

Henning Borggräfe

Sources on Deportations

A General Model and a Methodological Approach for Researching Person-Related Records based on the Berlin Transport Lists

Abstract: This paper discusses the existing sources on the history of the deportations of Jews as well as Sinti and Roma and, using the transport lists of the deportations of Jews from Berlin as an example, presents a methodological approach for digital-based research with archival mass data. In the first part, eight contexts will be identified in which different sources on the history of the deportations were produced by various actors. The paper then addresses aspects of provenance and accessibility and distinguishes documentation centers on the between three main categories of sources that have been used to date for different research approaches. In the second part, using archival data from the Berlin transport lists collection held at the Arolsen Archives as well as matchings with archival data from two other holdings, the paper tests how person-related serial records can be analyzed using a Geographic Information System and quantitative data evaluation. Here, the focus is on spatial dimensions of the deportations from Berlin and their dynamics, on concentration processes of the Jewish population in the city prior to deportations, and on the relations between mass data analysis and narrative sources. In the course of the digitization of archives, a growing amount of person-related mass data is being generated. This paper aims to contribute to a broader discussion of the opportunities and limits of their use for historical research using digital tools and methods.

Introduction

In May 1946, a team of the American Jewish Joint Distribution Committee (AJDC), which had set up a tracing office in the former capital of defeated Nazi Germany, found Gestapo transport lists in the basement of a Berlin finance administration building.¹ The lists contained the names, dates of birth, last residential address-

¹ Larry Lubetsky: *Berlin AJDC Tracing Office, 1945–1947*, Berlin: AJDC, 1948, 31–36; on the tracing work of the office, see also Akim Jah: “Die Deportation der Juden aus Deutschland 1941–1945. Zur Geschichte und Dokumentenüberlieferung im Archiv des ITS”, in Akim Jah and

es and other biographical information of about 49,000 Jews whom the Gestapo had deported from Berlin to ghettos and extermination camps. The financial authorities once had used the lists to liquidate the property that deportees had left behind. The Berlin AJDC office then created a tracing card index based on the lists. The originals initially remained with the financial authorities before being handed over to the International Tracing Service in Arolsen in 1953, which for decades also used the lists for searching and clarifying fates. Today, the Berlin transport lists collection held at the Arolsen Archives has been scanned, indexed in depth, and is available online.²

The Berlin transport lists are an example of a certain category of sources on the history of the Holocaust: person-related serial records. Until now, research has hardly analyzed such sources systematically except primarily for individual biographical studies. Holocaust research, in contrast, heavily relies on two other categories of sources: general files of the institutions involved, and ego-documents. For example, volume 6 of the edition ‘The Persecution and Murder of the European Jews by Nazi Germany, 1933–1945’,³ covering deportations from Germany and the so-called Protectorate, contains 329 sources of these two categories as well as some newspaper articles, but no source of the aforementioned category. Obviously, standardized lists, forms or index cards are not easy to explore when the research interest is not an individual person. At the same time, it is sources of this category that archives and documentation centers on the Holocaust are digitizing the most – with the result that we have more and larger person-related datasets available. Yet, researchers still need to explore how and to what end we can use this data for writing deportation history.

This paper has two goals. In a first, introductory step, it outlines a general model of the sources on deportations in order to provide a framework. The model is based on the deportation of the Jews from Germany, but for each case, i.e. also for deportations of Sinti and Roma, as well as for deportations from occupied Europe and countries allied with Nazi Germany, the model should make it possible to assess the source situation and to reflect on how it influences

Gerd Kühling (eds.): *Die Deportation der Juden aus Deutschland und ihre verdrängte Geschichte nach 1945*, Göttingen: Wallstein, 2016, 11–29, here 21.

² See the collection *Deportations from the Gestapo area Berlin*, reference code VCC.155-I, available online at https://collections.arolsen-archives.org/en/archive/12-1-1_VCC-155-I. Last accessed: 28.02.2022. A CSV export of the archival data for research can be requested from the Arolsen Archives. On this collection, see also the article by Kim Dresel and Christian Groh in this volume.

³ Susanne Heim (ed.): *Die Verfolgung und Ermordung der europäischen Juden durch das nationalsozialistische Deutschland 1933–1945*, volume 6: *Deutsches Reich und Protektorat Böhmen und Mähren, Oktober 1941–März 1943*, Berlin/Boston: De Gruyter/Oldenbourg, 2019.

research possibilities and perspectives. Among other aspects, it will be shown that the ongoing digitization of archival sources and the development of databases for online memorial books and digital memorials not only open up new possibilities for research, but that certain prerequisites must also be met for their productive scholarly use.

In the second, more detailed step, the paper will use the dataset of the Berlin transport lists collection from the Arolsen Archives to present a methodological approach for researching person-related records with digital tools. The paper examines the dynamics of the deportations from Berlin, spatial concentration processes within the city, and experiences of Jewish Berliners through GIS-based and quantitative analyses. For this, the paper will not rely on the data from the transport lists alone but also on a matching with Berlin data from the 1939 census provided by the German Federal Archives – a second set of person-related mass data.⁴ Furthermore, I enriched the GIS-model by another matching with metadata from the oral history collection of the United States Holocaust Memorial Museum (USHMM).⁵ In addition to presenting the methodological approach and first findings of this explorative case study, the paper thus also aims to raise awareness of the importance of considering testimonies in context in order to better assess their scope for explaining events and processes during the Holocaust.

Eight Contexts of Source Production on Deportations

Considering the overall process of the persecution and murder of the European Jews and the Sinti and Roma, we first have to state that deportations marked an incisive, but only short phase. While this phase is in focus here, sources on other phases of the Holocaust and the Porajmos (and even on the previous and in some cases the later lives of the victims) might be very important for research on deportations as well. Only looking at the history of deportations, with regard to the production of sources, we could distinguish between eight different con-

⁴ See Nicolai M. Zimmermann: “Die Ergänzungskarten für Angaben über Abstammung und Vorbildung der Volkszählung vom 17. Mai 1939”, 2013. Available online at: <https://www.bundesarchiv.de/DE/Content/Publikationen/Aufsaeetze/aufsatz-zimmermann-ergaenzungskarten.html>. Last accessed: 04.03.2022. I would like to thank the colleagues at the German Federal Archives for providing the dataset.

⁵ This concerned all interviews tagged with the keyword *Berlin*. I would like to thank the colleagues at the United States Holocaust Memorial Museum for providing the dataset.

texts, some of which ran in parallel – as shown in fig. 1. Each deportation was marked by a short period, sometimes lasting only a few days or weeks, from the preparation to the liquidation of the remaining property and subsequent registration of the event by various actors. And then there always was a very long period of retrospective source production, which began immediately after liberation, and continues to the present day.⁶

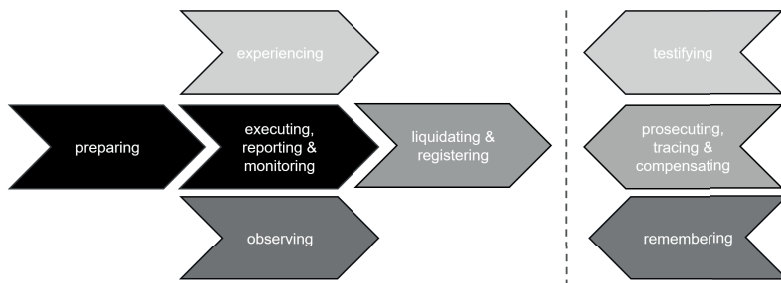


Fig. 1: Eight Contexts of Source Production in the History of Deportations.

