

Research Integrity Issues in Voigtlander and Voth (2012)

Joseph Francis

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I am wiser than this person; for it is likely that neither of us knows anything fine and good, but he thinks he knows something when he does not know it, whereas I, just as I do not know, do not think I know, either. I seem, then, to be wiser than him in this small way, at least: that what I do not know, I do not think I know, either.

Plato, *The Apology of Socrates*, 21d

To err is human. All human knowledge is fallible and therefore uncertain. It follows that we must distinguish sharply between truth and certainty. That to err is human means not only that we must constantly struggle against error, but also that, even when we have taken the greatest care, we cannot be completely certain that we have not made a mistake.

Karl Popper, 'Knowledge and the Shaping of Reality'

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Abstract

Voigtländer and Voth's (2012) study of the medieval origins of antisemitic violence in Nazi Germany has various research integrity issues. Their research design is supposed to rely on "unambiguous information" that often does not exist in their sources. Furthermore, when such information does exist, it frequently contradicts the dataset that is supposed to have been coded from those sources. There are also unexplained discrepancies in their dataset relating to the official statistics of the deportations of Germany's Jews during the Holocaust. As a result, Voigtländer and Voth's (2012) study cannot be replicated.

Keywords: antisemitism, Germany, the Holocaust, Nazis, Voigtländer and Voth

Nico Voigtländer and Hans-Joachim Voth (2012, 1340) have argued that antisemitic violence during the rise of the Nazis was a result of "the long-term persistence of interethnic hatred." To demonstrate this, they correlate the location of antisemitic pogroms in Germany during the Black Death with violence against Jews and support for the Nazis in the 1920s and 1930s. "We find persistence of anti-Semitic attitudes and behavior for more than half a millennium," Voigtländer and Voth (2012, 1340–1341, 1344) write. Germans' support for the Nazi persecution and eventual extermination of Europe's Jews had "deep historical roots," dating back to the medieval period.

Joseph Francis is an economic historian from Wales. He is an honorary research fellow at the University of Birmingham and can be contacted at joe francis505@gmail.com. Nico Voigtländer and Hans-Joachim Voth kindly provided comments on a previous version of this paper. At the Bundesarchiv, Jakob Hübner gave advice on the *Gedenkbuch* data. Jörg Ankel-Peters at the Institute for Replication made helpful editorial suggestions on an earlier draft. All opinions stated are those of The Catalogue of Errors Ltd.

This paper suggests that these findings are unsound due to widespread research integrity issues. First, the paper describes numerous irregularities in Voigtländer and Voth's main independent variable, that is, whether or not a town experiences a pogrom during the Black Death years of 1347–1350. Second, it shows that there is no evidence in their source that almost half of the pogroms they claim happened in the 1920s actually happened. Third, it describes discrepancies in the dataset relating to Germany's official statistics of Jewish victims of the Holocaust from 1933 to 1945. It is ultimately impossible to reconcile Voigtländer and Voth's dataset with their stated sources.¹ It is also likely that no "true" version of the dataset can ever be coded due to the reality of the sources that Voigtländer and Voth cite.

The Black Death Pogroms, 1347–1350

Voigtländer and Voth's description of how they coded their main independent variable cannot be reconciled with their sources. They repeatedly claim to rely on "unambiguous information" from two compilations of Jewish life in Germany to determine whether or not towns experienced anti-Jewish pogroms during the Black Death (POG1349). In Voigtländer and Voth (2012, 1340, 1348, 1352), their main sample consists of towns where there is "direct evidence of medieval settlement and unambiguous information on Black Death pogroms. [...] This leaves 325 towns with a confirmed Jewish settlement and unambiguous information on pogroms in 1349. [...] Our main sample includes 325 cities with unambiguous information on Black Death pogroms and Jewish communities in both medieval and interwar Germany." These repeated claims about "unambiguous information" are, however, impossible to reconcile with what is actually written in their two sources: Zvi Avneri's (1968) second volume in

¹ As part of a broader critique, Timothy W. Guinnane and Philip Hoffman (2022) have previously drawn attention to the coding issues. After recoding a key variable—the occurrence of a pogrom during the Black Death—in a random 10-percent sample, Guinnane and Hoffman (2022, Appendix, 39) report finding errors, including what they describe as "plain mistakes." In response, Voigtländer and Voth (2022, 2) state that the "allegations about coding problems are misguided" but offer no elaboration on why. Voigtländer and Voth (2022, 2) direct the reader to "Section I.B – I.D" to find the response to Guinnane and Hoffman's critique of their coding. Nonetheless, these sections do not contain any information on the issue.

the series *Germania Judaica*, covering the period from 1238 to 1350, together with Klaus-Dieter Alicke's (2008) more recent town-by-town account of Germany's Jews up to the present. Voigtländer and Voth's description of their data generating process cannot be reconciled with the material reality of what their books contain.

In reality, the information in their sources is often highly ambiguous. Aachen is a notable example due to the attention Voigtländer and Voth (2012, 1361) give the town in their own text. They confidently assert that the town "had a Jewish community" during the Black Death years of 1347–1350 based on Avneri's (1968, 1) description of a tax record in 1242, together with the existence of a street named "Judengasse" in 1330. Avneri also notes that "nothing is reported about persecutions of Jews in Aachen, not even during the time of the Black Death,"² which could support Voigtländer and Voth's choice to code the town as having Jews who were not persecuted. Nonetheless, Alicke (2008, 3), the later source, states that "possibly no Jews lived in the city around 1348–1349."³ Consequently, Voigtländer and Voth's claim to have coded Aachen based on "unambiguous information" seems inaccurate: there is some weak evidence of a Jewish presence in Avneri, while Alicke explicitly states that it is unknown whether there were Jews in the town at the time of the Black Death. This can be confirmed using the raw materials reproduced in Figures 1 and 2.

How Voigtländer and Voth handle these ambiguities in their sources can often give their coding decisions a surreal quality. Hence, having concluded that Aachen had Jews and no persecution during the Black Death on the basis of a single tax record from 1242 and a street name in 1330, they then seem to ignore Avneri's (1968, 798) description of how in Stralsund "the Jews were probably expelled from the city or killed" in 1350;⁴ Voigtländer and Voth instead conclude that it is unknown whether or not there was a pogrom in Stralsund during the Black Death (POG1349=NA). Yet they then make definitive coding decisions based on similarly weak evidence for other

² „Von Verfolgungen der Juden in Aachen wird nichts berichtet, auch nicht zur Zeit des Schwarzen Todes.“

³ „möglicherweise lebten um 1348/49 keine Juden in der Stadt.“

⁴ „1350 wurden die Juden wahrscheinlich aus der Stadt verbannt oder umgebracht“

***Aachen,**

lat. Aquae¹.

Aachen tritt bereits unter Friedrich Barbarossa (1152–1190) als Stadt im rechtlichen Sinne hervor. Der Abschluß dieser Entwicklung dürfte in die Regierungszeit Heinrichs VI. (1190–1197) fallen. Die Ummauerung, die zuerst nur die Altstadt einschloß, wurde im 13. und 14. Jahrhundert auch auf die Außenstadt ausgedehnt. Anfänglich besorgten unter Vorsitz des durch den Herzog von Jülich eingesetzten Vogtes und des Schultheißen die Mitglieder des Schöffenkollegiums die Angelegenheiten der Reichsstadt. Dem folgte der Erbrat, an dessen Stelle später ein aus Adel und Bürgerschaft gebildeter Magistrat trat, der Kleine und der Große oder Hohe Rat, von denen der erstere die Landeshoheit vertrat. Im 14. Jahrhundert erreichte die Stadt den Höhepunkt ihrer Macht und ihres Reichtums².

Im Jahre 1242 zahlen die Aachener Juden 15 Mark Reichssteuer³, was auf eine nicht allzu große Gemeinde schließen läßt. 1292 verpfändete König Adolf dem Herzog von Brabant die Reichseinkünfte in Aachen, wozu auch die Juden gehörten⁴. Die Judengasse wird 1330 erwähnt⁵. In dem Nekrologium der Marktkirche aus dem 11. bis 14. Jahrhundert lesen wir die Namen einiger Aachener Juden⁶; wir finden aus Aachen stammende Juden in Köln: Mannis genannt Troist ca. 1239–1247, die Familie des Isaak von Aachen ca. 1270–1275, Salomon von Aachen, Vater des Vivus um 1280⁷. Ob eine Urkunde vom 14. Oktober 1337, in der die Aussteller Adam und Bela von Gressenich geloben, zunächst alle Ansprüche von Christen, Lombarden und Juden auf ihre Güter aus dem Wege zu räumen⁸, sich auf Aachener Juden bezieht, ist fraglich. 1349 erlaubte Karl IV. der Stadt, die Lombarden zu den Gemeindelasten heranzuziehen, so daß, wenn es damals Juden in Aachen gegeben hat, diese nicht die einzigen Geldhändler gewesen sind. Von Verfolgungen der Juden in Aachen wird nichts berichtet, auch nicht zur Zeit des Schwarzen Todes, wiewohl die Bürger von Brüssel 1349 nach Aachen schrieben, „man solle sich hüten, daß die Juden die Brunnen nicht vergifteten“⁹.

Anmerkungen:

¹ Q. I 5, Nr. 27. 31, Nr. 118–120. 40, Nr. 141. 143.

² Pick in: *Kunstdenkmäler d. Stadt A. III* 10–12. A. er Heimatgesch. 38 ff.

³ *MG Const III* 2.

⁴ *Jean van Heelu, Chron. en vers, Brüssel 1836, Cod. dipl. 562 f., Nr. 199.*

⁵ *Germania Judaica II*

Figure 1
Avneri (1968) on Aachen

Source: Avneri (1968, 69).

