variables).

This approach in JSS in terms of statistical interdependence was not formalized as a statistical “method”. The ZDSJ published very few articles offering general consideration on statistics. In one of these few exceptions though, Cohen argued that considering JSS in terms of structure and statistical interdependence guaranteed a middle ground in the debate surrounding Jewish statistics. On the one hand, some statisticians, mostly physician anthropologist, were interested in collecting data on the Jews that could help to further characterize the Jewish “race”, in what we called an essentialist perspective. On the other hand, opponents to physician anthropologists pointed out that this research could lead to antisemitism, and that it would be preferable not to collect data on specific parts of the whole population. Between antisemitism and the pure denial of the “Jewish question”, argued Cohen, approaching statistics in terms of interdependency allowed a non-essentialist application of JSS while leaving space for the social reform of modern Jewry (Cohen, 1905).

In more practical terms, this approach in terms of statistical interdependency appeared in the journal through the frequent use of contingency tables, that articulated two statistical dimensions: for instance, in a 1911 article on the employment structure of German Jews, Segall provided the following contingency table:

Soziale Gliederung der erwerbstätigen Juden 1907.

Stellung im Berufe	Jahr	Hauptberuflich Erwerbstätige in der Berufsabteilung								Alle Erwerb. (Erwerbstät. A—E u. Dienstb. G) auß. Heer u. Flotte E I.	
		A. Land- u. Forstwirtschaft		B. Industrie		C. Handel und Verkehr		A—C		insges.	—
		insges.	weibl.	insges.	weibl.	insges.	weibl.	insges.	weibl.		
Selbständige, ohne Hausgewerbetreibende (a ohne afr; Selbständige Hausgewerbetreib. (afr)	1907	1011	324	25524	4045	78396	9099	104931	14171	118574	—
	1895	1616	419	23598	4796	80105	7836	105319	13051	—	—
	1907	—	—	1443	703	—	—	1443	703	1443	—
	1895	—	—	—	—	—	—	—	—	—	—
Angestellte (b)	1907	70	14	13475	2702	22901	3335	36446	6051	37445	—
	1895	76	3	5566	537	14997	683	20639	1223	—	—
Mithelf. Familienangehörige (c 1)	1907	2096	1688	2615	2193	11862	8242	16573	12123	16622	—
	1895	—	—	—	—	—	—	—	—	—	—
Arbeiter ausschließl. d. mithelf. Familienangehörig. (c ohn. c 1)	1907	569	149	19938	5263	32447	7170	52954	12582	59118	—
	1895	1679	786	16839	5030	38349	10604	56857	16420	—	—

Figure 3. Contingency table of occupational structure (columns) and social structure (lines) for German Jews, according to the 1907 German census (Segall, 1911d, p.98)

This table crossed social structure (lines) and occupational structure (columns). It could thus provide explanation of Jewish participation to a certain sector on the basis of their social composition. For instance, in his article on “industry and handicraft by the Jews in Prussia”, Korálnik observed that Jews were heavily concentrated in the garment industry (*Bekleidungsindustrie*). While arguing in an apologetic tone that this does not result from a specific Jewish inclination toward this profession, Korálnik suggested an alternative explanation on the basis of a similar contingency table: the garment industry was relatively less concentrated (both in size and in geographical terms), thus requiring a large number of independent workers and business owners, who were precisely over-represented in the Jewish population (Korálnik, 1931).

Jacob Segall was probably one of the contributors most committed to this interactionist and non-essentialist use of JSS. Both his doctoral dissertation and his general essay on the economic condition of German Jews (Segall, 1908 and 1912c), published in the ZDSJ in four different parts (Segall, 1911a-b-c-d), were statistical monographs that contained detailed analysis of social structure, employment structure, and demographics, particularly migrations. Segall insisted on the importance of migrations, notably in the emigration of German Jews after the economic crisis in the 1880's, and then on the immigration of Russian Jews into Germany, which affected both occupational parameters and demographics. Of particular interest for Segall was the consideration of age structure (*Altersaufbau*): following his former supervisor Georg von Mayr (cf. supra), Segall distinguished between several models of age structure (urban, stationary) that were central in his analysis (Segall, 1910b)⁴¹.

41 According to Segall, the age structure was “of fundamental importance for the knowledge of the structure of the population” (Segall, 1910b)

It should be noted however that this approach in terms of structure and interdependence did not entail a theory or a conception of statistical “causality”. Jewish social scientists very rarely used the word “cause” in their articles. For instance, in Koralnik's paper mentioned above, the author did not say that the participation of Jews to the garment industry was “caused” by their social structure; rather, both dimensions (occupational and social structure) were said to be corresponding, while not necessarily specifying any particular sense of causality (Koralnik, 1930). We spoke until now of “interpretations” and “explanations” but in most articles on Jewish occupational structure, contributors to the ZDSJ considered their contingency tables as part of the work of *verarbeitung*, i.e. as the “correct manner” to read the data, not as a personal hypothesis on observed tendencies. This lack of interest in causality explains one of the weaknesses of JSS: it did not offer a general theory of Jewish employment, yet it could help to refute excessively general claims, and render their meanings more precise.