Preparing a deportation was the first context: the actors directly involved in this (the Gestapo in case of the Jews, the criminal police in case of the Sinti and Roma) produced files at the state, regional, and local level, containing classic administrative sources, such as correspondence, memorandums, and reports. In addition, sources on deportations also exist in administrative files of other state authorities involved in or informed about the preparations: authorities at the Reich level – see the Wannsee conference for example – and intermediary state authorities, as well as transport operators, and, in case of deferrals (*Rückstellungen*) of Jewish forced laborers, the labor offices and employers. Finally, community organizations – in case of the German Jews the Reich Associ-

⁶ As mentioned above, the model is based on the deportations of Jews from the German Reich. For published source collections, in addition to Heim, *Die Verfolgung und Ermordung der europäischen Juden*, also see Akim Jah and Marcus Gryglewski: *„Ihre Grabstätten befinden sich nicht im hiesigen Bezirk.“ Quellen zur Deportation der Jüdinnen und Juden während des Nationalsozialismus*, Berlin: Hentrich & Hentrich, 2018. While the model will probably not be complete even for the German case, there might be sources only produced in the German setting, whereas there will be other types of sources that originated only in certain countries or occupied territories. See, for example, the article by Viorel Achim in this volume on Roma petitions from Transnistria.

ation of Jews in Germany – were already forcibly involved, as were individual victims who had to fill out property declarations.

A second context, actually three successive steps by those who carried out and accompanied a deportation, can be labelled as *executing, reporting and monitoring*. On the one hand, here we find sources directly triggering the act of deportation – the announcement by the community organization to the individual victims, the actual deportation order by the local Gestapo or criminal police, and the transport list. On the other hand, we find action reports at different levels: from operation reports of the escort command to reports of local to regional as well as regional to top police authorities. Furthermore, the execution of a deportation was monitored by top police and other state authorities and, in the case of deportations from outside the German Reich, also by collaborating regimes, as well as German embassies.

In parallel, marking a third and a fourth context, the victims *experiencing* deportations created other types of sources that are of the highest value for historical research: diary entries, letters, and postcards, sometimes even sent during a transport break or thrown off the train. In addition, deportees wrote petitions to the authorities at some destinations. Relatives and victims who, for example, lived in the neighborhood, in the same house or were waiting in an assembly camp and had not yet been deported created similar sources. The same applies – albeit from a fundamentally different perspective – to those *observing* a deportation, be they neighbors, bystanders at deportation routes to an assembly camp or at train stations, chroniclers of events in the hometown, journalists, or foreign diplomats. However, these observers did not only write diary entries or letters, but in many places photographs, newspaper articles and diplomatic reports have survived, which, among other things, make it possible to assess knowledge about deportations and reactions of the population.

The fifth context consists of various follow-up activities that began shortly after a transport had left. *Liquidating* the assets and property the deportees had to leave behind, meaning state-organized robbery, was an activity in which many sources were created on site, nowadays often serving as a secondary source for missing information on a deportation and its victims. Local and regional financial administrations created lists of previous owners – or, as in the Berlin case, continued to use the Gestapo's lists for their purposes. Financial administration officers kept case files on the liquidation of individual assets. Newspapers announced auctions. Another subsequent activity a number of actors carried out in different places was *registering* a deportation in various card files: card files of the community organization, the municipal resident registration office, the regional police, or the administration of an assembly camp. Moreover, we also find such registrations of a deportation in sources only created

many months later. For example, the deportations of hundreds of German Sinti from their hometowns to Auschwitz in early 1943 was recorded on prisoners' registration forms of the Buchenwald concentration camp, the camp they were further transported to in the summer of 1944 to perform slave labor for the German war industry.⁷

Turning to the second, much longer period that began after the end of the Nazi regime and continues to the present day, *prosecuting* the perpetrators as well as *tracing* the victims and *compensating* survivors and relatives all represent a sixth context. Particularly from the mid-1940s to the late 1960s, and again from the late 1980s to the early 2000s, tens of thousands of sources – mostly case files – were created here, which are not only used for research into how the Nazi crimes were dealt with, but also for research into the history of persecution.⁸ In many cases, victims of certain transports are only documented in these files, which were created subsequently for and of course shaped by very specific purposes.⁹ In many of these files, we find personal accounts as well as originals or copies of primary sources on the deportations, extremely important for writing a history of experience. Case files on prosecutions of perpetrators also include – often apologetic – descriptions of the deportations by, for example, subaltern Gestapo officials, themselves.

In parallel to criminal prosecution, tracing and compensation, where survivors and relatives were involved as witnesses and applicants and therefore had to provide information in given settings, many became active themselves by *testifying* the crimes – a seventh context. Bearing witness took place both out of individual attempts to cope with the horrible experiences and on the initiative of re-emerging Jewish self-organizations, which in a number of places made a concerted effort to collect and record.¹⁰ There were phases of varying intensity, with

⁷ See, for example, Prisoner Registration Form of Willy Blum, 1.1.5.3/5558954/ITS Digital Archive, Arolsen Archives. On the story of Willy Blum, see Anette Leo: *Das Kind auf der Liste. Die Geschichte von Willy Blum und seiner Familie*, Berlin: Aufbau, 2018.

⁸ In addition to the widely used compensation files in German state archives, the ITS Tracing and Documentation files (T/D-Files), which are kept in the Arolsen Archives, should also be mentioned here.

⁹ This includes the fact that the documentation of deported Sinti and Roma in compensation case files, due to their long non-recognition as Nazi victims, is much more fragmentary than the one on deported Jews. For the extensive archival material on German compensation in public archives, the German Federal Archive has started to develop a new online portal that will be included in www.archivportal-d.de in the next years.

¹⁰ See Laura Jokusch: *Collect and Record! Jewish Holocaust Documentation in Early Postwar Europe*, Oxford: Oxford University Press, 2012; also see the article by Johannes Meerwald in this volume.

peaks in the early postwar period as well as in the 1980s and 1990s, and the techniques changed from questionnaires and newspaper reports to written memoirs and oral history recordings. However, a unifying feature of most sources created here was that survivors presented their entire story of persecution, which is why they often described the deportation only briefly.

Finally, there is an eighth context in which a special kind of secondary source emerged since the 1950s, namely institutionalized *remembering*, which led to the creation of commemorative lists, memorial books, and, increasingly, online databases and digital memorials. This ranges from collections at the municipal level to nationwide works, such as the Memorial Book of the German Federal Archives or the Jewish Monument in the Netherlands, to registries with an international approach, such as the Central Database of Shoah Victims' Names of Yad Vashem or the Holocaust Survivors and Victims Database of the USHMM. All these products and tools of remembrance combine person-related information from various scattered primary sources and have thus become an important type of source in their own right.¹¹

Provenance, Accessibility and Categories of Sources

The outlined general model shows the broadest possible spectrum of sources potentially available for researching deportations in the Nazi era. Researchers might use it to compare source situations on deportations of different groups, from different countries, at different periods of time, as well as from individual places. At the same time, the model can serve as an orientation for better assessing the source situation for one's own research project. For this purpose, however, it is also necessary to consider other aspects of the source situation, namely questions of availability and accessibility, but also the different categories of sources.