Weitere Informationen:

- Franz Scholl, Die Juden in Aach. Schulchronik der Schule Aach (Franz Scholl war Lehrer und verfasste den Artikel im Jahre 1943)
- Richard Laufner, Die Geschichte der jüdischen Bevölkerung im Gebiet des heutigen Kreises Trier-Saarburg, in: Kreisjahrbuch Trier-Saarburg 1979, S. 166 f.
- Gilli Kasper-Holkotte, Juden im Aufbruch – Zur Sozialgeschichte einer Minderheit im Saar-Mosel-Raum um 1800, in: Schriftenreihe der Gesellschaft zur Erforschung der Juden e.V., Hg. H. Castritius/u.a., Band 3, Hannover 1996
- Gernot Kasel, Erinnerung an jüdische Mitbürger. Gedenktafel an der ehemaligen Synagoge in Aach, in: »Trierer Volksfreund« vom 10.11.1998
- Günter Heidt/Dirk S. Lennartz, Fast vergessene Zeugen – Juden in Freudenburg und im Saar-Mosel-Raum 1321-1943, Saarburg 2000, S. 230
- S. Fischbach/I. Westerhoff (Bearb.), »... und dies ist die Pforte des Himmels«. Synagogen. Rheinland-Pfalz und Saarland, Mainz 2005, S. 67/68

Aachen (Nordrhein-Westfalen)

Erste urkundliche Erwähnungen für die Existenz von Juden in Aachen gibt es bereits seit Karolingischer Zeit. Der erste namentlich bekannte Jude Aachens, Isaak, gehörte im Jahre 797 als Dolmetscher der Gesandtschaft Karls des Großen an den Kalifen Harun al Rachid an. Die folgenden Jahrhunderte geben jedoch keinerlei Hinweise auf jüdisches Leben in Aachen. Erst aus der Mitte des 13. Jahrhunderts sind spärliche Informationen über Juden (aus einem Verzeichnis der Steuereingänge) bekannt.

Auch aus der Zeit der Verfolgungen in den Pestjahren liegen keine Angaben über Pogrome gegen Juden in Aachen vor; möglicherweise lebten um 1348/49 keine Juden in der Stadt. Bis ins 18. Jahrhundert hinein scheint es in Aachen keine dauerhafte und organisierte jüdische Gemeinde gegeben zu haben. Nur vereinzelt hielten sich jüdische Familien hier auf. Eine jüdische Gemeinde bildete sich erst während der französischen Besatzungszeit.

Als das linksrheinische Gebiet 1801 unter französische Herrschaft geriet, kamen auch die Juden Aachens als französische »Vollbürger« in den Genuss der Gesetzgebung des napoleonischen Frankreichs; doch die gewährte Gleichberechtigung wurde bereits 1808 durch ein Dekret wieder eingeschränkt: Im Bereich des Handels und der Niederlassungsfreiheit wurden den Juden Grenzen gezogen. Die einschränkenden Bestimmungen für Juden blieben teilweise erhalten, auch nachdem das Aachener Gebiet 1815 preussisch geworden war. Erst gegen Mitte des 19. Jahrhunderts wurde die rechtliche Gleichstellung vorangetrieben, doch blieben in einigen Bereichen weiterhin Ungleichheiten bestehen, so etwa bei der Besetzung von höheren Beamten- und Offiziersstellen.

Im Jahr 1861 konstituierte sich die »Synagogen-Gemeinde zu Aachen« als Körperschaft öffentlichen Rechts. Der Synagogenbezirk umfasste den Stadt- und Landkreis Aachen und damit auch die in Burtscheid, Haaren, Kornelimünster, Richterich und Würselen lebenden Juden; nicht dazu gehörten Eschweiler, Höngen und Kinzweiler. Allerdings waren die Unterschiede zwischen der wohlhabenden, religiös-liberal eingestellten Stadtgemeinde und den armen, orthodox geprägten Landgemeinden relativ groß.

Die Mitglieder der Jüdischen Gemeinde Aachen lebten über die gesamte Stadt verstreut. Ihre wirtschaftliche Lage war meist gut; die erwerbstätigen Aachener Juden waren vor allem in der Textilindustrie und im -handel tätig, und namhafte Tuchfabriken befanden sich in jüdischem Besitz. Neben Fabrikanten und Geschäftsleuten gab es relativ viele jüdische Akademiker: Ärzte, Juristen, Lehrer und Professoren. Entsprechend ihrem wirtschaftlichen Einfluss gehörten zahlreiche vermögende Juden auch kommunalen Einrichtungen und Organisationen als führende Mitglieder an. Die meisten Juden Aachens waren bereits in der zweiten Hälfte des 19. Jahrhunderts assimiliert, doch gab es auch gesellschaftliche Vorbehalte und Spannungen.

... Denn Aachen ist keine Stadt, welche sich bisher durch besondere Toleranz ausgezeichnet hat. Aachen ist eine Fabrikstadt, wovon die Industriellen dominieren – und es ist bekannt, Handelsneid macht die Menschen oft noch intoleranter als religiöser Fanatismus. Aber auch der religiöse Fanatismus fehlt nicht, denn Aachen ist eine katholisch ... durch und durch beherrschte Stadt. Da wollte es schon viel heißen, daß vor Jahren ein Jude zum Stadtrath gewählt wurde ...
(Aus: »Allgemeine Zeitung des Judentums«, Ausg. 19. Jg., No. 50 vom 10.12.1855)

Der Standort der ersten Synagoge in Aachen ist heute nicht mehr bekannt; einen Betsaal soll es seit 1815/1825 gegeben haben, dem eine Gemeindeschule angeschlossen war. Ab 1839 wurde im Hirschgraben eine größere Synagoge mit Gemeinde- und Schulhaus eingerichtet, die bis zur Einweihung einer neuen in der Promenadenstraße im Jahre 1862 genutzt wurde. Angesichts des raschen Anstiegs der Mitgliederzahl der Israelitischen Gemeinde Aachens war ein Synagogen-Neubau erforderlich geworden. In der Promenadenstraße entstand ein repräsentativer Backsteinbau, der im September 1862 in Anwesenheit der Aachener Stadtprominenz von Bonner Rabbiner Dr. Ludwig Philippson eingeweiht wurde.



Aachener Synagoge um 1920

Figure 2
Alicke (2008) on Aachen

Source: Alicke (2008, 424).

towns. Hence, in Gau-Algesheim, Alicke (2008, 1385) simply states that the town's Jews "probably perished during the time of the plague pogroms,"⁵ but that is enough for Voigtländer and Voth (2012, 1352) to code the town as having had a Black Death pogrom (POG1349=1). Behind the rhetoric about "unambiguous information," then, there is a reality of inherent ambiguity and researcher degrees of freedom.

There are also cases of clear and obvious errors that cannot be explained by any ambiguity in the sources. Berlin is an example. Voigtländer and Voth exclude the city from their main sample for no reason. They code it as not being in Avneri's compilation (JUDAICA=0), despite Avneri (1968, 68–73) having an extensive entry for it. They also code Berlin as if Alicke did not describe a Jewish community being in the city at the time of Black Death (COMM1349=0), despite Alicke (2008, 424) clearly describing the city as having a Jewish community at the time of the Black Death. Voigtländer and Voth then code Berlin as having no anti-Jewish pogroms during the Black Death, despite both Avneri and Alicke clearly stating that it did. Avneri (1968, 69) states that Jews were among the oldest inhabitants of Berlin, with a fixed residence in the city since at least 1295. He explicitly notes that Berlin "was among the places where persecutions took place at the time of the Black Death."⁶ He further reports that on July 22, 1351, Margrave Ludwig the Elder forgave the city for what "had happened to the Jews."⁷ Alicke (2008, 424) corroborates this, referring to "the expulsion during the plague of 1348/1349."⁸ In this case, the information in Voigtländer and Voth's sources is genuinely unambiguous and cannot be reconciled with their decision to exclude Berlin from their sample.

Furthermore, Voigtländer and Voth's coding criteria systematically introduce an error into their control group. These were the towns that supposedly had Jewish populations and no persecution during the Black Death. Voigtländer and Voth never-

⁵ „ging wahrscheinlich in der Zeit der Pestpogrome zugrunde“

⁶ „Berlin gehörte zu den Orten, in denen zur Zeit des Schwarzen Todes Verfolgungen stattfanden.“

⁷ „was an den Juden geschehen sei.“

⁸ „Vertreibung während der Pest von 1348/1349.“

theless treat simple inclusion in Avneri's compendium as sufficient evidence of there having been Jews in a town in the years 1347–1350 (JUDAICA=1). Their control group of towns that they treat as paragons of tolerance and harmony therefore includes towns in which the Jews had already been exterminated in previous pogroms. Deggendorf is an example. Avneri (1968, 157) describes how Jews settled in Deggendorf in 1337 but "were accused of host desecration and on September 30 of the following year were all burned." The local duke nevertheless pardoned the townsfolk and gave them the Jews' property, thereby setting an example for other antisemites to follow in the rest of Bavaria. But Voigtländer and Voth still code Deggendorf as having a Jewish population who did not suffer a pogrom during the Black Death.

And other examples abound. Avneri (1968, 401) reports that the Bad Kissingen's Jews were affected by the Rindfleisch persecution in 1298;⁹ Alicke (2008, 237) goes further, stating that the Jewish community "was destroyed in 1298 in connection with the so-called 'Rindfleisch unrests,'"¹⁰ while a "new Jewish community did not appear in Kissingen until the sixteenth century."¹¹ Similarly, Avneri (1968, 142) notes that in 1330, Jews settled in Büdingen, but "were affected by the Armleder persecution in 1337, and since then, all news of Jews in the city was missing for a long time."¹² Alicke (2008, 713) corroborates this: "Already in 1337, the Jews were expelled from Büdingen again. In the two following centuries, documentary evidence of the presence of Jews in the city is missing."¹³ In Creglingen, Avneri (1968, 154) notes that the town's Jews were affected by the Rindfleisch persecution in 1298, stating that "other reports are missing."¹⁴ Alicke (2008, 839) indicates that a Jewish community "presumably existed"

⁹ „Juden wurden hier 1298 von der Verfolgung durch Rindfleisch betroffen.“

¹⁰ „Bereits im 13. Jahrhundert soll es hier eine jüdische Gemeinde gegeben haben, die jedoch im Jahre 1298 im Zusammenhang der sog. ‚Rindfleisch-Unruhen‘ vernichtet wurde.“

¹¹ „Eine neue jüdische Gemeinde gab es in Kissingen erst wieder ab dem 16. Jahrhundert.“

¹² „wurden aber 1337 von der Armleder-Verfolgung betroffen, und seitdem fehlte lange Zeit jede Nachricht von Juden in der Stadt“

¹³ „Doch bereits 1337 wurden die Juden wieder aus Büdingen vertrieben. In den beiden folgenden Jahrhunderten fehlen urkundliche Hinweise auf die Anwesenheit von Juden in der Stadt.“

¹⁴ „Andere Nachrichten fehlen.“

in the Middle Ages but “[p]erished in 1298 as a result of pogroms.”¹⁵ And so on; the same problem can be found in Freudenberg-Main, Grünsfeld, Krakow am See, Krautheim-Jagst, Lohr, and Mellrichstadt.¹⁶ Given that their Jews had already been killed or expelled *before* the Black Death, it would be absurd to include these towns in a control group of places where there were Jews who were not persecuted *during* the Black Death. Yet Voigtländer and Voth do.