2.3. Beyond commerce : positive and negative stereotypes about Jewish occupational structure

As far as economic questions are concerned, the main outcome of JSS was to show that Jewish occupational structure was “contingent” upon demographic and social variables, as contingency tables suggest (cf. supra). This approach therefore left the door open for social reform: Jewish concentration in commercial activities was not definitive, and Jewish employment might be reallocated in more “productive” sectors. JSS was precisely seen as providing the important parameters one had to control for such reallocation, and hence the essential support to such social reforms (Cohen, 1905). As is well-known, “productivization policies” and return to agriculture played an important part in early Zionism⁴². In the ZDSJ, several articles echoed this interest in productivization policies among Zionist goals (Preuss, 1927; Menes, 1931). In his 1931 article on Jewish occupational structure in Palestine, Abraham Menes provided, for instance, the following table:

⁴²Ruppin dedicated for instance the last chapter of his book to the creation of a specific “Jewish economic system through the return to agriculture”, considered as an essential part of “Jewish nationalism”(Ruppin, 1911, pp.242-260).

	Polen (1921)		Palästina (1930)	
	abs.	%	abs.	%
Landwirtschaft	9 406	6,1	5 135	28,2
Industrie	102 056	65,9	8 327	45,8
Verkehr	4 392	2,8	1 492	8,2
Haus- u. persönl. Dienst .	39 102	25,2	3 231	17,8
Zusammen	154 956	100,0	18 183	100,0

Figure 4. Comparison of Jewish occupational structure in Polen and Palestine, according to the 1921 Polish census and the 1930 British census (Menes, 1931, p.30)

According to Menes, the table provided evidence for a “*productivization process*” (*Produktivisierungsprozess*) with more than a quarter (28%) of Jews employed in agriculture, while they were only 6,1% in Poland. More detailed data also indicated that in Palestine, Jews were not excessively concentrated in the garment industry, as was the case in Poland, but rather in construction, metallurgy, and the timber industry (Menes, 1931). As mentioned earlier, Menes did not offer here a theoretical justification for considering agriculture in Palestine a more productive sector than the Polish garment industry; it was merely motivated by the widely shared perception that Jewish overcrowding in restricted economic branches equated poverty and misery for Russian and Eastern European Jews. In Germany, Jewish statisticians also observed a similar “*productivization process*” between the censuses of 1895 and 1907, with a respective rise and decline of Jewish participation in industry and commerce (Segall, 1912c; Weiner-Odenheimer, 1915)⁴³.

Segall was highly enthusiastic about this tendency: “This phenomenon, for which we have brought numerical proof, is a clear contradiction to the antisemitic [...] claim that the Jews are a haggling Nation [*Schachervolk*] and possess a distinct commercial spirit [*Handelgeist*] [...]”. The Jewish occupational shift from commerce to industry rather indicated “phenomenal intellectuality [*Geistigkeit*], purposefulness, determination, flexibility and adaptability [*Anpassungsfähigkeit*]”, which were, according to Segall, also highlighted in Ruppin's and Sombart's works (Segall, 1912c, pp.41-42). Apologetic intentions were here explicit. The German word *Schacher* was a negative term used in the 19th century to refer to “a specific Jewish type of commerce, with the pejorative sense of haggling, huckstering” (Penslar, 2001, pp.45-46)⁴⁴. Pointing out Jewish *Geistigkeit* instead of calling them a *Schachervolk* allowed Segall to refute the usual antisemitic claim while presenting Jewish occupational structure in a favorable light. Similarly, in a 1911 article, Segall

43 Segall nonetheless observed an opposed tendency for the period 1907-1925 (Segall, 1930c).

44 *Schacher* was also claimed to come from Hebrew “miskhar” (מִסְחָר), which means traffic, commerce. Penslar notes that the word contains an “interesting conceptual paradox”, because it was associated to both the financial power of rich Jewish merchants, but also to poverty of Jewish peddlers and *Luftmenschen* (Penslar, 2001, pp.45-46)

argued that Jewish concentration in liberal professions resulted from Jewish “intellectuality” and preference for spiritual goods; in modern times, Jewish erudition in Talmudic sources had been turned into predispositions and a special taste for modern sciences. Beside alternative factors (such as urban concentration), this cultural factor was also meant by Segall as a defense against antisemitic claims that there were too many Jewish doctors, journalists or lawyers (Segall, 1911a).

Segall was clearly turning here negative stereotypes about Jewish economic behavior into a positive one (Jewish intellectuality). This was quite typical of JSS : as Efron argues, many Jewish social scientists and anthropologists accepted anti-Semitic considerations of the Jews, while eventually trying to transform these considerations as positive assessments, to prove the anthropological worth of the Jewish race (Efron, 1994 ; about Ruppin, see also Morris-Reich, 2010, p.456). The idea that Jewish concentration in commerce was not due to a *Schachergeist* but to Jewish intellectuality was also to be found in Ruppin's works (e.g. Ruppin, 1911, pp.211-230).

Here the idea of Jewish *Geistigkeit* placed Jews in a favorable light as leaders of the modern economic world. But Jewish intellectuality was also associated with an economic disadvantage. It was the case for instance in Letschinsky's paper on “The psychology of Jewish immigrants”. The article was entirely theoretical and contained no statistical data. Letschinsky argued that most Jewish migrants were poor merchants and *Luftmenschen*, whose sole economic worth was their intellectual abilities. Contrary to peasants or factory workers, who could always adapt in a new county to other jobs either in the factory or in agriculture because it was still physical work, poor Jewish migrants were accustomed to independence and could not adapt to the modern industrial condition and to machine work (Letschinsky, 1913). As Sander Gilman argues, Jewish intellectuality, like any stereotype, can be associated with both positive and negative meanings (Gilman, 1996). The figure of the *Luftmensch* contained both aspects: on the one hand, *Luftmenschen* were innovative, creative, but in Letschinsky's perspective, they were unlikely to constitute themselves as proletarians.