Regarding availability, provenance is crucial. Quite often, it simply depends on the provenance whether sources still exist today and might be available for research in general. For records of perpetrators (police and other authorities on the state, regional and local level) as well as for other authorities involved (transport operators, financial administrations, labor offices) one key question is what was not destroyed – willingly or by the war. The other is which archive

¹¹ On person-related databases and digital memorials, see also the article by Maximilian Strnad in this volume.

or documentation center preserves surviving documents of these actors today. More than with most other historical topics, the sources on the Holocaust are fragmented. Parts of holdings of a certain perpetrator institution may be located not only at the public archive responsible according to the principle of provenance, but also in public and special archives of the Allied victors, holdings of judicial authorities of various countries, collections of tracing services, as well as documentation centers and memorial sites. In addition, the same collection may be available at two or even more locations in different ways. There might be a collection of original documents non-catalogued and hardly accessible while, at the same time, there might be a fully machine-readable digital copy available elsewhere.¹² This is not only important for researchers, but also for archivists when it comes to making the best use of limited resources. Here, exchanging information, including digital data and images, is key.

Sources created by various institutional actors after liberation (investigation commissions, prosecutors, courts, compensation and restitution authorities, tracing services, but also municipal and state institutions involved in remembrance) are significantly more likely to be preserved. The same is true for sources produced by non-German institutional observers during the war (diplomats, intelligence, foreign press), especially from western countries, as war destruction was less extensive. We will usually find materials of these provenances in public archives, unless they are still with the authorities that created them. The issue of availability for research here is primarily one of accessibility, meaning, on the one hand, the question of whether they are accessible or still classified.¹³ On the other hand, if sources are open for research, how are they cataloged and indexed? As will be discussed below, this question takes on much greater significance for researchers using digital methods.

12 This is one of the reasons why the portal of the European Holocaust Research Infrastructure (EHRI) is so important for deportation research. See <https://portal.ehri-project.eu/>. Last accessed: 03.03.2022. On the emergence of collections archives following World War Two, see: Henning Borggräfe and Isabel Panek: "Collections Archives Dealing with Nazi Victims. The Example of the Arolsen Archives", in Henning Borggräfe, Christian Höschler and Isabel Panek (eds.): *Tracing and Documenting Nazi Victims Past and Present*, Berlin/Boston: De Gruyter/Oldenbourg, 2020, 221–243.

13 Here, the political work of the International Holocaust Remembrance Alliance (IHRA) regarding the European General Data Protection Regulation (GDPR) was very important. However, it remains to be seen how the GDPR will play out in practice, especially with regard to those sources on the Holocaust that were created in the context of criminal prosecution or compensation only a long time after 1945. On GDPR and Holocaust records, see <https://www.holocaustremembrance.com/stories/reference-holocaust-gdpr>. Last accessed: 27.02.2022.

For all other sources that are neither from state provenance nor from the provenance of larger organizations, that is, sources of victims and survivors, as well as relatives, but also observers and individual perpetrators, regardless of whether they were created during or after the war, the basic challenge is that we do not know at all who produced such sources on deportations. On top of that, all previously mentioned questions arise, too. It is thanks to decades of work by documentation centers, memorial sites and museums that sources of private provenance have been collected and made available for research. In addition, however, there are still many collections of small community organizations, but also victims associations and individual records of survivors and relatives in possession of private individuals and small organizations. These collections often depend on the commitment of individuals of high age; their future status is therefore fragile. This is why it is all the more important that larger archives and memorials try to secure micro archives and make them accessible.¹⁴ At the same time, many municipal archives and local museums, not only in Europe but all over the world, also hold sources on deportations from private provenances in their collections. In view of this, what is still missing is a portal that virtually brings together such sources, provides background information and makes them digitally accessible. For pictures of Nazi deportations, the Arolsen Archives and partners have just started such an endeavor with the project #LastSeen.¹⁵

A general model of sources on deportations is not complete without a distinction of the different categories of sources. As shown in fig. 2, we could divide the many types of sources into three main categories, closely connected to certain research approaches.

The first category is general files of all institutions involved (containing correspondence, memos, protocols, reports, etc.). Historians have been evaluating these sources mainly for researching decision-making processes, the actors involved, and responsibilities. There is also a separate archival scholarly discussion on this category of sources, which is probably the most frequently used in Holocaust research.¹⁶ The second category is ego-documents, i.e. sources from the perspective of individual persons, victims as well as bystanders and in-

¹⁴ See the corresponding initiative of EHRI: <https://www.ehri-project.eu/call-ehri-looking-micro-archives>. Last accessed: 03.03.2022. The Arolsen Archives are also open to collaborations for securing small collections.

¹⁵ See <https://lastseen.arolsen-archives.org/en/>. Last accessed: 04.03.2022.

¹⁶ See for example the EHRI Online Course “Modern Diplomats of the Holocaust”, available at <https://training.ehri-project.eu/unit/6-modern-diplomats-holocaust>. Last accessed: 06.03.2022.



Fig. 2: Three Main Categories of Sources and Methods of Evaluation.

dividual perpetrators. These are diary entries, letters, testimonies, witness interviews, but also photographs.¹⁷ Researchers have been evaluating these sources mainly for a history of experiences of the deportations, for researching individual scope of action, the agency of the victims, but also knowledge about the Holocaust among the non-Jewish population. Here, too, we find a wide range of specialized literature on these sources and their use for research.¹⁸

The situation, however, is quite different for the third category of sources: person-related documents (case files, forms, lists, or index cards) created for various purposes during and after the war, as well as person-related online-databases built for remembrance. So far, in thousands of cases, researchers have evaluated the enormous number of these sources almost only for the sake of documenting fates of individual deportees. Not only in Holocaust research, but also in the broader field of contemporary history, the methodological-theoretical discussion on researching “person-related records beyond the personal”¹⁹ has just begun.

Yet, as this kind of research necessarily has to be digital, i. e. based on digital tools and methods to cope with the mass of sources and information contained

17 For the history of the deportations, available newspaper reports can also be included here, since they are mostly based on observations. For a topic-independent ideal-typical differentiation of sources, however, published media sources (newspapers, television, radio, Internet) should be treated separately.

18 On pictures of deportations, see also the contribution by Christoph Kreutzmüller in this volume.

19 This was the title of an EHRI workshop aimed at discussing this category of sources. See <https://arolsen-archives.org/en/news/personal-stories-and-big-data/>. Last accessed: 07.03.2022. However, the methodological-theoretical discussion of person-related serial records is still in need of further development. For some basic questions and research approaches using documents on displaced persons, see Henning Borggräfe: “Exploring Pathways of (Forced) Migration, Resettlement Structures, and Displaced Persons’ Agency: Document Holdings and Research Potentials of the Arolsen Archives”, in *Historical Social Research*, 45–4, 2020, 45–68.

therein, we can at least highlight an important prerequisite. From a researcher's point of view, it is fundamentally important whether archives and other institutions holding digitized collections and hosting digital databases allow for a comprehensive analysis of the data. Will researchers be able to receive datasets of entire collections in a standardized format to enrich, manipulate, and further process them, or will they only be able to carry out pre-defined searches and make use of existing filters in completely digitized holdings via the interface provided, but cannot get the actual data?²⁰ Provided we will be able to work with whole datasets of archives and digital memorials or online databases, which research questions could we then investigate? Which research methods would be most promising? Which skills would historians need to master? Not least and most important, how would this expand our knowledge of the history of deportations? The second part of the paper approaches some of these questions using the dataset of the Berlin transport lists collection held at the Arolsen Archives.