Voigtländer and Voth’s (2012) main independent variable thus makes little sense. The repeated claim that POG1349 is based on “unambiguous information” cannot be reconciled with what is printed on the pages of Avneri (1968) and Aliche’s (2008) books. Much of the information that those books contain is ambiguous. Consequently, the description of the coding found in Voigtländer and Voth (2012) cannot be reconciled with their actual source material. Furthermore, numerous errors can be seen in their coding when the information is unambiguous. The control group is contaminated, for example, with numerous towns that had already killed or expelled their Jews before the Black Death.

The 1920s Pogroms

The dependent variable for whether a town experienced a pogrom in the 1920s presents a particularly clear example of these research integrity issues. In this instance, Voigtländer and Voth (2012, Online Appendix, 1) provide strict coding criteria that should have been easy to apply:

For pogroms in the 1920s we use the dummy POG^{1920} that equals 1 for cities with documented pogroms during this period. Aliche focuses on ‘positive’ information, and mentions when an event actually occurred. We set POG^{1920} to zero otherwise. We define a pogrom as a violent outrage against the Jewish population, involving physical violence against and/or the killings of people. Therefore, political agitation through Brandreden

¹⁵ („vermutlich eine jüdische Gemeinde [...] Sie ging aber 1298 im Folge von Pogromen unter.“

¹⁶ See Avneri, 1968, 259, 307, 452–453, 493, 534; Aliche, 2008, 1315–1316, 1616, 2333, 2336, 2559, 2736.

(incendiary speeches), attacks on Jewish shows, or the desecration of cemeteries are not coded as pogroms. Only when physical violence against at least one Jewish inhabitant is mentioned in Alicke does this variable take the value of unity.

If this is a reality-based account of their research, then, it should be enough to check the printed pages of Alicke (2008) to find the positive information that Voigtländer and Voth (2012) claim to have used as the basis for their coding. Their description of their research nevertheless fails this basic test.

For Voigtländer and Voth's main sample of 325 towns, Alicke (2008) only provides actual evidence of physical violence against Jews in 11 of the 20 towns that Voigtländer and Voth code as having pogroms in the 1920s, even when that period is charitably extended up to when Adolf Hitler became Chancellor on January 30, 1933. Almost half of their coded pogroms cannot be found in the cited source:

Altenburg: Alicke (2008, 70) documents that "[a]s early as the end of the 1920s, an anti-Jewish hate campaign began in Altenburg, carried out by NSDAP members; Jewish families were frightened with insults, threats, and graffiti."¹⁷ There is, however, no mention of physical violence.¹⁸

Bad Bergzabern: Alicke (2008, 201) notes that at the end of the 1920s, the Jews of Bergzabern "were confronted with the first antisemitic attacks. The attacks were led particularly by young men of the strong South Palatinate NSDAP, who agitated

¹⁷ „Bereits Ende der 1920er-Jahre setzte in Altenburg eine antijüdische Hetzkampagne ein, die von NSDAP-Angehörigen getragen wurde; mit Beleidigungen, Bedrohungen und Schmierereien wurden die jüdischen Familien verängstigt.“

¹⁸ In a comment on a previous version of this paper, Voigtländer and Voth (2025, 6–7) complain that "Francis changes our coding of pogroms in the 1920s from 1 in our paper to 0." They then cite a newspaper article from the online version of Alicke describing a physical attack by Nazis on Jews in December 1929, which "ticks all the boxes we set out as criteria for a 1920s pogrom." Yet Alicke's (2008, 69–71) printed entry for Altenburg does not contain either the newspaper article or any other reference to physical attacks on Jews in the 1920s, while the online version of Alicke only became available in 2014, two years after Voigtländer and Voth's article was published. As such, their explanation of how they coded Altenburg as having a pogrom in the 1920s does not seem plausible.

with slogans like 'We don't need a Jewish republic' and 'Jews out of the country.'"¹⁹ Given that Voigtländer and Voth (2012, Online Appendix, 1) explicitly state that "political agitation through Brandreden (incendiary speeches) [...] are not coded as pogroms," this antisemitic sloganeering cannot be considered evidence of a pogrom based on their own coding criteria; Alicke does not provide "positive" information on "physical violence against and/or the killings of people."

Bad Hersfeld: Alicke (2008, 228) states that in the mid-1920s, anti-Jewish incidents occurred, leading to "synagogue desecrators" (*Synagogenschänder*) being punished and an incident in a café where a Jewish doctor and his companions were "provoked" (*proviziert*) and later "rudely jostled" (*angerempelt*) outside. However despicable it may be, rude jostling does not, however, seem to cross the threshold for physical violence that Voigtländer and Voth's (2012, Online Appendix, 1) coding criteria require.

Braunschweig: Alicke (2008, 632) notes that "already in the 1920s, antisemitism became noticeable in Braunschweig, because in 1928–1929 the synagogue was desecrated several times."²⁰ Again, there is no evidence of the "physical violence against and/or the killings of people" that Voigtländer and Voth (2012, Online Appendix, 1) demand.

Buchen-Odenwald: Alicke (2008, 705) reports that in August 1931, the synagogue was the target of an attack.²¹ But Voigtländer and Voth (2012, Online Appendix, 1) state that "the desecration of cemeteries are not coded as pogroms."

¹⁹ „Mit ersten antisemitischen Attacken waren die Juden Bergzaberns Ende der 1920er-Jahre konfrontiert. Die Angriffe wurden besonders von jungen Männern der starken südpfälzischen NSDAP geführt, die mit Parolen wie ‚Wir brauchen keine Judenrepublik‘ und ‚Juden hinaus aus dem Land‘ agitierte.“

²⁰ „Bereits in den 1920er Jahren wurde in Braunschweig der Antisemitismus spürbar, denn 1928/29 wurde die Synagoge einige Male geschändet.“

²¹ „Im August 1931 war die Synagoge erstmals Ziel eines Anschlages.“

Duisburg: "During the 1920s," Alicke (2008, 998) reports, "there were isolated antisemitic incidents in Duisburg, which became increasingly worse over the years. As early as the summer of 1930, antisemitic excesses occurred in Duisburg; harassment of Jewish children in schools and on the streets also increased. The group of Eastern Jewish residents in particular became the target of antisemitic propaganda. SA and SS members had already resorted to open violence against Duisburg Jews by the end of February 1933."²² This suggests that physical violence against Jews only began after Hitler came to power.

Erfurt: Alicke (2008, 1137) notes that during and after the First World War, anti-semitism became more noticeable in Erfurt, stating that in 1924 "the Erfurt synagogue was defaced with Nazi slogans for the first time."²³ No physical violence is mentioned before January 30, 1933.

Gau-Odernheim: Alicke (2008, 1393) documents the "first violent attacks on Jewish families" in Gau-Odernheim in the summer of 1933,²⁴ after Hitler came to power.

Öhringen: Alicke (2008, 3199) notes that the "first nationalistic-antisemitic discord had already occurred in the 1920s—arson, poisoning of domestic animals, and a proposed ban on ritual slaughter were expressions of a spreading anti-Jewish

²² „Während der 1920er-Jahre gab es in Duisburg vereinzelte antisemitische Vorfälle, die im Laufe der Jahre immer schlimmer wurden; so kam es schon im Sommer 1930 in Duisburg zu antisemitischen Exzessen; auch Belästigungen von jüdischen Kindern in den Schulen und auf den Straßen nahmen jetzt zu. Besonders die Gruppe der ostjüdischen Bewohner wurde zur Zielscheibe antisemitischer Propaganda. SA- und SS-Angehörige waren bereits ab Ende Februar 1933 zur offenen Gewalt gegenüber Duisburger Juden übergegangen.“

²³ „1924 wurde die Erfurter Synagoge erstmals mit NS-Parolen beschmiert.“

²⁴ „Im Sommer 1933 kam es hier zu ersten gewalttätigen Übergriffen auf jüdische Familien.“

sentiment.”²⁵ But there is no mention of actual physical violence against persons as opposed to property before January 30, 1933.²⁶

Notably, it proved impossible to find any towns in their main sample in which the errors pointed in the other direction: in other words, they were all false positives.

The treatment effect that Voigtländer and Voth find for pogroms in the 1920s appears to entirely depend on these coding choices. Table 1 presents the results: the coefficient for Black Death pogroms falls from 0.061 to 0.021, while p rises from 0.008 to 0.256. The choices made when coding pogroms in the 1920s resulted in a treatment effect that would otherwise have been statistically indistinguishable from zero. Voigtländer and Voth (2012, 1340) thereby found statistical support for their description of “waves of persecution, even before the Nazi Party seized power in 1933,” which were supposedly driven by the ethnic hatreds inherited from the medieval era. The reality found in Alicke (2008)—that there was little physical violence directed against Germany’s Jews before Hitler became Chancellor—is not reflected in their dataset.

The Deportations, 1933–1945

The deportations of Germany’s Jews from 1933 to 1945 is another dependent variable with issues of another kind. For this variable, Voigtländer and Voth (2012, Online Appendix, 3) describe using “the second, expanded and improved edition” of the *Gedenkbuch: Opfer der Verfolgung der Juden unter der nationalsozialistischen Gewaltherrschaft in Deutschland, 1933–1945*, the Bundesarchiv’s official database of 159,972 Jews deported from Germany during the Holocaust. That version of the database is no longer

²⁵ „Erste nationalistisch-antisemitische Misstöne hatte es bereits in den 1920er-Jahren gegeben – eine Brandstiftung, Vergiftung von Haustieren und ein angestrebtes Schächtverbot waren Ausdruck einer sich ausbreitenden antijüdischen Stimmung.“

²⁶ Voigtländer and Voth have also complained about this correction to their coding, “despite Alicke mentioning arson—because arson is apparently not violent enough as a sign of persecution.” Apparently, they are now unaware of the criteria in Voigtländer and Voth (2012, Online Appendix, 1), which state that “[o]nly when physical violence against at least one Jewish inhabitant is mentioned in Alicke does this variable take the value of unity.”