Intellectuality was seen as an essential feature of Jewish economic activity: does it therefore contradict our previous claim that the dominant approach in the ZDSJ was non-essentialist, framed in terms of structure and statistical interdependency? Some form of essentialism was indeed consubstantial to JSS, due to the adherence of most Jewish social scientists to race theory (Efron, 1994). As said in the introduction, it is beyond the scope of this article to assess the influence of race theory on the ZDSJ. As far as economic questions were concerned, we shall here just state that contributors to the ZDSJ rejected on the whole the idea of a specific Jewish “commercial

instinct” or “commercial spirit”⁴⁵ that was widely shared among economists at the time⁴⁶, but largely subscribed to the idea of Jewish intellectuality. The stereotype was regularly advanced as an easy explanation for Jewish involvement in crafts that required technical knowledge (e.g. shoe-making, watchmaking, tailoring), while under-representation in other crafts could be explained by reluctance toward physical work (e.g., Ruppin, 1905d).

The argument about Jewish intellectuality was frequent, yet its overall importance in economic discussions in the ZDSJ should be nuanced for two reasons. First of all, purely theoretic articles without statistical data such as Lestschinsky's were unusual in the ZDSJ. If some controversial authors such as Ruppin and Theilhaber published controversial books outside of the ZDSJ that were filled with far-reaching generalizations, the overall tone in the ZDSJ was far more neutral and balanced (cf. supra). Secondly, the argument that Jews were essentially predisposed toward intellectual pursuits and high level of education was actually refuted in other articles published in the ZSDJ. Empirical skepticism toward far-reaching claims also led Ruppin in a 1906 article to refute the idea that Jews had a specific concern for education, on the basis of educational statistics that showed the relatively high frequency of illiteracy among Russian Jews (Ruppin, 1906a). The problem was well documented in the ZDSJ and was known to relate to the institution of the *cheder*, the traditional school that provided almost exclusively for literacy in Hebrew for religious needs, and was thus blamed for its lack of practical purpose (Rabinowitsch, 1913). In Germany, Ruppin also pointed out on the basis of a private field study that Jewish pupils performed worse than non-Jews, notably in mathematics, contrary to the usual claim that Jews are good at counting (Ruppin, 1906c).

In the end, contributors to the ZDSJ did not provide a definitive answer to the question of Jewish occupational structure, and its eventual “productivization”. Some contributions were motivated by apologetic purpose ; others could be read as sharing economic stereotypes about the Jews, while the journal on the whole was committed toward cautious empirical descriptions and contextual explanations. This mix between statistical rigor and reliance on economic stereotype probably explains the overall positive assessment of Sombart's works on the Jews by most contributors to the ZDSJ..⁴⁷. The figure of the *Luftmensch*, with its positive and negative economic

45 This remark applies to the contributors to the ZDSJ. Outside of the journal, many Jewish social scientists expressed less skepticism and sometimes embraced a racialized idea of Jewish commercial talent. Theilhaber for instance spoke in his 1911 book (but not in the ZDSJ) of the “economic and commercial predispositions” of the Jews (Theilhaber, 1911a, pp.48-49).

46 For an explicit mention of Jewish “commercial instinct”, see for instance Commons, 1901, p.327. On the influence of antisemitism and race theory on American institutionalism, see Cherry, 1976 ; Fiorito and Orsi, 2016 ; Leonard, 2016.

47 This could be surprising for a contemporary reader, since Sombart's book on *the Jews and Modern Capitalism* is now widely rejected as an antisemitic tract (Landes, 1974 ;Mendes-Flohr, 1976). Jewish social scientists usually considered that Sombart was overstating his arguments (particularly because of his reluctance toward statistical methods) but his

attributes, was complementary to Sombart's picture of the Jewish merchant and to his highly fantasized vision of Jewish economic history. Yet unlike Sombart, and beside images, Jewish social scientists also provided numbers.

3. The statistical legacy of Jewish statistics

3.1. The qualitative knowledge of JSS: mathematical sophistication *versus* statistical rigor

Looking at JSS with the eyes of a contemporary economist might be disappointing at first sight. It seems indeed that the basic problematic of most articles published in the ZDSJ would allow for an easy application of contemporary econometrics and statistics. Asking, for instance, whether there was a “significant” difference between the Jewish and non-Jewish employment structures, or between discriminated and undiscriminated regions⁴⁸ could have been naturally subjected to a statistical test, while the modern concept of regression would have been a natural candidate to further investigate statistical interdependence between Jewish occupational structure, and other social and demographic variables.