A GIS-based and Quantitative Analysis of the Berlin Transport Lists

The remaining part of this paper is about testing how we could use the masses of digitized person-related documents, like the Berlin transport lists, for deportation research when the focus is not on individuals. On the following pages, I do not present completed research, but use an experimental project to suggest a methodological approach to this particular type of source. The approach includes processing, visualization and analysis of archival data in a Geographic Information System (GIS), combined with quantitative data evaluations.

Generally, geographical visualization of archival data can pursue three goals: first, we can map archival collections to make them better accessible, so that researchers can find all sources relevant to their place or area of interest regardless of what terms they are indexed or searched with. Second, for remembrance and education, we can make sources on victims visible on a map at the places where they once lived. This simultaneously makes the many places of persecution visible in today's urban space. Third, and this approach is followed here, we can use geographical visualization as an analytical tool to identify pat-

²⁰ The provision of an API or online data repository of the archives would be desirable. At the Arolsen Archives, researchers can currently at least receive a CSV export of data. However, many institutions also have unresolved copyright and data protection issues when it comes to making archive data available.

terns in archival mass data of historical events that would otherwise remain hidden, and from this we can gain new insights into the history we seek to explore. In this sense, data visualization in a GIS is not an end in itself. Rather, it is about understanding and describing historical events more precisely, and thus making experiences visible.²¹ The approach presented here has parallels with Tim Cole's and Alberto Giordano's GIS-study of the Budapest ghetto.²² One main difference is that their project is based on the elaborate composition of many different sources, whereas I am more interested in probing what can be done relatively quickly with existing indexing data provided by archives.

The deportations from Berlin, the subject of this case study, are of particular significance in the history of the persecution and murder of the German Jews. In 68 so-called waves, consisting of 184 individual transports, the Gestapo deported about 50,000 men, women and children from Berlin to the ghettos and extermination camps between October 1941 and March 1945.²³ Berlin formed by far the largest Jewish community in Nazi Germany, and the capital thus accounted for more than a third of all Jews deported from the so-called *Altreich*.²⁴ Nevertheless, we still know relatively little about the deportations from Berlin. This applies in particular to spatial dynamics and the issue of forced concentration processes of the Jewish population into so-called Jews houses (*Judenhäuser*) prior to deportation.²⁵

21 See Henning Borggräfe, Lukas Hennies, and Christoph Rass: "Geoinformationssysteme in der zeithistorischen Forschung. Praxisbeispiele aus der Untersuchung von Flucht, Verfolgung und Migration, in den 1930er bis 1950er Jahren", in *Zeithistorische Forschungen/Studies in Contemporary History* (forthcoming, 2022).

22 Tim Cole and Alberto Giordano: "Bringing the Ghetto to the Jew: Spatialities of Ghettoization in Budapest", in Anna Kelly Knowles, Tim Cole, and Alberto Giordano (eds.): *Geographies of the Holocaust*, Bloomington: Indiana University Press, 2014, 121–151.

23 For a chronology and commentary of all transports, see Akim Jah: *Die Deportation der Juden aus Berlin. Die nationalsozialistische Vernichtungspolitik und das Sammellager Große Hamburger Straße*, Berlin: be.bra, 2013, 619–674.

24 Nicolai M. Zimmermann: "Was geschah mit den Juden in Deutschland zwischen 1933 und 1945? Eine Dokumentation des Bundesarchivs", in *Zeitschrift für Geschichtswissenschaft* 64/12, 2016, 1045–1058, here 1055.

25 On the deportations from Berlin and transit camps within the city, see Jah, *Die Deportation der Juden aus Berlin*; on the connections between housing evictions for the new Reich capital and deportations, see Susanne Willems: *Der entsiedelte Jude. Albert Speers Wohnungsmarktpolitik für den Berliner Hauptstadtbau*, Berlin: Edition Hentrich, 2000; on Jewish forced labor and its connection with the deportations, see Wolf Gruner: *Der Geschlossene Arbeitseinsatz deutscher Juden. Zur Zwangsarbeit als Element der Verfolgung 1938–1943*, Berlin: Metropol, 1997.

As mentioned above and shown in fig. 3, the Berlin transport lists contain information on first and last names, dates of birth, last residential addresses and other biographical information of the deportees. After a deportation train had left Berlin, the Gestapo passed on the respective list to the financial administration for the liquidation of the deportees' property. That the Gestapo had previously used the lists for its own purposes is clear from the fact that the lists also include numerous Jews deported via the German capital from other parts of the Reich and even from occupied countries, for whose property the Berlin financial administration was not responsible.²⁶

Before analyzing the Berlin transport list data, it has to be emphasized that the collection kept in the Arolsen Archives is not complete. The lists of the first seven transports in October and November 1941, which presumably affected about 7,000 people, are missing. Information on these deportees is partially available,²⁷ but not machine-readable. Therefore, this explorative case study refers 'only' to the deportations from January 1942, and to 41,974 people.²⁸

Although the person-related information on the lists is machine-readable, it still needs to be prepared for research. Since many people were crossed off lists and reappear on lists of later dates, and since sometimes different lists for the same deportation can be found in the collection, duplicates have to be removed. Furthermore, German *Umlaute* have to be changed, incorrectly transcribed street names have to be corrected, and most importantly, old district numbers and addresses have to be matched with today's addresses. This is quite complicated for Berlin due to postwar reconstructions and the political history of the divided city. However, with the open source software QGIS used for this study, the actual geocoding can afterwards be conducted more or less automatically via a plugin using an OpenStreetMap-API.²⁹ Once the data is geocoded, we can visualize and examine it in the GIS. Any data can be displayed either as points (i.e. people at addresses), as lines (i.e. movements between two addresses) or as polygons (i.e. boundaries of territories such as city districts). Different datasets are stored

26 Spread over the lists, we find 1,789 Jews who were deported via Berlin from towns and communities in Brandenburg and Mecklenburg, from other cities in the Reich, as well as from occupied countries.

27 See https://www.statistik-des-holocaust.de/list_ger_ber_ot1-7.html. Last accessed: 07.03.2022. See also the article by Kim Dresel, and Christian Groh in this volume.

28 For 41,562 Berlin deportees, last residential addresses are available, while this information is missing for 412 other deportees, mainly inmates of the Berlin police prison and people recorded as homeless.

29 The software QGIS is available here: <https://www.qgis.org/en/site/>. Last accessed: 07.03.2022. The MMQGIS plugin used for geocoding can be installed therein.