	(1) Voigtländer and Voth (2012)	(2) Corrected POG1920
Pogrom, 1348–1350	0.06070** (0.02258)	0.02079 (0.01828)
Log population	0.03895* (0.01520)	0.03408** (0.01286)
% Jewish	0.01351 (0.01141)	0.01267 (0.00981)
% Protestant	0.00034 (0.00042)	-0.00013 (0.00034)
Constant	-0.39275** (0.13962)	-0.32109** (0.11545)
Observations	320	323
R ²	0.06630	0.06406
Adj. R ²	0.05444	0.05229

Table 1
Variations in the 1920s Pogroms Results

Notes: Comparison of the original Voigtländer and Voth (2012) results with corrected data. The dependent variable is whether or not there is a report of physical violence against Jews in a town from 1920 to January 30, 1933. Standard errors clustered by *Kreis*. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, . $p < 0.10$.

publicly available because the online edition has been expanded further to 175,550 people, as of January 10, 2026.²⁷ Voigtländer and Voth's numbers can, however, be compared to the first edition from 2006, which is still available on a CD-ROM, and the current online version. The result reveals anomalies for numerous towns, as shown in Table 2. For instance, the 2006 version finds zero deportations for Gau-Algesheim, while the current online version reports 2, yet Voigtländer and Voth report 172. In Voigtländer and Voth's dataset, there was only 1 deportee from Bendorf, yet there were 405 in the 2006 version and 622 in the online version. There are, moreover, 26 towns out of the 363 that are or should be in the main sample that Voigtländer and

²⁷ The *Gedenkbuch* is available at <https://www.bundesarchiv.de/gedenkbuch/>.

Voth report as "NA," despite having many of their residents deported in both versions of the database.²⁸

Crucially, there seems to be no reason why the "NA" category exists at all. Voigtländer and Voth (2012, Online Appendix, 3) describe how they "consulted the database by entering every single locality in our dataset into the search engine (under the query term 'Wohnort'), and then recorded the number of listed deportees for the years 1933–45." This procedure could have produced no results, which should have led them to record zero deportations, as is the case for various towns in their dataset. That so many towns were instead coded as "NA" therefore cannot be explained. It is a mystery.

In alphabetical order, Altenburg is the first town that Voigtländer and Voth code as "NA." The 2006 edition of the *Gedenkbuch* recorded 44 deported Jews as having resided there, while the number increases to 114 in the current version of the online edition. The town's prohibition on Jewish settlement had been lifted in 1869, when the Duchy of Saxony-Altenburg joined the North German Confederation. By 1925, the community numbered approximately 170 individuals. Their extermination was then systematic. During the *Polenaktion* of October 28, 1938, approximately 50 Polish Jews from Altenburg were forcibly expelled to the Polish border. Among them, for example, was the Soltes family: Israel Soltes and his five children were detained, transported to the border at Beuthen, and left stranded in no-man's-land before eventually being pushed into Poland. Israel Soltes died in the Warsaw Ghetto; only his son Siegfried survived. During *Kristallnacht* the following month, the prayer hall on Pauritzer Straße was vandalized, and around 20 Jewish men were arrested. Among them were Nathan Dannemann, a shoe merchant born in 1878; he was deported to Buchenwald on November 12 but released on November 23; broken by torture and mistreatment, he died six days later on November 29. Many of Altenburg's Jews then fled to neighboring countries, only to be trapped by the German occupation. Marianne Bucky (née Cohn),

²⁸ Voigtländer and Voth have been contacted about the discrepancies in the *Gedenkbuch* data but have not offered an explanation.

	(1)	(2)	(3)
	Voigtländer & Voth	<i>Gedenkbuch</i>	
		2006	2026
Altenburg	NA	44	114
Alzey	NA	63	98
Amberg	NA	30	29
Angermünde-Uckermark	NA	0	13
Ansbach	NA	9	49
Arnstadt	NA	45	72
Aschaffenburg	NA	193	276
Augsburg	NA	337	446
Bad Neustadt-Saale	NA	52	84
Bad Orb	12	6	7
Bamberg	NA	251	368
Bayreuth	NA	61	99
Bendorf-Rhein	1	405	622
Bernburg-Saale	NA	28	77
Bernkastel-Kues-Mosel	NA	10	13
Beuthen	NA	386	1078
Bielefeld	NA	353	804
Bingen-Rhein	NA	164	211
Bochum	NA	220	499
Bonn	NA	459	660
Gau-Algesheim	172	0	2
Gau-Odernheim	8	2	5
Gerolstein-Eifel	27	10	15
Gross-Gerau	112	3	48
Heidenheim an der Brenz	NA	6	7
Heidingsfeld	NA	0	0
Heimerzheim	20	3	7
Laudenbach	NA	24	37
Naumburg-Saale	NA	7	27
Oldenburg	NA	102	179
Oppenheim-Rhein	NA	10	48
Saalfeld	NA	11	15
Uerdingen	NA	605	697

Table 2
Discrepancies in the *Gedenkbuch* Data

76, matriarch of the M. & S. Cohn department store family, fled to the Netherlands. She was detained in Westerbork transit camp and deported to Sobibor on March 23, 1943, where she was gassed upon arrival on March 26. Those Jews who remained

in Altenburg had also been deported and killed in 1942: on May 10, 17 Jews were deported to the Belzyce Ghetto in the Lublin District; all were subsequently murdered in Sobibor or Majdanek; on September 20, the town's remaining Jews, the elderly, were deported to the ghetto in Theresienstadt, where most died within months from starvation and disease. It is unclear, then, why Voigtländer and Voth classified this town as "NA."²⁹

Alzey, the next on the list, is a similar story. The 2006 edition of the *Gedenkbuch* recorded 63 Jews as having been deported from there, while the number increases to 98 in the current version. The destruction of the Jewish community in Alzey was total. It began with economic strangulation and became increasingly violent after the November 1938 pogrom, during which 15 Jewish men were arrested and deported to Buchenwald. The first systematic murders occurred not in the camps of the East, but in the Rhineland itself; under the "Action T4" euthanasia program in 1940 and 1941, institutionalized Jewish patients were transferred from asylums to the gas chambers of Hadamar. By late 1941, the systematic deportations began, scattering Alzey's families across various sites of genocide: some were sent to the Lodz Ghetto on October 20, 1941, while others were transported to the Minsk Ghetto in Belarus on November 11/12, 1941. In 1942, the extermination culminated in targeted waves of deportation. The elderly were sent to the "model" ghetto of Theresienstadt on September 27, 1942, where most died of hunger and disease within months. Simultaneously, younger families and children were murdered: 9-year-old Marianne Mayer was deported with her parents to Raasiku in Estonia on September 30, 1942, and shot in the dunes of

²⁹ For general Altenburg Jewish history, see <https://www.christian-repkewitz.de/en/the-jewish-altenburg-en>. Yad Vashem provides an overview of the Holocaust there, at <https://collections.yadvashem.org/en/places/5420583>. On Nathan Dannemann and *Kristallnacht*, see <https://www.juedisches-leben-thueringen.de/pogrome-1938/altenburg>. The *Polenaktion* is described at <https://www.christian-repkewitz.de/index.php/de/neuigkeiten/juedisches-altenburg/464-vor-75-jahren-qpolenaktionq-bedeutet-fuer-etwa-50-juden-aus-dem-altenburgerland-die-zwangsausweisung.html>. For the Soltes family, see <https://www.christian-repkewitz.de/index.php/de/neuigkeiten/juedisches-altenburg-news/624-vor-80-jahren-juni-aktion-bringt-israel-soltes-ins-konzentrationslager>. Marianne Bucky's life and death is described at <https://www.joodsmonument.nl/nl/page/224321/marianne-bucky-cohn>. The Sobibor transports from Westerbork are detailed at <https://www.sobibor.org/en/the-nineteen-transports/>.

Kalevi-Liiva, while the 15-year-old Marianne Strauß was sent with her mother Ida directly to the gas chambers of Treblinka on the same date. Their town is, however, classified as "NA" in Voigtländer and Voth's dataset.³⁰

The fate of Amberg's Jews is particularly well-documented thanks to the research of Johannes Laschinger (1988; 2018). The Jewish community had re-established itself in 1861 after the abolition of residency restrictions, building a synagogue in the Salzgasse in 1896 and integrating into the city's commercial life. Yet persecution began once Hitler became Chancellor in 1933. The Nazis enforced a boycott of Jewish shops, such as the "Erwege" department store, which was finally "Aryanized" in 1936. On the night of November 9, 1938, the local SA were mobilized to destroy the synagogue's interior and burn its ritual objects. Laschinger (2018, 337) describes how, the following day, the local newspaper, the *Amberger Volkszeitung*, claimed that the pogrom reflected how "the deep indignation of the population vented itself,"³¹ mirroring Voigtländer and Voth's (2012, 1340) claim that antisemitic violence reflected "the long-term persistence of interethnic hatred" within the local culture. As Laschinger (1988, 208–209) observes, however, the Nazis privately knew this narrative to be false. In February 1939, the Supreme Party Court of the NSDAP acknowledged that the violence had not been spontaneous: "The public knows down to the last man that political actions like those of November 9 are organized and carried out by the party [...]. If in one night

³⁰ For comprehensive documentation of Alzey's Jewish community and deportations, see https://www.alemannia-judaica.de/alzey_synagoge.htm. On the November 1938 pogrom and Buchenwald arrests, see https://www.jewishgen.org/Yizkor/pinkas_germany/ger3_00072.html, and <https://encyclopedia.ushmm.org/content/en/article/the-night-of-broken-glass>. On the T4 euthanasia program and Hadamar, see <https://www.gedenkstaette-hadamar.de/en/history/the-t4-programme-and-the-hadamar-killing-centre-1941/>, and <https://encyclopedia.ushmm.org/content/en/article/euthanasia-program>. The September 27, 1942 Theresienstadt transport is documented at https://www.statistik-des-holocaust.de/list_ger_hhn_420927.html. The September 30, 1942 Treblinka deportation is documented at <https://collections.arolsen-archives.org/en/document/11201634>. For a memorial to Marianne Strauß, see <https://alzeyer-zeitung.de/denkmal-fuer-marianne-strauss-in-alzey-mit-antisemitischer-parole-beschmiert/>. On the Raasiku/Kalevi-Liiva shootings, see <https://www.memorialmuseums.org/eng/staettens/view/159/Denkmal-f%C3%BCr-die-in-Kalevi-Liiva-ermordeten-Juden>, <https://klooga.nazismvictims.ee/en/materjalid/holokaust-eestis/>, and <https://kalevi-liiva.nazismvictims.ee/en/>.