Techniques of statistical sampling based on error theory in mathematics were at the time thriving, particularly in the works of Galton, among others (Porter, 1986). Though they were familiar with eugenics (and thus with Galton's works) and race theory, Jewish social scientists general thesis was regarded as “convincing” (e.g. Segall, 1912c, p.52). Several reasons explain this positive reading of Sombart among Jewish statisticians. As Penslar points out, in the German context of the early 20th century, *The Jews and Modern Capitalism* was certainly filled with “strident assertions and self-contradictions”, but “few of its arguments were “intrinsically antisemitic” and did not share the “overtly hateful elements” of the classical antisemitic literature (Penslar, 2001, p.165). Fundamentally, Sombart was deeply ambivalent when speaking of a Jewish economic “spirit”, just like Jewish statisticians writing about Jewish intellectuality : on the one hand, Sombart's vision of Jewish merchants was “saturated with the cultivated man's horror of commerce” (Ringer, 1990, p.157), and was undeniably associated by antisemitic perceptions of Jewish economic behavior. On the other hand, the prior ideal of technological and economic efficiency that Sombart had adopted in his early career (Ringer, 1990, p.157) could have given the impression that *The Jews and Modern Capitalism* was a positive reassessment of Jewish participation to the foundation of modern economic life. It was precisely in this sense that Cohen read Sombart's book, considering Sombart's thesis as a “source of pride” for Jews (Cohen, 1914). Last but not least, though Sombart claimed to be skeptical toward explanations grounded in physical anthropology, race theory offered a middle ground between Sombart and Jewish social scientists. Both Sombart and such authors as Ruppin shared the idea that the Jewish race had to be “preserved” for its intellectual and cultural worth (Ruppin, 1911, p.230; Sombart, 1912, pp.54-60). Preservation of the Jewish race was for Ruppin an important argument in favor of Zionism. Though he was less enthusiastic about Zionism, Sombart also regarded Jewish emigration to Palestine in a positive light in *Die Zukunft der Juden*. Also motivated by the conservation of the Jewish race, both Ruppin and Sombart strongly opposed the assimilation of Jews to Western societies.

48 cf. Brutzkus, 1908. In this article, Brutzkus compared the occupational structure of regions outside and within the Pale of Settlement to show the effects of discrimination (strong limitation to mobility within the Pale, cf. supra) on Jewish employment.

largely ignored these techniques and did not use them in the articles of the ZDSJ. This lack of mathematical sophistication can be related to the well-known strong empirical and qualitative focus in the German statistical tradition. The notion of statistics as a technique of estimating probabilities remained largely alien to German economists and statisticians (Lindenfeld, 2008, pp.131-132). In the second part of the 19th century, apart from a few exceptions (Lexis), most German statisticians ignored the technique of sampling⁴⁹.

The mentors of Jewish social scientists were themselves known for their preference for empirical analysis over mathematical sophistication. Conrad, supervisor of Ruppin (cf. supra) provided detailed quantitative investigations of local conditions, and thus “continued the idiographic strand of German statistics”, rather than the mathematical treatment advocated by Lexis (Lindenfeld, 2008, p.239-243). Such authors are usually considered as having an almost excessive empirical focus. According to Grimmer-Solem, Mayr, Segall's supervisor, embodied the type of statistical analysis “giving way to the narrow accumulation of data” (Grimmer-Solem, 2003, p.276).

It would be wrong however to consider JSS as being mathematically “unsophisticated”. It should be noted first that inductive statistics based on probability theory were not really influential in economics until the 1970's (Biddle, 2017). As far as JSS is concerned, it might be reasonably considered that due to the huge statistical differences Jewish statisticians were dealing with, techniques of statistical sampling were not especially useful. Jewish and non-Jewish populations diverged so strongly in their occupational structure that it was not necessary to perform a statistical test in order to prove that the difference was “significant”.

More importantly, the idea of mathematical unsophistication does not reflect adequately the statistical methods of the GHS. German statisticians of the late 19th century were interested in what Porter calls “systematic covariation”: the “proper statistical procedure” was “to fracture the population into tiny pieces, and then regroup these in various ways” (Porter, 1986, p.184). These “tiny pieces” had to be chosen as the specific subgroups which were homogenous and coherent according to the main variable of interest, thus illustrating the main differences in the general population. “Systematic covariation” meant, basically, paying attention to the details and statistical rigor. Statistical ability largely consisted in the deep empirical knowledge which was necessary to identify coherent subgroups: for instance, a statistician working on the occupational structure in Austria had to know how this structure varied and should be then “fractured” among geographic (cities versus countryside, or specific regions such as Galicia), demographic (e.g., gender, age) or temporal (e.g., specific periods) lines.

49Georg Friedrich Knapp in his *Theory of Population Growth* used differential equations to development new mortality measures (Grimmer-Solem, 2003, p.156), but Jewish statisticians did not use Knapp's equations in their demographic works.

An important corollary of “systematic covariation” was a general skepticism and suspicion toward statistical aggregates and averages. Such a skepticism played an essential part in Segall's harsh critique of Theilhaber's book on German-Jewish demographic decline (cf. supra, Theilhaber, 1911a). The ZDSJ published a short version of Segall's review (Segall, 1911e)⁵⁰. Segall did not and could not reasonably disagree with Theilhaber's general claim that German Jews were demographically declining⁵¹; the bulk of the controversy was about statistical rigor. A repeated claim in Segall's review was indeed that Theilhaber paid insufficient attention to the details of the data. For instance, Theilhaber compared the statistics on birth between 1871 and 1905 to substantiate his thesis that the German-Jewish population was declining, but did not look at what happened between these two dates, i.e. the statistics on birth in the 1880's and 1890's, which were strongly affected by emigration and immigration. In doing so, Theilhaber could not understand properly the relationship between migration and demographics (Segall, 1911f, pp.491-494). Through his meticulous review, Segall also uncovered that Theilhaber wrongly reported census statistics (Segall, 1911f, p.496), and even invented numbers in a subsequent article (Segall, 1911f, p.494).