Transportliste

Lfd. Nr.	N a m e	Vorname	geb. am	Ort	Beruf	seit	verh.	Alter	Einheits-fähig	Ort	Wohnung	Kennzeich-nr.	Kennzeich-nr.	Bemerkungen
220	Lutz geb. Harris	Therese Sara	15.1.76	Neugutec USA.	ohne	ja	-	66	ja	NO 55, Rykestr. 41 II	A152110	12111		
222	Marienthal	Adolf Isaac	14.1.74	Packellshelm, Westf. Arb.	ja	ja	-	68	ja	Halsensee, Margraf-Albrechtstr. 14	A427210	12112		
223	Maass	Alfred Isr.	2.3.78	Flelhne	ohne	-	ja	64	ja	Wilmdef., Güntzelstr. 17-18	A450297	12114		
224	Maass geb. Angress	Johanna Sara	12.2.76	Berlin	ohne	-	ja	66	ja	dto.	A450298	12115		
225	Lewin	Mendel Isr.	14.2.75	Schwerin	ohne	ja	-	67	ja	Biesdorf, Schackelstr. 90	A709304	12116		
226	Kruski L e o p o l d	Elli Sara	25.6.75	Kreppitz OS.	ohne	ja	-	66	ja	NW 87, Tillefardenbergstr. 26a	A 052943	12118		
227	Lawitz geb. Cohn	Rosalie Sara	5.3.75	Posen	ohne	ja	-	67	ja	N 58, Hagenauer 14	13 II-9103/41	12122		
228	Lindenstrauss	Anna Sara	27.9.75	Neuenburg	ohne	ja	-	66	ja	NO 55, Winastr. 5	A 045885	12127		
229	Liebier geb. Meyrowski	Jenni Sara	2.3.76	Guttstadt	Arb.	ja	-	66	ja	W 15, Konstanzer 3	L 93/40	12128		
230	Lewinsohn	Margarete Sara	14.11.75	Berlin	"	ja	-	66	ja	Stegl.-Ellisenstr. 24	A564604	12130		
231	Lechmann	Martin Isr.	14.4.75	Nakel	ohne	-	ja	66	ja	Blm. W 30 Traunsteiner Str. 6	A500277	12131		
232	" geb. Cohn	Hedwig Sara	27.5.80	Berlin	ohne	-	ja	61	ja	dto.	A 500278	12132		
233	Jontoffsohn geb. Jacobsohn, Regina Sara	Hedwig Sara	10.11.75	Flelhne	ohne	ja	-	66	ja	Wilm., Uhländstr. 118	A00438	12145		
234	Kaul geb. Elncke	Hedwig Sara	27.9.75	Straussburg	ohne	ja	-	66	ja	N 54, Alte Schönhauserd. Str. 4	A39420	12148		
235	Kniebel	Martha Malchen Sara	26.10.75	Schwerzenz	ohne	ja	-	66	ja	Lichtenberg, Tasdorfer Str. 71	A 693 227	12152		
236	Rohr geb. Zanderling	Jachet Sara	27.6.75	Zakopasse	ohne	ja	-	66	ja	C 2, Neue Schönhauserd. Str. 16	A42338	12158		
237	Sündermann	Irma Sara	10.3.94	Gothelm	ohne	ja	-	48	ja	NO 55, Weissenburger 11	A 00039	12177		
238	"	Heinz Isr.	6.10.30	Bamberg	ohne	ja	-	11	ja	dto.	A 193244	12178		
239	Baer	Dorothea Sara	1.12.75	Landeck	Arbeiter	ja	-	65	ja	N 54, Schönhauser Allee 186 I	A 187148	12182		
240	Markus	Berthold Isr.	16.2.74	Tangermünde	"	ja	-	64	ja	Charl. I., Wilmersdorferd. Str. 32	A 369817	12183		

Fig. 3: Sample List from the Berlin Transport Lists Collection, 1.2.1.1/127187646/ITS Digital Archive, Arolsen Archives.

on different layers, whereby multiple layers can be placed upon each other. The data of each layer can be categorized by color based on values of selected table columns and can also be displayed in aggregated form.

Fig. 4 shows a visualization from the project GIS with the three mentioned forms of representation (points, lines, polygons). However, the multitude of maps created for this study cannot be properly illustrated in this paper – especially since the colors of displayed lines and points are crucial. Therefore, in the following, I refer to a complementary PDF containing a number of visualizations and statistics of the deportations from Berlin, which readers should consult while reading the following chapters of the paper.³⁰ In addition, it should be emphasized that data visualization and calculation does not always provide immediate answers, but often serves as a kind of question and hypothesis generator. On this basis, further analyses of the data and evaluations of other sources have to be carried out in order to explain patterns.

Centers of Jewish Life in Berlin and Deportation Dynamics

Thanks to previous research, especially by Akim Jah, we know the chronology of the deportations from Berlin, destinations of individual transports, and details about assembly camps within the city. However, we do not yet know where the remaining Jewish population, already reduced by emigration, was living across the city and how deportations were carried out in space and time. From what parts of the city did the Gestapo deport Jews during which periods? Was there a planned spatial approach, in the sense that certain areas were ‘cleared of Jews’ one after the other? Not least, where was the ongoing disappearance of Jewish neighbors visible, and for how long?

To address these questions, I first created a visualization categorizing the whole dataset by deportation waves.³¹ In this map, each dot represents one deportee, here grouped around their last residential addresses. Each color stands for a certain wave. As a result, we initially only see a very colorful picture. One possible way to get a better overview is to use an analysis function in GIS: counting points within certain polygons, meaning deportation addresses

³⁰ The PDF is available here: <https://www.degruyter.com/document/isbn/9783110746464/html>.

³¹ *Ibid.*, 2.