³¹ „die tiefe Empörung der Bevölkerung machte sich [...] Luft.“

all synagogues burn, it must be organized somehow.”³² This program of centrally-directed extermination culminated in the implementation of the Final Solution in 1942: in April, most of the Amberg’s Jews were deported to Piaski in the Lublin District; in September, the elderly were deported to Theresienstadt. The testimony of Klara Lorsch, the only survivor, was used in the successful prosecution of several Nazi officials in 1947. The trial established that the violence had been a coordinated operation ordered from above rather than an expression of the popular will. Voigtländer and Voth (2012), however, classify the town as “NA” as part of their research on the “medieval origins of antisemitic violence.”

Unfortunately, it is impossible to know the exact effect of these data discrepancies. The online version of the *Gedenkbuch* that Voigtländer and Voth used is no longer available: the Bundesarchiv does not keep previous versions of it; nor is it possible to reconstruct it using metadata. What can be determined is that Voigtländer and Voth’s results for this dependent variable are sensitive to the dataset used. Hence, Table 3 presents three versions: column 1 replicates the original version from Voigtländer and Voth (2012, 1365, Table 6); column 2 then uses the 2006 edition of the *Gedenkbuch*; column 3 uses the January 10, 2026 version. As can be seen, there are major differences between the three columns, even though all other variables are from Voigtländer and Voth’s original uncorrected data. Using their version of the *Gedenkbuch* data, Voigtländer and Voth found a coefficient of 0.142 that was statistically significant at the crucial 95 percent confidence level; using the 2006 edition, the coefficient increases to 0.281 and remains statistically significant ($p < 0.05$); but it falls to 0.023 and becomes statistically indistinguishable from zero ($p > 0.10$) using the current version.

³² „Die Öffentlichkeit weiß bis auf den letzten Mann, daß politische Aktionen wie die des 9. November von der Partei organisiert und durchgeführt sind [...]. Wenn in einer Nacht sämtliche Synagogen brennen, so muß das irgendwie organisiert sein.“

	(1) Voigtländer and Voth (2012)	(2) <i>Gedenkbuch</i> (2006)	(3) <i>Gedenkbuch</i> (January 10 2026)
Pogrom, 1348–1350	0.14184* (0.07049)	0.28079* (0.11464)	0.02323 (0.09305)
Log population	0.24143** (0.08397)	0.47667. (0.28745)	0.43553* (0.19868)
% Jewish	0.07433* (0.03476)	0.19692. (0.10145)	0.15305* (0.07212)
% Protestant	-0.00391*** (0.00116)	-0.00349* (0.00138)	-0.00342* (0.00133)
Log Jewish population	0.81477*** (0.08201)	0.57048* (0.26816)	0.57277** (0.18732)
Observations	278	300	300
Pseudo R ²	0.97200	0.95422	0.96061

Table 3
Variations in the Deportation Results

Notes: Comparison of the original Voigtländer and Voth (2012) results with updated data from the 2006 and January 10, 2026 versions of the *Gedenkbuch*. The dependent variable is the count of deportations. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, . $p < 0.10$.

Degrees of Freedom

Voigtländer and Voth (2012) thus provide an extreme illustration of the problem of “researcher degrees of freedom.” It seems likely that the results that they report reflect the choices that they made during the research process. As Appendix A details, the fragility of their econometrics supports this impression by suggesting that their minimal results will be sensitive to coding choices made. Appendix B then presents the results of a full large language model-assisted recoding of their main sample, which leads to 169 corrections to their dataset. The corrections push most of the results of their main OLS and Poisson regressions over the critical $p > 0.05$ line that publication bias requires, confirming the impression of fragility.³³

³³ In their response to an earlier version of this paper, Voigtländer and Voth (2025) attempted to discredit this recoding by fixating on the use of large language models. In the four months that they and their research assistants had to examine the paper, however, they were only able to find two genuine errors, reducing the number of corrections from 171 to 169.

Ultimately, however, a "true" version of Voigtländer and Voth's (2012) dataset is impossible because the "unambiguous information" that it would require from Avneri (1968) and Alicke (2008) does not exist. Their published article describes a research process that cannot be replicated due to the nature of their sources. Even the most diligent researcher could not accurately apply Voigtländer and Voth's coding criteria in the way that they describe. The repeated assertion that they relied on "unambiguous information" is at odds with the inherent ambiguity found in their sources. Their description of their research process is not credible. As such, there can be no "true" version of their dataset or their findings.

Voth has nevertheless claimed that his study can help to answer questions that philosophers have grappled with for millennia. According to Voth (2021, 243), the "persistence" literature in economics, of which Voigtländer and Voth (2012) is a key reference, offers important insights into "philosophical questions such as the concept of free will." If what we do is shaped by our deep cultural heritage, he seems to imply, we have only limited freedom. Such a message runs, however, against the fundamental lessons that other thinkers have drawn from the historical experience of Nazism and the Holocaust (Jaspers 1947; Frankl 1962; Arendt 1964). The evidence that Voigtländer and Voth (2012) present to support their argument seems, moreover, to be highly sensitive to researcher degrees of freedom. It appears to be a case of persistence hallucinated.

Appendix A

The research integrity issues described in this paper are compounded by econometric issues that substantially invalidate Voigtländer and Voth's argument, even when their uncorrected dataset is used. At the most basic level, the correlations underlying their claims about 600-year persistence indicate that their results are quite minor. Table A.1 presents Shapley values for the key independent variable—whether there was a pogrom during the Black Death—across their six dependent variables. The Shapley value measures the average marginal contribution of medieval pogroms to explained variance after controlling for population, religious composition, and other covariates. In their original dataset, these values range from 0.004 to 0.038. This suggests that results are fragile: even if five of them achieve statistical significance at the 95 percent confidence level, they are likely to be vulnerable to omitted variable bias, given the small percentage of variance they explain.³⁴

Two matching procedures are used to make these results seem more robust. Voigtländer and Voth (2012, 1362) supplement their "regression techniques" in Panel A with "propensity score matching" in Panel B and "matching by geographical location" in Panel C. To do so, they use Alberto Abadie et al.'s (2004) "nmatch" function in Stata, matching treated towns ($POG1349=1$) with control towns ($POG1349=0$). In their propensity score matching, each treated town is matched to four control towns based on the covariates used in their main regressions, while each treated town is matched to two controls based on longitude and latitude in the geographic matching. In doing so, Voigtländer and Voth (2012, 1362–1363) claim to "demonstrate the strength of our

³⁴ On the connection between variance explained and robustness, see Cinelli and Hazlett (2020). Applying Cinelli and Hazlett's sensitivity analysis tools to Voigtländer and Voth's OLS regressions confirms this fragility. For the 1920s pogroms, the robustness value ($q = 1, \alpha = 0.05$) is only 0.33 percent, meaning that an unobserved confounder explaining less than 1 percent of the residual variance in both the treatment and the outcome would render the result statistically insignificant. For the NSDAP and DVFP vote shares, the corresponding robustness values are 2.04 percent and 0 percent, respectively. Even for the most robust outcome, synagogue attacks, the robustness value is only 6.56 percent. As detailed in Appendix B, moreover, there are severe issues in the coding of the synagogue attacks variable.

	(1)	(2)
	<i>N</i>	Shapley Value
1920s pogroms	320	0.0150
NSDAP vote share	325	0.0143
DVFP vote share	325	0.0037
Deportations	278	0.0175
<i>Der Stürmer</i> letters	325	0.0236
Synagogue attacks	278	0.0384

Table A.1
Shapley Values for POG1349, Panel A

Notes: Shapley values measure the average marginal contribution of the indicator for a pogrom in 1348–1350 to explained variance in Table 1. For OLS models, this is the LMG (Lindeman-Merenda-Gold) Shapley value from `relaimpo`. For Poisson regressions (deportations and *Der Stürmer* letters), this is the general dominance statistic from `dominanceanalysis`.

results (and control for nonlinearities)” and “overcome the problems associated with omitted variables.”

These matching procedures are, however, invalidated by a simple problem: there are too few controls and they are too different to be matched. As can be seen in the map of the German Empire in 1939, Voigtländer and Voth’s main sample has far more treated towns than control towns: 235 versus 90. The matching algorithm therefore has to reuse towns as controls. Furthermore, the treated towns are heavily clustered in the West, where there are few control towns, and the treated towns are, on average, around twice the size of the control towns. The results are often absurd. According to the 1933 census, Heimerzheim was, for example, a town of 1,603 people. Nonetheless, the geographic matching in Panel C turns it into one of two controls for numerous towns of far greater size. Hence, for the 1920s pogroms, Heimerzheim is a control for 20 different towns, including Köln, with a population of 756,605. Similarly, Pappenheim, in the Weißenburg-Gunzenhausen district in Bavaria, had a population of 1,741, but it becomes a control for 13 towns, including Munich, with 735,388 people, and Augsburg, with 176,575. There is a general tendency for the algorithm to match treated towns and cities to villages as controls.

	(1)	(2)	(3)	(4)
	Lat	Lon	Pop '33	Jews '33
Panel B: Propensity score matching				
1920s pogroms	-0.40	-0.84	0.20	0.20
NSDAP vote share	-0.38	-0.84	0.22	0.22
DVFP vote share	-0.44	-0.86	0.21	0.21
Deportations	-0.62	-0.96	0.22	0.18
<i>Der Stürmer</i> letters	-0.54	-0.88	0.16	0.20
Synagogue attacks	-0.55	-0.86	0.17	0.21
Panel C: Geographic Matching				
1920s pogroms	-0.01	-0.01	0.20	0.23
NSDAP vote share	-0.02	-0.00	0.19	0.22
DVFP vote share	-0.02	-0.00	0.19	0.22
Deportations	-0.02	0.01	0.30	0.25
<i>Der Stürmer</i> letters	-0.02	-0.00	0.19	0.22
Synagogue attacks	-0.00	-0.01	0.18	0.26

Table A.2

Covariate Balance in Matched Estimates, Panels B and C

Notes: The table reports the standardized mean differences (treated minus control, divided by the pooled standard deviation). Panel B matches on propensity scores estimated from covariates. Panel C matches on latitude and longitude.