It can be argued that the kind of statistical rigor and thoroughness displayed by Segall was one of the important strengths of both the German tradition in statistics and JSS. For both economists of the GHS and Jewish statisticians, such a knowledge was grounded in monographs. As said earlier, Segall's dissertation was on the demographics of the Jewish community in München, and was published as a separate outlet by the *Verein* (Segall, 1908). The ZDSJ occasionally published monographs on Jewish populations in particular cities (e.g., Weiner-Odenheimer, 1915, 1916; Unna, 1925).

Another important critique in Segall's review was that Theilhaber lacked the qualitative knowledge about the production of statistics: “Theilhaber sees only numbers, not the way they came to existence” (Segall, 1911f, p.487). In other words, Theilhaber did not know how censuses were conducted, what were their shortcomings, and therefore could not probably understand statistics. Gross misunderstandings of data occurred when, for instance, Theilhaber compared the population in Prussia over the periods 1866-1871 and 1871-1876 without taking into account that the Prussian borders had moved in 1871, therefore invalidating the meaning of his comparison (Segall, 1911f,

50 We will base here our analysis on the longer version of Segall's review, and Theilhaber's subsequent response, that were published in *Im deutschen Reich*, a journal of the German Jewish liberal press (Segall, 1911f-g; Theilhaber, 1911b)

51 The problem was a general concern for the vast majority of Jewish statisticians (Hart, 2000). In his response to Segall, Theilhaber reports that Mayr admitted his thesis of a demographic decline of German Jews (Theilhaber, 1911b, p.668). It should also be noted that Segall became less critical of Theilhaber later on: in a 1930 article, Segall writes that Theilhaber described in his book with “sharp eyes” the phenomenon of Jewish demographical demise and gave the impulse of a necessary Jewish population policy (Segall, 1930a, p.2)

p.493).

As seen in section 2, a significant part of the articles published in the JNS or in Schmoller's *Jarhbuch* were precisely dedicated to the presentation of censuses and to the description of the various procedures for data collection (cf. supra). This surrounding qualitative knowledge about quantitative knowledge can be regarded as the second important strength of the German statistical tradition and JSS.

As far as JSS is concerned, this qualitative knowledge consisted firstly in knowing the shortcomings of public censuses or field studies run by charities and communal institutions. One of the important purposes of *verarbeitung* was precisely to indicate to the reader and/or future user of statistics such shortcomings. These could relate first to missing data. For instance, Koralnik mentioned that in the 1920 Soviet Russian census, several regions were not included because of war (Koralnik, 1927). More frequently, contributors to the ZDSJ indicated to their readers the several biases that might have occurred during the collection of data, notably an occupational distortion known as “Columbus tailors” (Lederhendler, 2009, p.18): according to Lestschinsky, when questioned about their professions by US immigration officials, Jewish migrants were inclined not to answer “commerce” but rather any craft, because of its better reputation, hence the over-representation of tailors among Jewish migrants (Lestschinsky, 1910; for another example about liberal professions in Germany, see Koralnik, 1930b). Jewish statisticians also pointed out that some specific part of the employment and social structure was not adequately reflected in a census: for instance, the German census classified as employee in the world of commerce only the personal working in the office (*Kontorpersonal*), and not salespersons (*Ladenpersonal*), though both positions were closely related (Ruppin, 1905b; see also Segall, 1912c for a similar remark in the industry). Similar remarks were made for studies run by communal institutions⁵² (Locker, 1926).

Beyond signaling lacunae, authors of the ZDSJ proposed ways to amend the existing statistics in order to get the adequate information, notably methods to identify Jews in public censuses. As said earlier, in many countries, public censuses did not include questions about confessions, and Jews could not be directly identified in the outcomes of the census; Germany was in this regard an important yet unusual exception for confessional statistics (cf. supra). When data about confessions were not directly available, Jewish social scientists developed alternative empirical techniques to trace indirectly the Jewish subgroups in the general population. For instance, in the 1897 Russian census, Jews could be identified on the basis of mother tongue (i.e., yiddish; Ruppin, 1906a). The same technique was used to discriminate between Jewish and non-Jewish migrants to the US

52 : B. Locker regrets in his 1926 article that the Joint Distribution Committee in his survey of Jewish industrial and craft work in Poland lacked of a clear definition of a Jewish firm, actually included any company in which a Jew was working, thus excluding Jewish-owned companies without Jewish workers

(Ruppín, 1906d). In other countries such as Rumania where Jews were not citizens, they could be indirectly identified as foreigners without citizenship in a foreign State (Ruppín, 1905d).