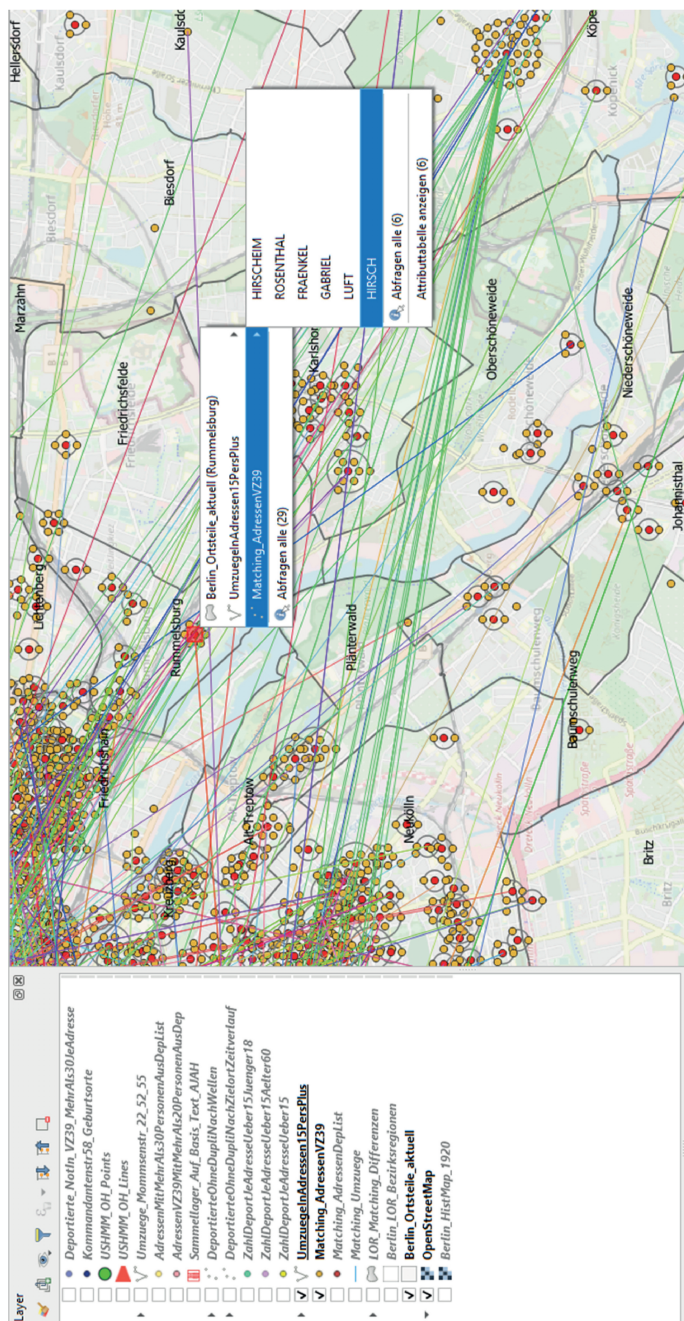


Fig. 4: Points, Lines and Polygons as Basic Display Modes in a GLS.

within city areas.³² Those familiar with Berlin will recognize two main centers of Jewish life: one in the west of the City in southern Charlottenburg, Wilmersdorf and Schöneberg, the other one further east around Alexanderplatz in Mitte and in southern Prenzlauer Berg. A third but smaller center was in Moabit. This map clearly shows the deportation hotspots in Berlin, but it does not tell us anything about deportation dynamics. Therefore, another possible way to further clarify the picture is by switching back to the categorized visualization by waves and then looking at the deportations chronologically and comparatively according to different periods highlighted in previous research.³³ The centers are again clearly recognizable at each period. In addition, we already see special places from where many people were deported repeatedly – north of the city center, for example, the Jewish hospital at Iranische Straße, from where almost 1,000 people were deported in 58 different transports. What we do not see, however, is a clear spatial pattern in the sense of a planned ‘de-Jewification’ of the city quarter by quarter. On the contrary, we see that the centers of Jewish life, as well as outlying areas, were affected almost permanently, wave after wave.

If we zoom in on a neighborhood, for example the bourgeois so-called Bavarian quarter in Schöneberg,³⁴ we can see from the different colors for different waves that the whole time deportations were taking place from the same neighborhoods, and even from the same houses. Many individual houses were affected in up to 20 and more waves of deportations. The long duration of the deportations from individual quarters becomes even clearer here, too, when comparatively looking at the periods.³⁵ The process of intensive deportation operations lasted for one and a half years until the completion of the so-called *Fabrikaktion* (factory raid) in March 1943.³⁶ Also during the following two years, after the end of the mass deportations, the same neighborhoods were repeatedly affected by deportations. This impressively illustrates the experience of the Jews still living there, namely the permanent uncertainty as to when they themselves would be deported next. On the other hand, for the non-Jewish neighbors in the

32 <https://www.degruyter.com/document/isbn/9783110746464/html>, 3. The representation is not historically correct, because I used a freely available layer of today’s neighborhoods, instead of manually drawing a layer of the old *Bezirke*.

33 <https://www.degruyter.com/document/isbn/9783110746464/html>, 4.

34 *Ibid.*, 5.

35 *Ibid.*, 6.

36 This shows that no clear pattern can be discerned for Gestapo action in terms of urban space – not even after the change in Gestapo personnel in the fall of 1942, which research associates with a more planned and sharper deportation action, see Jah, *Die Deportation der Juden aus Berlin*, 388–405.

houses as well as the immediate surroundings, the disappearance of the Jews – which was followed by the sealing of the apartments and later the moving in of new neighbors – took place over a long period time and repeatedly and thus could hardly have remained unnoticed. However, in comparison with other cities in Nazi Germany – Cologne, Frankfurt am Main, or Munich – research would have to clarify whether this time-spatial pattern was typical for bigger cities having larger Jewish communities or a Berlin peculiarity, possibly due to the high number of Jewish forced laborers used in industry. It would also be worth clarifying whether this pattern of deportations tended to enable Jewish residents to go into hiding, which seems to have been a more widespread phenomenon in Berlin compared to other cities.³⁷

Besides the time-spatial visualization of deportations in a GIS, with quantitative analysis of the transport lists data one could also look more deeply social-biographically at the events, for example by examining social profiles of all deportees at individual phases, from certain neighborhoods or from specific transports, or by researching individual groups, such as minors. A graph of the number of deportees over time, categorized by age groups at the time of deportation, which can be calculated from birth and deportation data, shows not only periods of greater and lesser deportation intensity, but also that the deportations did not strictly follow a specific pattern with regard to age.³⁸ In addition, it would be important to include gender as a category. However, the deportees' gender was not recorded on the lists, but could only be derived from the given names, which would result in some fuzziness, of course, but would nevertheless be possible with some effort. Certainly, much more could be extracted from the transport lists data for a social history of the deportees than mentioned here. This is especially true for a study of deportation risks of different social groups over time, as well as, derived from this rather than from the destinations of deportation trains, a chronology of the events. In that sense, this paper should be read as an encouragement to further explore research potentials of archival mass data from person-related serial records.

³⁷ See Richard N. Lutjens: *Submerged on the Surface. The Not-So Hidden Jews of Nazi Berlin, 1941–1945*, New York: Berghahn, 2019, 16–18; on the number of Jewish forced laborers in Berlin compared to the Reich: Gruner, *Der Geschlossene Arbeitseinsatz*, 304.

³⁸ <https://www.degruyter.com/document/isbn/9783110746464/html, 7>.

Forced Concentration Processes Prior to Deportations

A main research topic for Berlin is the spatial concentration of the remaining Jewish population prior to the deportations, especially in connection with the planning and construction work for the new Reich capital. According to Susanne Willem, there was a strong displacement and concentration, but in her book, she did not outline how extensive this phenomenon actually was as well as how and where it actually affected the Jewish population of the city.³⁹ Closely related is the question of the effects of the Reich law on the tenancy of Jews from April 1939 and the establishing of so-called Jews houses, in other words: forced housing in crowded places, a topic that has been largely unexplored for Berlin both in terms of the numbers of the 'Jews houses' and their locations.⁴⁰

A first approach to the topic of 'Jews houses' is possible if we display the transport lists data not point by point, but aggregated, as shown on the next map.⁴¹ The larger a yellow dot, the more people were deported from a given address. In total, there were 545 addresses across Berlin from where the Gestapo deported more than 15 people, most of them again in the centers of Jewish life. In this way, we can very well identify addresses that would need further investigation with other sources. However, research currently does not know whether a minimum of 15 residents is a good indicator for identifying 'Jews houses'. Furthermore, even if we would have a number, it would remain open whether an address was a 'Jews house', or simply a large building with many Jewish residents, or perhaps an institution of the Jewish self-administration. As demonstrated on another map showing the second center of Jewish life in Berlin, the so-called Spandauer Vorstadt in Mitte, and southern Prenzlauer Berg,⁴² a possible way to distinguish 'Jews houses' from institutions of the Jewish self-administration is to calculate the age of the deportees from the transport lists data. In doing so, on additional layers, we can overlay the total number of deportees

³⁹ See Willems, *Der entsiedelte Jude*, 362–363.