Simple balance tests would have indicated that Voigtländer and Voth’s matched regressions were invalid. As shown in Table A.2, the standardized mean differences indicate massive geographic imbalance on latitude and longitude in Panel B, together with significant imbalance for the towns’ populations. In Panel C, the latitude and longitude imbalances are fixed, but the significant population imbalances persist. Furthermore, even when the algorithm is given the 1933 population together with latitude and longitude to match, it still cannot achieve balance because there are simply not enough control towns of sufficient size.³⁵ Balance tests, which should have been a basic requirement for a propensity score matching exercise (Rosenbaum and Rubin 1985), would have invalidated Voigtländer and Voth’s results from the beginning.

³⁵ In this alternative “Panel D” specification, standardized mean differences become worse than in Table A.2: for population in 1933, they range from 0.29 to 0.35. Note that the 1933 data have been used here because the earlier covariates used in Panel B are often grouped for small towns within the same *Kreis*, making them inappropriate for matching.

	(1)	(2)	(3)	(4)
Pogrom in 1349	0.207 (0.151)	0.211 (0.160)	0.247. (0.144)	0.228 (0.149)
Jewish community in 1349	–	–	0.027 (0.127)	-0.056 (0.136)
Log population (1933)	-0.173* (0.075)	-0.025 (0.071)	-0.250*** (0.047)	-0.086* (0.039)
% Jewish (1933)	0.058 (0.105)	-0.123 (0.105)	0.122** (0.046)	0.078. (0.041)
% Protestant (1925)	0.311*** (0.077)	0.314*** (0.076)	0.297*** (0.044)	0.291*** (0.041)
% Blue collar (1933)	–	-0.364* (0.176)	–	-0.189. (0.096)
% Manufacturing (1933)	–	0.046 (0.183)	–	0.007 (0.096)
% Self-employed (Retail)	–	0.103 (0.067)	–	0.224*** (0.067)
Observations	241	241	819	819
Adjusted R ²	0.083	0.133	0.156	0.242

Table A.3
Principal Components Analysis with Listwise Deletion

Notes: OLS estimates using the corrected PCA dependent variable constructed via listwise deletion (complete cases only). Columns (1) and (2) are restricted to towns with a documented Jewish community in 1349. Columns (3) and (4) include all towns, controlling for the existence of a community. All independent variables are standardized. Standard errors clustered by *Kreis* are in parentheses. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, . $p < 0.10$.

What Voigtländer and Voth (2012, 1371–1373) describe as a “principal components analysis” (PCA) is also misleading. A standard PCA should ideally have complete data, with each observation having valid values for all variables, and scores are calculated using consistent weights. Examination of Voigtländer and Voth’s Stata code reveals that they instead run four separate PCAs with different variables and sample restrictions, then stitch the resulting scores together through sequential imputation, without any quantification of the uncertainty introduced by guessing the missing data. An alternative specification with listwise deletion suggests that this is crucial for the reported result. Hence, in Table A.3, Black Death pogroms no longer have a statistically significant effect at the 95 percent confidence level ($p > 0.05$) when the

more conservative approach is used. Without Voigtländer and Voth's imputation of the missing data, then, statistical significance disappears. Furthermore, it is likely that the nature of some of the variables—sparse and highly skewed—render more sophisticated imputation procedures computationally unviable. A PCA is probably not the correct methodology to use in this instance.

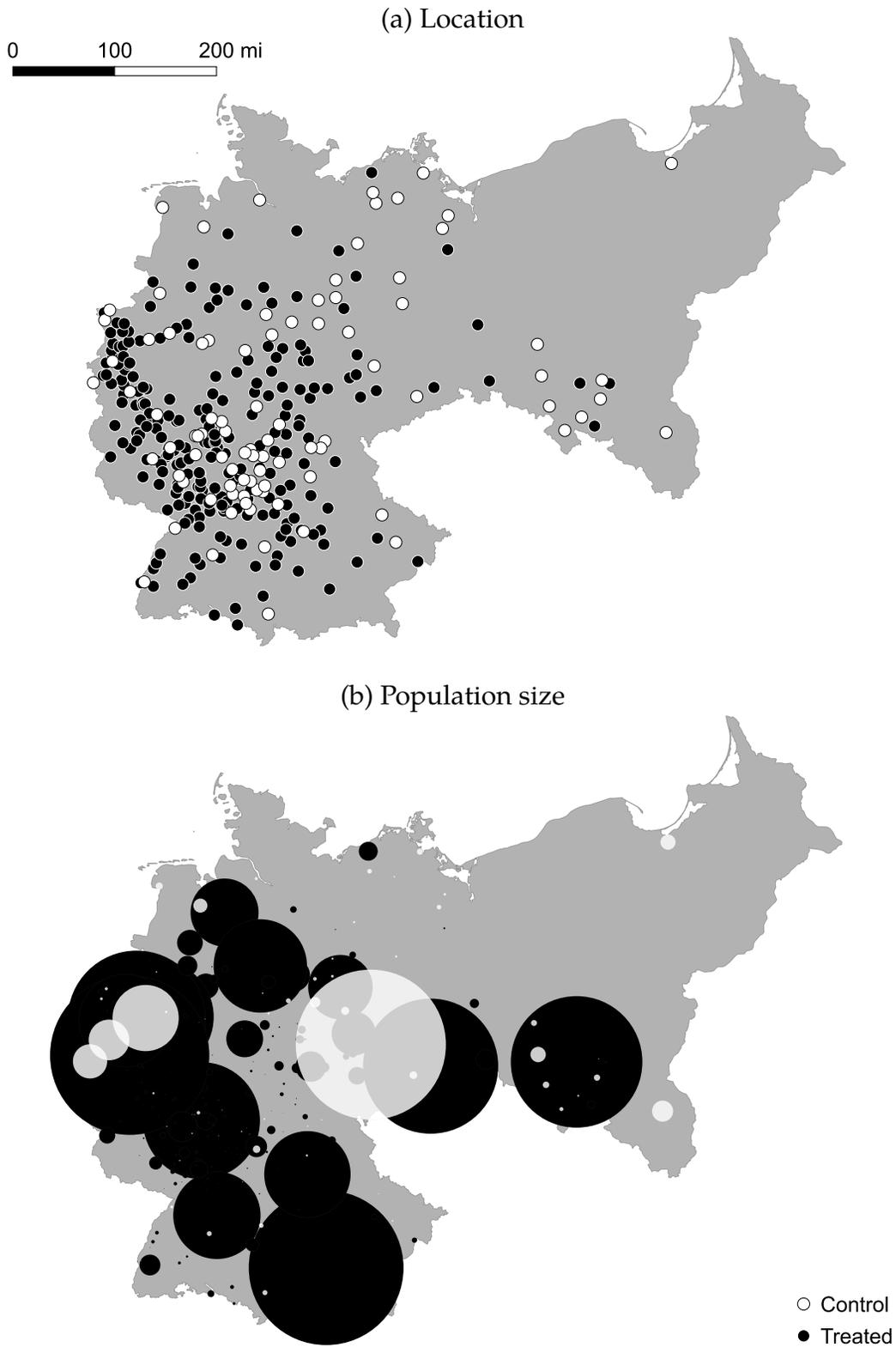


Figure A.1
Control and Treated Towns in 1933

Source: Town location and population size in 1933 are from Voigtländer and Voth (2012). The map of the German empire is from the MPIDR and CGG (2011).

Appendix B

An attempt has been made to arrive at a corrected “true” version of Voigtländer and Voth’s dataset that can be used to test the results of their main OLS and Poisson regressions. Doing so was a multi-stage process that involved large language models (LLMs). The first step was to assemble text files for each town in their dataset, using a digitalized version of Avneri (1968) and (for convenience) the updated, online version of Alicke (2008), available at <https://www.xn--jdische-gemeinden-22b.de/>, supplemented by the printed version when towns were missing there. Those text files were then given to Google’s Gemini Flash, with the following prompt:

Please answer these questions as briefly as possible, drawing only on this text from Alicke:

[Paste Alicke text here]

and this text from Avneri:

[Paste Avneri text here]

When the two texts contradict each other, Alicke should be given precedence over Avneri.

existmed: (a) Was there a Jewish community in [town name] at any point in the 13th and/or 14th centuries? pogmed: (b) Was there any violent persecution of Jews in [town name] at any point in the 13th and/or 14th centuries? exist1349: (c) Was there a Jewish presence in [town name] immediately prior to the Black Death? pog1349: (d) Was there any violent persecution of Jews—pogroms, violent attacks on the Jewish population, the burning of Jews, or the wholesale extermination of the Jewish community—in [town name] at any point during and immediately after the Black Death? exist20s: (e) Was there a Jewish presence in [town name] at any point in the 1920s up to Hitler becoming Chancellor on January 30, 1933? pog20s: (f) Was there any violent persecution of Jews in [town name] at any point in

the 1920s up to Hitler becoming Chancellor on January 30, 1933? It must involve physical violence against people rather than property, otherwise it should be coded as 0. It must be a violent outrage against the Jewish population, involving physical violence against and/or the killings of people. Therefore, political agitation, attacks on Jewish shows, or the desecration of cemeteries are not coded as pog20s=1. syn30s: (g) Was there a synagogue or Jewish place of worship in [town name] in 1933? synattack: (h) Was a synagogue or Jewish place of worship damaged in [town name] on November 9–10, 1938, during Kristallnacht?

All should be coded as 1, 0, or NA for uncertain.

If there is no mention of a violent persecution or synagogue attack, assume it should be coded as 0. Only code as NA if the source explicitly says it is uncertain.

If Jews are mentioned first arriving after the medieval period, assume that existmed is 0.

Be careful of logical inconsistencies. If, for instance, there was a pogrom in the years after the Black Death (pog1349=1), then there must also have been a Jewish presence there (exist1349=1). Be careful with NAs. If no physical personal violence against Jews is mentioned in the 1920s, for example, code pog20s as 0. And if a text mentions a Jewish community being established in, say, the 17th or 18th centuries, it means that both existmed and exist1349 should be 0. If pog1349 is 1, pogmed must also be 1, etc.

Please use direct quotes in German from Alicke to answer each question, as appropriate. Translate those quotes into English (in parentheses).