Jewish social scientists did not only know the techniques; they were also aware of their relative advantages and shortcomings, and discussed these. For instance, Harry Lindfield, director of the statistical department of the American Jewish Committee, published an article in the ZDSJ in which he criticized (with regard to the US) the identification method based on mother tongue, and proposed to estimate the number of Jewish children on the basis of the number of pupils who were not present at school on the day of Yom Kippur (Lindfield, 1930). Similarly, Ruppín engaged in a discussion in the ZDSJ with Philipp Cowen, an official at the US bureau of immigration, on the proper method to identify Jewish migrants (Ruppín, 1908b). Once again, strong qualitative knowledge of the data was needed to properly use these techniques. As the ZDSJ was also publishing articles on, for instance, the literacy of Russian Jews in Yiddish, Hebrew, and Russian (Rabinowitsch, 1913), other contributors to the ZDSJ knew quite accurately the proportion of Yiddish speakers among Russian Jews, and thus the accuracy of the “mother tongue” technique.

In the end, it could be argued that it was not despite of but precisely because of their empirical rigor and their qualitative knowledge of statistics, that Jewish social scientists, just like German economists of the same period, used “unsophisticated” methods, that could not lead to far-reaching theories⁵³. This interpretation corroborates both our hypotheses that JSS was intellectuality grounded in the GHS, and that the ZDSJ operated as a “statistic platform”, whose main purpose consisted in the *verarbeitung* of statistical data (cf. supra). Using anachronistic terms, one could say that the ZDSJ was dedicated to “data cleansing”, i.e. to the production of reliable statistics on the Jews, from scattered sources, and available for future research.

The large amount of economic data produced by the ZDSJ can be regarded as its “statistical legacy”⁵⁴. This legacy is visible through the multiple use and re-use of the data which were edited. When it comes to Jewish economic history of the 19th century, most economists and historians relied on sources that were compiled in the ZDSJ⁵⁵. It was indeed difficult to edit its own data, for the

53 Grimmer-Solem makes a similar point about 19th century German economists: “it was not for lack of, but precisely because of their mathematical ability, knowledge of statistical methods, and sophisticated empirical understanding of social phenomena that they emphasized the variability of causal factors determining statistical averages” (Grimmer-Solem, 2003, pp.276-277).

54 This interpretation is close to the following comments on Ruppín by the demograph Sergio Della Pergola: “while the quantity and quality of Ruppín's works are remarkable, the statistical methods he employed were neither very innovative nor technically very sophisticated [...]. Ruppín's main contribution to an innovative layer of scholarship is [...] a massive and systematic effort of documentation, based on large-scale multinational compilations from the many sources of statistical data on Jewish population and society” Della Pergola, 1999, p.55.”

55 An important exception would be the economic historian Arcadius Kahan, specialist of both Russian and Jewish economic history. Kahan worked for instance directly on the original sources of the 1897 Russian census and the 1904 ICA study (cf. supra), but also acknowledges his “intellectual debts” to the works of Brutzkus, Ruppín, and Lestschinsky (Kahan, 1986, p.1) who were important contributors to the ZDSJ.

various reasons that were previously explored (original sources are hard to read, scattered across different volumes, or without direct identification of the Jewish population). We shall briefly mention here two revealing examples. Interestingly, Werner Sombart himself heavily quoted articles from the ZDSJ in *The Jews and Modern Capitalism*⁵⁶. In his subsequent 1912 book entitled *Die Zukunft der Juden*, Sombart relied almost exclusively on the “reliable compilations” provided by Ruppin (Sombart, 1912, p.10). Later on, when Simon Kuznets wrote several essays on Jewish economic history, he borrowed statistics from the ZDSJ and acknowledged his intellectual and empirical debt toward Lestschinsky and Ruppin⁵⁷.

3.2. Statistical reflexivity on occupational categories: gainful employment, self-employment and unemployment

Another reason why articles published in the ZDSJ might appear at first sight methodologically weak in the eyes of a contemporary economist is that contributors to the journal had mostly an “occupational” approach of economic phenomenon, i.e. economic questions were mostly apprehended through the angle of occupational statistics and employment structure. In his book on *Statistics and the German state, 1900-1945*, Adam Tooze argues that such statistics in the 19th century prevented a conceptualization of the modern notion of unemployment. Occupation (*Beruf*), as defined by von Mar, was indeed conceived “in vocational terms as a person's “permanent task” (*dauernde Aufgabe*) and could not therefore integrate the fact that individuals might be temporarily unemployed. Another problem associated with the notion of *Beruf* was that it made no distinction between personal occupation and industry of employment (Tooze, 2001, pp.52-53). The classical classification of economic activities in terms of professions involved indeed a confusion between branches and occupations (e.g., between butcher and butchery, shoe-maker and shoe-making) and neglected the qualification and internal hierarchy within firms and organizations (Desrosières and Thévenot, 2002).

It is true that occupational censuses in 19th century-early 20th century Germany were meant to identify the main occupation (*Hauptberuf*) of the individuals, which was the learned profession, different from the occasional occupations or “side jobs” (*Nebenberuf*). In his presentation of the 1895 German occupation census in the JNS, Scheel precisely argued that the “unemployed”

56 Though Sombart wrote in a footnote that “the ZDSJ (begun 1905) deals with questions of economic history only occasionally” (Sombart [1911] 1962, p.41, footnote 22), he actually made numerous references to articles of the journal (e.g., p.10, pp.164-165, p.196, p.282), especially in the last part of the book which includes mostly considerations about race.

57 Kuznets' essays on Jewish economic history have been recently edited by Glen Weyl and Stephanie Lo (Kuznets, 2017a and 2017b)

category should not be recorded in the census, because the statisticians were interested in the “real” profession, not in the temporary phases in which individuals might be unoccupied; unemployment, wrote Scheel, is a too evanescent of a category⁵⁸(Scheel, 1898, p.10).