⁴⁰ When 'Jews houses' are mentioned in the following, it must be kept in mind that they were probably often only apartments in larger residential buildings in which the Jews had to live together in cramped conditions. A new research project is currently exploring this topic for Berlin. See Akim Jah, Silvija Kavčič, and Christoph Kreutzmüller: "'Grösse der Wohnung: 1 Leerzimmer'. Eine Projektidee zu den 'Judenwohnungen' und 'Judenhäusern' in Berlin 1939–1945", in *Mitgliederrundbrief Aktives Museum*, 84, 2021, 3–5.

⁴¹ <https://www.degruyter.com/document/isbn/9783110746464/html>, 8.

⁴² *Ibid.*, 9.

from certain addresses with the number of residents older than 60 or younger than 18. In this way, it works well to exclude Jewish old people's homes as well as orphanages among the addresses of interest.⁴³

If we then add the layer with all deportation addresses to this map again,⁴⁴ we come to an important finding regarding the persecution experiences of Jews from Berlin. In parallel with the 'Jews houses', old people's homes and orphanages, meaning dense living in crowded rooms, there were very many houses in which still only a few Jewish residents lived together. The spatial concentration of Berlin's Jews that Susanne Willem emphasizes in her study thus by no means affected the entire Jewish population of the city. A table of the calculated housing density prior to deportations⁴⁵ confirms that almost 25,000 deported Berlin Jews, that is, almost 60 percent of the deportees included in this case study, lived at addresses together with fewer than 15 other deportees. Among them, there are more than 6,000 addresses from where only one to five people were deported. For the remaining Jews prior to deportations, there were very different housing situations in the city.

However, if we look only at the data from the transport lists and the housing density, we still do not get an impression of displacement dynamics. Perhaps such differences in housing already existed before – simply as an effect of different social situations. The transport lists alone do not reveal what had actually changed following the 1939 law on the tenancy of Jews and eviction actions by the General Building Inspector (GBI) Albert Speer.⁴⁶ In order to find answers to this, I included a second data set into the study, also containing address data of Berlin Jews: the data of the 1939 census kept in the German Federal Archives.⁴⁷ Person matching between the two datasets is not quite easy, because of differing name spellings and dates of birth.⁴⁸ Nevertheless, I was able to retrieve the 1939 addresses for almost 30,000 of the deportees, which is about 75 percent, and to process and geocode them as well. A map of the addresses of the 1939 census above the deportation addresses of the same people shows many overlaps, but

⁴³ Many of these institutions are known and references to them can be found scattered in the research literature on Jews in Berlin. In this way, however, addresses of potential institutions of the Jewish self-organization can be determined automatically even in cases where research is less advanced.

⁴⁴ <https://www.degruyter.com/document/isbn/9783110746464/html>, 10.

⁴⁵ *Ibid.*, 11.

⁴⁶ On these actions, see Willem, *Der entsiedelte Jude*, 180–193.

⁴⁷ On this dataset, see Zimmermann, *Die Ergänzungskarten*.

⁴⁸ After experimenting with different identifiers built from the two datasets, I used an identifier consisting of the first three letters of the last name, the first letter of the first name and the date of birth, which had the most hits without producing duplicates due to incorrect matches.

also deviations, meaning moves within the city.⁴⁹ To be more precise, 52 percent of the deportees for whom both addresses are available experienced a change in residence between the 1939 census and deportation about three to four years later. Of all these moves, 55 percent were into houses from which more than 15 people were deported. Consequently, within the group of the 30,000, the proportion of Jewish residents living in houses with more than 15 people increased sharply (from 9.6 percent to 31.4 percent). This again shows the divided housing situation: for many Berlin Jews the housing situation did not change drastically, but many others experienced a forced move into crowded apartments or the influx of strangers into their own houses. One aspect of this was a sharp increase in institutional housing of the elderly.

What did this concentration process mean in terms of urban space? In other words, where did the Jewish population decrease and where did it increase compared to the prewar situation? To approach these questions, we can again use the analysis function of counting points within certain polygons, meaning residential addresses within city areas, for the 1939 addresses as well as the deportation addresses, and then calculating the differences.⁵⁰ It becomes evident that there was a densification in the two main centers of Jewish life, less strongly but still recognizably in the Charlottenburg, Wilmersdorf, and Schöneberg districts, and more strongly in Mitte and Prenzlauer Berg. On the other hand, the Jewish population decreased in many outer neighborhoods, especially in bourgeois residential areas in southwest Berlin.

The data on the 1939 census also helps us to further narrow down potential ‘Jews houses’ and look at moves into these houses. By generating lines between the residential addresses of the Jewish Berliners available in the two datasets, we can visualize moves within the city. This is, of course, an abstract model, because in many cases there may have been other residential addresses between the two from 1939 and the date of deportation. If we visualize all moves into addresses where more than 15 people were deported from⁵¹, again, we do not see a clear spatial pattern in the sense that, for example, the allocation of housing would have been as close as possible to the previous places of residence, or only into certain areas. On the contrary, the visualization suggests, that the allocation of the remaining living space for Berlin Jews, which the housing advisory office (*Wohnungsberatungsstelle*) of the Berlin branch of the Reich Association of Jews

⁴⁹ <https://www.degruyter.com/document/isbn/9783110746464/html>, 12.

⁵⁰ *Ibid.*, 13.

⁵¹ *Ibid.*, 14.

did under the control of the Gestapo,⁵² rather followed situational logics instead of a plan to concentrate the Jews only in certain areas of the city. If we only look at moves to a few selected ‘Jews houses’, it becomes clear that although some Berlin Jews moved from the vicinity, for others the move meant not only being brought together with strangers in a crowded space, but also being torn far away from their familiar neighborhood.⁵³ Since Jews in Nazi Germany were no longer allowed to own bicycles and to use local transport gradually from the fall of 1941 and completely from May/June 1942⁵⁴, this meant de facto the severance of previous social relations to remaining non-Jewish as well as Jewish friends. This also seems to be an important experience of many Berlin Jews prior to their deportation.

Testimonies and Mass Data Visualization

As Tim Cole and Alberto Giordano already pointed out in their study on Budapest, “historical GIS provides a context for a better understanding of individual stories.”⁵⁵ This also applies to the history of the deportations from Berlin, as this final section will briefly illustrate. As a third data set for the explorative case study, I received a metadata export from the oral history collection of the USHMM. The export consists of metadata of 501 interviews tagged with the keyword Berlin, among them 431 containing at least a birth year of the interviewee, which is important for data matching. Matching with the transport lists data⁵⁶ leads to only eight hits. This is an interesting finding for the USHMM collection itself, namely that it deals only little with the deportations from Berlin. This makes it even more important to contextualize these few interviews. We find only five of the eight interviewees in the 1939 census data as well. Only three of the five, one of them the well-known survivor Norbert Wollheim, experienced

⁵² See Willem, *Der entsiedelte Jude*, 376–393.