These logical rules should be applied:

1. if pogmed=1, existmed must also equal 1 # 2. if pog1349=1, exist1349 must also equal 1 # 3. if exist1349=1, existmed must also equal 1 # 4. if pog1349=1, pogmed must also equal 1 # 5. if pog20s=1, exist20s must also equal 1 # 6. if synattack=1, syn30s must also equal 1 # 7. if exist1349=NA, pog1349 must also equal NA

After you have answered, please code the following as a list, each on its own row:

existmed: pogmed: exist1349: pog1349: exist20s: pog20s: syn30s: synattack:

All should be coded as 1 if yes; 0 if no; NA if unclear, without any space between the colon at the code. For example,

existmed:1 pogmed:0 etc

Various towns in which there were discrepancies between Gemini Flash and Voigtländer and Voth were then investigated using unscripted conversations with both Anthropic's Claude Sonnet and Google's Gemini Pro, leading to some further corrections to the coding. Each of the towns with discrepancies was then given again to Gemini Flash, with the texts from Avneri and Alicke and the following prompt:

Based on the documents, here is how Voigtländer and Voth (VV) coded each variable:

exist1349 (presence of Jews during the Black Death)

VV established the presence of Jewish communities based on inclusion in their primary source:

> "We first establish the presence of a Jewish community based on its inclusion in GJ, volume II, which is for the period 1238-1350. Whenever later work by Alicke (2008) mentions that a Jewish community existed during this period, we use his information instead."

Their main source was Avneri's *Germania Judaica* (GJ), supplemented by Alicke (2008). They excluded doubtful cases:

> "Doubtful cases of Jewish settlements or occurring of pogroms in 1349 are not included in the data set. This leaves 325 towns with a confirmed Jewish settlement and unambiguous information on pogroms in 1349."

pog1349 (persecution of Jews during the Black Death)

VV coded this as a dummy variable based on documented violence:

> "For each town, city or village where GJ mentions pogroms, violent attacks on the Jewish population, the burning of Jews, or the wholesale extermination of the Jewish community in 1348-50, we code our dummy variable for Black Death pogroms, POG1349, as unity, and zero otherwise."

> Note that a lack of information should be treated as zero, according to this statement.

exist20s (existence of Jews in the 1920s)

This is implicitly coded as 1 in all VV's towns.

pog20s (persecution of Jews during the 1920s)

VV used a strict definition requiring actual physical violence:

> "For pogroms in the 1920s we use the dummy POG1920 that equals 1 for cities with documented pogroms during this period. Alicke focuses on 'positive' information, and mentions when an event actually occurred. We set POG1920 to zero otherwise. We define a pogrom as a violent outrage against the Jewish population, involving physical violence against and/or the killings of people. Therefore, political agitation through Brandreden (incendiary speeches), attacks on Jewish shows, or the desecration of cemeteries are not coded as pogroms. Only when physical violence against at least one Jewish inhabitant is mentioned in Alicke does this variable take the value of unity."

syn30s (presence of a synagogue or Jewish place of worship)

This was a simple binary coding based on Alicke's documentation:

> "we examine data from the Reichskristallnacht (on November 9, 1938), limiting the analysis to localities that were home to synagogues or prayer room"

> "From Alicke (2008), we also take data on the existence of a synagogue in 1933 (coded as 1 if mentioned as such, and 0 otherwise)"

Note that they include synagogues and prayer rooms in the indicator. I have also interpreted this variable to refer to places of worship that continued functioning up to 1938, given that it is used in conjunction with the following variable.

synattack (damage or destruction of a synagogue or Jewish place of worship in 1938)

VV created a combined variable from two separate measures of destruction and damage:

> "as well as on the extent of attacks in 1938 during the 'Night of Broken Glass' (Reichskristallnacht). We construct two dummy variables – one for destroyed synagogues [or prayer rooms], and one for damaged ones. For the former, we assign a value of 0 if no synagogue in use in 1933 was destroyed during Reichskristallnacht. 'Destruction' occurred if the relevant building was damaged at least to an extent that it became unusable, in which cases Alicke mostly uses the term 'zerstört' (destroyed). The variable then takes the value 1. We code our variable for synagogue damage in a locality as 0 if no synagogue/s in use in 1933 was damaged during Reichskristallnacht. 'Damage' we define if the inventory of a synagogue was destroyed or the physical fabric of the building itself was damaged but remained intact. The variable takes the value 1 in these cases. From these

two variables, we create a combined variable for synagogues destroyed or damaged.”

All variables relied heavily on Alicke (2008) for 20th-century data and *Germania Judaica* for medieval data, with VV taking care to exclude ambiguous cases and use strict definitions for violence-related variables. Alicke is generally given precedence over Avneri when there are two sources. Alicke’s files can be identified by *Jüdische Gemeinde*.

All of the data points in which there were still discrepancies compared to Voigtländer and Voth (2012) were then manually checked against Avneri (1968) and the original printed version of Alicke (2008). The recoding was thus machine-assisted but ultimately the responsibility of the author.

Throughout, consistency was the key to the recoding. While working through the towns from A to Z, it was essential to treat them all in the same way. Direct evidence of Jewish settlement was always used to determine whether there was a Jewish presence in a town during the Black Death, leading to the creation of the new variable `EXIST1349`. When Avneri and Alicke present evidence that strongly suggests that there were Jews in a town during the Black Death, `EXIST1349` was coded as 1. And when they conclude that the town’s Jews were probably persecuted during the Black Death, `POG1349` was coded as 1, while it is given 0 when there is no news of a pogrom or when Avneri and Alicke explicitly say that a pogrom did not occur. Genuinely ambiguous cases are coded as NA. The result is 113 corrections to the data points for the pair of medieval variables, as follows (with -> indicating a correction):

1–2. *Aachen* (`EXIST1349` 1 -> NA; `POG1349` 0 -> NA)

Avneri (1968, 1) documents Jewish presence in Aachen before 1349, citing a 1242 tax record and the mention of a “Judengasse” in 1330. He also notes that in 1349, “citizens of Brussels wrote to Aachen that ‘one should be careful that the Jews do not poison the wells’” (*„wiewohl die Bürger von Brüssel 1349 nach Aachen schrieben, man solle sich hüten, daß die Juden die Brunnen nicht vergifteten“*), which implies Jewish

presence. Avneri explicitly states that "nothing is reported about persecutions of Jews in Aachen, not even during the time of the Black Death" (*„Von Verfolgungen der Juden in Aachen wird nichts berichtet, auch nicht zur Zeit des Schwarzen Todes“*). Alicke (2008, 3) nevertheless states that "possibly no Jews lived in the city around 1348–1349" (*„möglicherweise lebten um 1348/49 keine Juden in der Stadt“*), making the existence of a Jewish population uncertain.

3. *Amberg* (EXIST1349 1; POG1349 NA -> 0)

Avneri (1968, 13) states that "[n]o news is available about the fate of the Jews of Amberg at the time of the Black Death" (*„Über das Schicksal der Amberger Juden zur Zeit des Schwarzen Todes liegen keine Nachrichten vor“*). Alicke (2008, 106) mentions earlier persecutions in 1298 but provides no information regarding pogroms during the Black Death period (1348–1350). Such a lack of news is taken as an indication that no pogrom occurred.

4–5. *Arnstein* (EXIST1349 1 -> NA; POG1349 0 -> NA)

Avneri (1968, 23) mentions that among Franconian places where Jews were killed in 1298 by Rindfleisch, an "Arnstein" is named, "which is probably this one" (*„womit wohl das unsrige gemeint ist“*), but explicitly states that "other reports are missing" (*„Andere Nachrichten fehlen“*). Alicke (2008, 149) similarly notes that the small Jewish community in the High Middle Ages "is said to have existed until the first half of the fourteenth century" (*„die bis zur ersten Hälfte des 14. Jahrhunderts bestanden haben soll“*). This makes it uncertain whether there were still Jews in the town at the time of the Black Death.

6–7. *Aub* (EXIST1349 1 -> NA; POG1349 0 -> NA)

Avneri (1968, 30) notes that Jews were present in Aub in 1298 and again in 1327, but explicitly states that in July 1336, during the Armleder persecution, "the 'common man' killed the Jews in Aub, and since then, there are no reports of Jews in this place" (*„erschlug der gemeine Mann' die Juden in Aub, und seitdem fehlen Nachrichten über Juden in diesem Ort“*). Alicke (2008, 168) similarly reports that the Jewish community, said to

be among the oldest in southern Germany, "was almost completely wiped out during the 'Rintfleisch-Pogrome' of 1298 and the 'Armleder-Verfolgung' of 1336" („wurde sie während der ‚Rintfleisch-Pogrome‘ von 1298 und der ‚Armleder-Verfolgung‘ von 1336 fast völlig ausgelöscht“). Consequently, it is unclear whether there was still a Jewish community in Aub at the time of the Black Death.

8. *Bad Kissingen* (EXIST1349 1 -> 0; POG1349 0)

Avneri (1968, 401) notes that Jews in Bad Kissingen were affected by the Rindfleisch persecution in 1298 („Juden wurden hier 1298 von der Verfolgung durch Rindfleisch betroffen“). Alicke (2008, 237) goes further, stating that the Jewish community "was destroyed in 1298 in connection with the so-called 'Rindfleisch unrests'" („Bereits im 13. Jahrhundert soll es hier eine jüdische Gemeinde gegeben haben, die jedoch im Jahre 1298 im Zusammenhang der sog. ‚Rindfleisch-Unruhen‘ vernichtet wurde“), while a "new Jewish community did not appear in Kissingen until the sixteenth century" („Eine neue jüdische Gemeinde gab es in Kissingen erst wieder ab dem 16. Jahrhundert“).

9. *Bad Orb* (EXIST1349 1; POG1349 NA -> 1)

Avneri (1968, 632) states that "[a]ccording to a fourteenth-century written record, the Jews in Orb fell victim to persecution; presumably, the one at the time of the Black Death is meant" („Nach einem im 14. Jahrhundert geschriebenen Verzeichnis fielen die Juden in Orb einer Verfolgung zum Opfer; vermutlich ist die zur Zeit des Schwarzen Todes gemeint“). Alicke (2008, 279) similarly notes that the "[f]irst documentary evidence of Jewish life in Orb can be found in the first half of the fourteenth century. At this time, however, only very few families resided here; they are said to have fallen victim to the persecutions during the plague years" („Erste urkundliche Hinweise auf jüdisches Leben in Orb finden sich in der ersten Hälfte des 14. Jahrhunderts. Zu dieser Zeit waren allerdings nur sehr wenige Familien hier ansässig; sie sollen den Verfolgungen während der Pestjahre zum Opfer gefallen sein“).