Yet it is not true that Jewish social scientists were unable to grasp the internal hierarchy of professions within companies and organizations. As seen earlier, the analysis of occupational tables was usually followed and explained with tables on “social structure”. In Germany, the classifications used about social structure were firmly grounded in the following categories: *Arbeiter* (manual workers), *Angestellte* (employee, i.e. non-manual workers), *selbständig* (self-employed), *Beamte* (civil servants). These categories were well identified since the end of the 19th century in the German system of social protection (Desrosières and Thévenot, 2002). When these categories were provided -which was usually the case in most social and occupational censuses-, Jewish statisticians had at their disposition a basic yet operative scheme to understand differences in qualification and social status.

In 1925, Germany abandoned the principle of occupational census. The 1925 economic census was based on a different classification. Instead of classifying, for instance, all carpenters in the same category of “carpentry” or “woodwork”, now individuals were classified according to the organization or firm (*Betrieb*) in which they were working: e.g., in a glass industry company, carpenters, locksmiths, blacksmiths would be gathered in the branch “glass industry”. Jewish statisticians showed no difficulty in accommodating to the new system (Segall, 1930c). Koralnik argued that it had no significant consequences for JSS, as most modifications concerned factory workers, in which Jews were relatively less represented, while for self-employed and employees in the commercial sector, in which Jews were more numerous, the classification was almost left untouched (Koralnik, 1930b).

The core of Tooze's argument, however, is that late 19th century occupational statistics was unable to grasp the modern notion of unemployment. As seen earlier, Jewish statisticians were interested in *Erwerbstätigkeit*, i.e. the proportion of the population which was “gainfully employed” (cf. supra). For instance, Tennenbaum observed in Austria that *Erwerbstätigkeit* among Jews amounted to 43%, which was significantly lower than the rest of the population (Tennenbaum, 1919). Of course, this rate was not a rate of unemployment, since it merely divided the number of occupied individuals by the general population: what was lacking was a statistical definition of “working population”. But we also saw that Jewish statisticians were able to interpret

58 Scheel mentioned however that three questions about unemployment were asked in the census: is the individual actually working when the census was conducted; if no, for how long had he been unoccupied; and for which reason (sickness, or personal reasons). Yet Scheel insisted on the difficulties associated with the interpretation of the unemployment statistics, and also to the tendency of social-democrats to significantly exaggerate its importance to support their political agenda (Scheel, 1898, p.10).

Erwerbtätigkeit in the light of demographics, and a frequent explanation for the lower Jewish *Erwerbtätigkeit* was indeed that the Jewish population was older (cf. supra). So it could be argued that Jewish statisticians were capable of providing at least an estimate of unemployment as a statistical aggregate.

Yet it is true that Jewish social scientists were not “fighting against unemployment” in the modern sense. Their prior economic objective remained “productivization”, i.e. introducing an occupational shift within the Jewish labor force toward more “productive” sectors. Rather than being an impediment toward the modern understanding of unemployment, we argue that this specific concern, along with their skepticism toward statistical aggregates, led Jewish statisticians to an early reflection on “precarious work”, i.e. on the fringes of employment. Due to their qualitative knowledge of how censuses were conducted (cf. supra), Jewish social scientists were aware that individuals were sometimes counted as gainfully employed while they were actually not, or in very precarious situations.

Statistical reflexivity toward *Erwerbtätigkeit* led Jewish statisticians in particular to further investigate the status of self-employment in two domains. The first domain was women's employment. Very few women wrote in the ZDSJ (cf. section 1) yet the mostly male contributors to the journal were sensitive to the issue of women's employment. Though recently rising, women's *Erwerbtätigkeit* among Jews was usually observed to be lower than among non-Jews (e.g. Segall, 1912c; Fürth, 1919). The idea of “productivization” led contributors to the ZDSJ to argue in favor of women's employment⁵⁹ (e.g., Tennenbaum, 1919; Fürth, 1919).

Beyond the question of whether women's employment as a whole was beneficial, the method of “systematic covariation” (cf. supra) led Jewish social scientists to study in detail how Jewish women were employed, contrasting some beneficial and more precarious positions. In a 1919 article, Tennenbaum carefully analyzed the participation of Jewish women in each economic sector in Austria, and then focused on their social status. Tennenbaum observed a strong representation in the categories of self-employed and “helping family members”. Though noting that self-employment might be associated with favorable positions as directors in small business, Tennenbaum interpreted this particular social structure of Jewish feminine employment as unfavorable. Most Jewish women who were self-employed or “helping family members” were categorized as such because they were unprepared for the labor market and insufficiently educated. According to Tennenbaum, this revealed that at the ideological level, women's employment continued to be considered as an occasional replacement of male work (Tennenbaum, 1919).

⁵⁹ Outside of the ZDSJ, Theilhaber argued in *The Demise of German Jews* against women's employment, considered as threat to tradition and family life (Theilhaber, 1911a, pp.118-135)

Similarly, Henriette Fürth insisted in her 1919 article⁶⁰ on the necessity for Jewish women not only to work, but to obtain favorable status at work. She also pointed out that self-employment might be related to both favorable and unfavorable situations depending on the branch and the company, while regretting that there were significantly more Jewish women than men classified as workers in the industry, a position mostly associated with unskilled job and low-wages (Fürth, 1919).