⁵³ <https://www.degruyter.com/document/isbn/9783110746464/html>, 15.

⁵⁴ Wolf Gruner: *Judenverfolgung in Berlin 1933–1945. Eine Chronologie der Behördenmaßnahmen in der Reichshauptstadt*, Berlin: Edition Hentrich, 1996, 79, 83–84.

⁵⁵ Cole and Giordano, *Bringing the Ghetto to the Jew*, 151.

⁵⁶ As the metadata from the interviews is not uniformly comprehensive, I used the first three letters of the last name combined with the year of birth as an identifier and checked the results manually for actual hits.

a change of residence within Berlin between 1939 and the date of their deportation.⁵⁷

These three interviewees who had already lived in Berlin in 1939 and had moved to another address prior to deportation, as well as the three others who cannot be found in the census data, were deported from 'Jews houses' or other addresses where many Jews had to live together. On the contrary, one of the interviewees, Gerald Adler, lived with only five other deportees, among them his parents and his younger brother, at an address in Charlottenburg where he had already lived in 1939, and again from 1941, after returning from a Hachsharah farm. In July 1943, the Gestapo deported him to Theresienstadt.⁵⁸ His housing situation in Berlin before deportation does not play any role in the interview. The same is true for interviewee Henry Oertelt, who lived with his mother and another Jewish man at an address in the northern part of Wedding, from where the Gestapo deported him with the same transport to Theresienstadt in July 1943.⁵⁹ As we have seen, this kind of housing situation concerned about half of the deportees from Berlin but is represented by only two of the eight interviewees and not even mentioned in the interviews. If we were to work only with these interviews, we would get a very different impression of the extent of the concentration of the Berlin Jews before deportation than we see framed by the analysis of the transport lists data.

As mentioned above, three of the eight interviewees are not included in the 1939 census data, as they did not live in Berlin at that time. From the interviews, we learn that one of them, Gerda Haas, only came to the Jewish hospital at Iranische Straße as a nurse in the winter of 1940/1941, from where the Gestapo deported her to Theresienstadt in May 1943.⁶⁰ Artur Posnanski, a native Berliner, had led a Jewish youth group in Brandenburg in 1939 and returned to Berlin as a forced laborer after its dissolution. He was deported to Auschwitz during the '*Fabrikaktion*' in March 1943.⁶¹ And Carol Steinhardt from Frankfurt am

57 For a visualization of the residential addresses of the eight interviewees and the moves of three of them in the context of other addresses and moves, see <https://www.degruyter.com/document/isbn/9783110746464/html>, 16.

58 Interview with Gerald Adler. Available at: <https://collections.ushmm.org/search/catalog/irn508647>. Last accessed: 25.02.2022.

59 Interview with Henry Oertelt. Available at: <https://collections.ushmm.org/search/catalog/irn512459>. Last accessed: 25.02.2022.

60 Interview with Gerda Haas. Available at: <https://collections.ushmm.org/search/catalog/irn506701>. Last accessed: 25.02.2022.

61 Interview with Artur Posnanski. Available at: <https://collections.ushmm.org/search/catalog/irn502821>. Last accessed: 25.02.2022.

Main had to move to Berlin for forced labor only in 1941. Together with a large group of young Jewish women from Hesse and other parts of Germany, she had been placed into a labor camp in Kreuzberg. In March 1943, during the '*Fabrikaktion*' she was also deported to Auschwitz.⁶² These movements and experiences cannot be gleaned from either the analysis of the transport lists data or the matching with the census data. With these three, therefore, we see how important it is to also frame mass data analysis with qualitative sources.

Even more, these oral history interviews prompt us to take a different look at the mass data and, through further visualization, detect patterns that would otherwise remain hidden. In other words, who were those about 12,000 deportees from Berlin who, like Haas, Posnanski, and Steinhardt, we do not find in the 1939 census data? These were at least three groups: first, Jewish children who were born in Berlin only after the census in May 1939. Their number can be given as 667 from the transport list data. Second, there is an unknown number of people, who had lived in Berlin in 1939, but for whom automated data matching did not work. Finally, as the interviews show us, there was a third relevant group: people who came to Berlin only because of the growing pressure of persecution during the war.

Had those people been mostly forced laborers placed in camps like Steinhardt? To investigate this question, I aggregated only the deportation addresses of these 12,000 persons, again for places where more than 15 of them lived. The visualization points to an interesting finding: If we put the layers of all deportees aggregated by age below,⁶³ it becomes clear that Steinhardt's forced labor camp in Kreuzberg was rather an exception. Instead, there seem to have been strong movements from outside Berlin into Jewish old people's homes – an experience that, simply due to age, cannot be present in any oral history interview recorded since the 1980s. A pattern becomes visible here, which Akim Jah also describes in his contribution on the Jewish old people's home at Gerlachstraße: the persecution-related displacement of especially the elderly Jews into the remaining centers of Jewish life.⁶⁴ The starting point for this finding were oral history interviews from a different context – young Jewish forced laborers. This shows once again how important it is not to understand the analyses of quantitative and qualitative sources on deportations as strictly separate approaches, but to relate them to each other in the research process.

⁶² Interview with Carol Steinhardt. Available at: <https://collections.ushmm.org/search/catalog/irn47746>. Last accessed: 25.02.2022.

⁶³ See <https://www.degruyter.com/document/isbn/9783110746464/html>, 17.

⁶⁴ See the contribution by Akim Jah in this volume.

Conclusion

Although often not explicitly reflected in historical studies, there is a close relationship between research questions and epistemological interests on the one hand and the source situation on the other. This paper aimed, first, to sketch a general model of sources for the history of Nazi deportations and to discuss some basic questions of provenance, accessibility and categories of sources. The range of available sources varies greatly, between not only different countries and occupied territories or the deportation of the Jews and the Sinti and Roma, but also between periods, localities and even individual transports. Sometimes, there are almost no or very poorly catalogued sources for some research topics, while for others there are extensive holdings, fully digital and machine-readable. A wider question is how this heterogeneity affects historical research, not only regarding the extent of existing research on certain topics, but also with regard to the topics and approaches that researchers actually choose, and how this shapes our knowledge.

The general model of sources has shown that in various contexts of both contemporary and retrospective source production on the history of deportations, a third category of sources emerged alongside administrative sources and ego-documents: person-related serial records, of which the Berlin transport lists kept in the Arolsen Archives are an example. Large datasets of person-related serial records on the Holocaust are increasingly available digitally, but researchers have hardly explored their potential. Using the deportations from Berlin as an explorative case study, the second part of the paper showed that GIS analyses and quantitative evaluations of this data help to look at historical events more precisely and thereby to contribute to a history of experience of the Holocaust. The chapter on forced concentration processes of Berlin Jews prior to deportation demonstrated that, in addition to evaluations of individual datasets, working with results of person matching between different datasets is particularly promising. Finally, the short chapter on testimonies and mass data visualization made clear that GIS analyses and quantitative data evaluations do not stand alone, but historians ought to conduct them in combination with researching qualitative, narrative sources to write a comprehensive history of Nazi deportations.