Consistently with what we have observed before, this sense of skepticism toward statistical categories (e.g., self-employment) led Jewish social scientists to fracture these categories in more homogenous “tiny pieces” (cf. *supra*). As far as women's employment was concerned, of particular interest was the category of “self-employed without profession” (*selbständig ohne Beruf*), which accounted for 36% of women's employment in the 1907 German census (Segall, 1912c, pp.79-80). In his 1912 essay, Segall detailed the sub-groups within this category, and regretted its lack of homogeneity: “self-employed without profession” was made up of no less than 9 subgroups, including for instance annuitants, students, individuals supported by their family, disabled persons, individuals detained in prisons, asylum, poor houses (Segall, 1912c, pp.79-80). In a previous article, Segall also argued that this category led to an overestimation of women's employment, because most of these self-employed without profession were actually unoccupied; he therefore proposed to exclude the category from *Erwerbtätigkeit*. Segall made similar reservations about the category of “helping family members” (Segall, 1912c, pp.79-80).

The second important preoccupation related to the status of self-employment was the poverty of Eastern European Jews. By the end of the 19th century, the bulk of the Jewish population in Russia and Eastern Europe had indeed been reduced to a mass of *Luftmenschen*, without stable jobs and dependent on communal relief, and as the historian Eli Lederhendler wrote, “Jewish impoverishment in Russia was not a reduction to lower-wage, blue-collar jobs [...], it meant not just the lack of income, but also the lack of any real standing” (Lederhendler, 2009, p.22). What interests us here though is how this historical phenomenon translated into statistical thinking. Here again, Jewish statisticians regarded self-employment as the central parameter. Self-employment was known to reflect adverse economic conditions in Russia and Eastern Europe (see for instance Lestschinsky, 1931). Over-representation in self-employment, especially in the commercial sector, was associated with the quasi-absence of a Jewish proletariat (e.g., in Austria, Tennenbaum, 1919). Conversely, inability to integrate large-scale factories was related to poverty and discrimination. Providing data on employment according to the size of firms, Korálnik observed that Jews in Russia were increasingly relegated to small industries, which consisted often of parallel systems of home-

⁶⁰This article was a vibrant advocacy of women's employment. We shall here only focus on the statistical considerations.

working, with the worst and toughest economic conditions, almost no qualification, in typically overcrowded Jewish sectors such as the garment industry (Koralnik, 1925). Size (of firms) was the problem. According to Salomon Margolin, the fundamental reason for the lack of a Jewish proletariat was its dispersion: scattered across the Pale of Settlement in small cities, Jews could not constitute a communitarian labor force susceptible to integrate large-scale factories (Margolin, 1910).

The lack of “proletarianization”, i.e. participation in the modern industry of the Jewish labor force, was seen as an important problem by Jewish statisticians (Franckel, 1986). Once again, contributors to the ZDSJ did not offer a specific theory of why large-scale industry would be more beneficial to Jews. One still finds the idea that industry provides a fixed occupation, with its related advantages-- better qualification (Koralnik, 1925), regular wages, possibility to organize the labor movement (Lestschinsky, 1913)-- while self-employed peddlers and craftsmen were associated with uncertain occupations and poverty. Yet the image of the *Luftmensch* offered a powerful and coherent understanding of the main problems within the Jewish labor force. As seen before, Lestschinsky for instance associated the intellectual disposition of *Luftmenschen* with their strong sense of independence, and thus their preference for self-employment, which relegated them to the least advanced branches of industry (Lestschinsky, 1913; cf. supra). Central to this argument about “unproletarianized” Jewish workers was their alleged lack of *real Beruf*: one could suggest that the economic idea of associating productivity with industry (or with any other sector) came from a statistical sense of skepticism toward the pseudo-occupations of self-employed, as embodied by the figures of the *Luftmensch* and the *Luftfroy*⁶¹.

61 *Luftfroy* would be the feminine word in yiddish for *Luftmensch*. The word is ours and did not appear in the ZDSJ. Yet both poor Eastern Jewish peddlers and Jewish women were regarded in the ZDSJ as figures of precarious work (cf. supra). We therefore chose here to speak of the *Luftmensch* and the *Luftfroy* to recall that they were subjected to similar economic considerations.

Conclusion

Trained as typical 19th century German economists, Jewish social scientists were interested, among other things, in the question of Jewish “productivization”. We showed that numbers provided by the ZDSJ had an ambivalent role in the debate over Jewish occupational structure: though contributors to the journal were certainly committed toward empirical rigor, statistics served also apologetic purposes, to disprove antisemitic claims about Jewish economic behavior (e.g., documenting Jewish poverty), while Jewish statisticians themselves were not free from economic stereotypes, and shared notably the idea of Jewish intellectuality. We argued that the ZDSJ had two important economic and statistical legacies. It provided a vast amount of “cleaned” economic data that could and has been used in subsequent research. Authors in the ZDSJ also developed a specific sense of reflexivity toward occupational categories, which led to a critical approach toward self-employment. Though they certainly did not anticipate the modern notion of unemployment, Jewish social scientists had a specific concern for precarious workers, classified as employed though being in fragile economic positions, as embodied by the figures of the *Luftmensch* and the *Luftfroy*, which paradoxically sounds familiar to the modern statistical critiques of employment categories.

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