10. *Bad Wimpfen* (EXIST1349 1; POG1349 1 -> NA)

Avneri (1968, 906) states that "at the time of the Black Death, the Jews of Wimpfen fell victim to the general persecution" (*„Zur Zeit des Schwarzen Todes fielen die Wimpfener Juden der allgemeinen Verfolgung zum Opfer“*). Alicke (2008, 304–305), however, explicitly notes that "whether Wimpfen was also the scene of the plague pogrom of 1348–1349 cannot be proven" (*„Ob auch Wimpfen Schauplatz des Pestpogroms von 1348/1349 war, kann nicht belegt werden“*).

11–12. *Beelitz* (EXIST1349 1 -> NA; POG1349 0 -> NA)

Avneri (1968, 61–62) discusses the legend of the "Wunderblut" in Beelitz, which links Jews to a host desecration around 1247. Nonetheless, he observes that "Jews were only included in the legend around 1500" (*„erst um 1500 Juden in die Legende einbezogen worden sind“*). He concludes that "[w]e have no proof that Jews lived in Beelitz in 1247 or that a burning of Jews took place here around that time" (*„Wir besitzen nach all dem keinen Beweis dafür, daß Juden 1247 in Beelitz gewohnt haben oder daß hier um diese Zeit eine Judenverbrennung stattgefunden hat“*). Alicke (2008, 390–391) similarly notes the legend as the "first reference to possibly Jews staying in Beelitz" (*„Ein erster Hinweis auf möglicherweise sich in Beelitz aufhaltende Juden stammt aus der Mitte des 13. Jahrhunderts und steht im Zusammenhang mit der Legende des „Wunderblutes von Beelitz“*), but immediately clarifies that "[o]nly about 500 years later—at the beginning of the eighteenth century—are Jews again mentioned sporadically in Beelitz in writing" (*„Erst etwa 500 Jahre später – zu Beginn des 18. Jahrhunderts – sind wieder vereinzelt Juden in Beelitz schriftlich erwähnt“*).

13–14. *Berlin* (EXIST1349 0 -> 1; POG1349 0 -> 1)

Avneri (1968, 69, 71) states that Jews were among the oldest inhabitants of Berlin, with a fixed residence in the city since at least 1295. He explicitly notes that Berlin "was among the places where persecutions took place at the time of the Black Death" (*„Berlin gehörte zu den Orten, in denen zur Zeit des Schwarzen Todes Verfolgungen stattfanden“*). He further reports that on July 22, 1351, Margrave Ludwig the Elder forgave the city for what "had happened to the Jews" (*„was an den Juden geschehen sei“*). Alicke (2008,

424) corroborates this, referring to "the expulsion during the plague of 1348–1349" („Vertreibung während der Pest von 1348/49“).

15–16. *Beuthen* (EXIST1349 1 -> NA; POG1349 0 -> NA)

Avneri (1968, 79) notes that the Deutz Memorbuch mentions that Jews were persecuted in "Bytom" during the Black Death, "which perhaps refers to our place" („mit dem vielleicht unser Ort gemeint ist"). Yet Alicke (2008, 465) states that it "was probably not a permanent presence; this only occurred towards the end of the seventeenth century" („dabei dürfte es sich aber nicht um eine dauerhafte Anwesenheit gehandelt haben, diese erfolgte erst gegen Ende des 17. Jahrhunderts"). It is therefore unclear whether there were Jews present during the Black Death.

17–18. *Bockenheim a. d. Weinstrasse* (EXIST1349 1 -> NA; POG1349 0 -> NA)

Avneri (1968, 90) notes that Jews in Bockenheim paid an annual imperial tax around 1309, stating that "other reports are missing" („Andere Nachrichten fehlen"). Alicke (2008, 554), however, indicates that "[i]n the first half of the sixteenth century, [...] a few Jewish families are said to have lived" in the town („In der ersten Hälfte des 16. Jahrhunderts sollen [...] einige wenige jüdische Familien gelebt haben"), with the first documentary evidence from 1548. But "whether Jews lived here permanently, however, is not apparent from the available documents" („Ob hier allerdings dauerhaft Juden gelebt haben, ist aus den vorliegenden Unterlagen nicht ersichtlich"). Consequently, the existence of a Jewish community in 1349 is unclear.

19. *Borken* (EXIST1349 1; POG1349 NA -> 1)

Avneri (1968, 97–98) provides evidence of Jews living in the town in the early thirteenth century but notes that "[o]ther reports are missing" („Andere Nachrichten fehlen"). Alicke (2008, 600), however, states that "[d]uring the plague pogroms, the Jews living in Borken must have been expelled or murdered" („Während der Pestpogrome müssen die in Borken lebenden Juden vertrieben bzw. ermordet worden sein").

20. *Brühl* (EXIST1349 1; POG1349 NA -> 1)

In 1348, "the Jews are said to have been expelled from Brühl" (*„1348 sollen die Juden aus Brühl vertrieben worden sein“*), according to Avneri (1968, 135). Alicke (2008, 693) similarly notes that Jewish families "were expelled in 1348–1349" (*„1348/49 vertrieben wurden“*).

21. Büdingen (EXIST1349 1 -> 0; POG1349 0)

Avneri (1968, 142) notes that in 1330, Jews settled in Büdingen, but "were affected by the Armleder persecution in 1337, and since then, all news of Jews in the city was missing for a long time" (*„wurden aber 1337 von der Armleder-Verfolgung betroffen, und seitdem fehlte lange Zeit jede Nachricht von Juden in der Stadt“*). Alicke (2008, 713) corroborates this: "Already in 1337, the Jews were expelled from Büdingen again. In the two following centuries, documentary evidence of the presence of Jews in the city is missing" (*„Doch bereits 1337 wurden die Juden wieder aus Büdingen vertrieben. In den beiden folgenden Jahrhunderten fehlen urkundliche Hinweise auf die Anwesenheit von Juden in der Stadt“*).

22–23. Büren (EXIST1349 1 -> NA; POG1349 0 -> NA)

Avneri (1968, 143–144) notes that "[b]efore 1292, the Jews of Büren were murdered by the noble lords of Büren and the townspeople. [...] Further news about Jews in Büren in the fourteenth century is not available" (*„Vor 1292 wurden die Bürener Juden von den Edelherren von Büren und den Städtern ermordet. [...] Weitere Nachrichten über Juden in Büren im 14. Jahrhundert sind nicht vorhanden“*). Alicke (2008, 727) similarly reports the 1292 pogrom. "Already towards the end of the thirteenth century, Jews must have been in Westphalian Büren, because a document from 1292 reports a pogrom against Büren Jews, triggered by an alleged host desecration. [...] Whether Jewish families lived in the town in the subsequent period cannot be proven; it is considered certain that a hesitant, but then permanent, resettlement occurred around the middle of the sixteenth century" (*„Bereits gegen Ende des 13. Jahrhunderts müssen sich Juden im westfälischen Büren aufgehalten haben, denn in einer Urkunde von 1292 wird über ein Pogrom an Bürener Juden berichtet, der durch einen angeblichen Hostienfrevel ausgelöst*

wurde. [...] Ob jüdische Familien in der Folgezeit im Ort gelebt haben, kann nicht belegt werden; als sicher gilt, dass gegen Mitte des 16. Jahrhunderts eine zögerliche, dann aber dauerhafte Wiederansiedlung erfolgte“).

24–25. Burg (EXIST1349 0 -> 1; POG1349 NA -> 0)

Alicke (2008, 730) states that Jewish life in Burg “is first documented in the year 1338” („ist erstmals im Jahre 1338 urkundlich belegt“). Alicke also notes that “from the second half of the fourteenth century, information about a ‘Judenstrate’ (today’s Kammacherstraße) exists, where Jewish families of Burg lived at that time” („aus der zweiten Hälfte des 14. Jahrhunderts Angaben über eine ‚Judenstrate‘ (die heutige Kammacherstraße) vor, in der damals die jüdischen Familien Burgs wohnten“). Alicke only mentions an expulsion in 1493, stating that “the Jews of Burg also had to leave the town” during wider persecution in the Archbishopric of Magdeburg („auch die Bürger Juden das Städtchen verlassen“). There is no evidence of pogroms or violent attacks during the Black Death.

26. Burgsteinfurt (EXIST1349 1; POG1349 0 -> NA)

Avneri (1968, 147) confirms Jewish presence in Burgsteinfurt before 1349, noting that in 1347 “a Jewess Heyleke is in a citizen list” („eine Jüdin Heyleke in einer Bürgerliste aufgeführt“), although there is no report of any persecutions during the Black Death. Alicke (2008, 751), on the other hand, corroborates the early Jewish presence but then states that “[a]fter the plague pogroms, no Jews lived in the County of Steinfurt for a long time” („Nach den Pestpogromen haben dann lange Zeit keine Juden in der Grafschaft Steinfurt gelebt“). This implies that they may have been killed or expelled, without being entirely clear.

27. Coburg (EXIST1349 1; POG1349 1 -> NA)

Avneri (1968, 151) states that there was Jewish presence in Coburg from the mid-thirteenth century and that “the Jews in Coburg were also affected by the persecution at the time of the Black Death” („Von der Verfolgung zur Zeit des Schwarzen Todes wurden auch die Juden in Coburg betroffen“). Nonetheless, Alicke (2008, 810) notes that “whether the Jews of Coburg were affected by the plague pogroms cannot be proven due to a

lack of historical sources" („Ob die Coburger Juden von den Pestpogromen betroffen waren, kann wegen fehlender historischer Quellen nicht belegt werden").

28. Creglingen (EXIST1349 1 -> 0; POG1349 0)

Avneri (1968, 154) notes that Jews in Creglingen were affected by the Rindfleisch persecution in 1298, stating that "other reports are missing" („Andere Nachrichten fehlen"). Alicke (2008, 839) indicates that a Jewish community "presumably existed" („vermutlich eine jüdische Gemeinde") in the Middle Ages but "[p]erished in 1298 as a result of pogroms" („Sie ging aber 1298 im Folge von Pogromen unter").

29. Deggendorf (EXIST1349 1 -> 0; POG1349 0)

Avneri (1968, 157) notes that Jews seem to have settled in Deggendorf around 1337 but were accused of host desecration and "on September 30 of the following year, all were burned" („am 30. September des folgenden Jahres sämtlich verbrannt"). Alicke (2008, 872) states that the "real reason for the pogrom, however, was obviously the citizens' high level of indebtedness to the local Jews" („Der wahre Grund für den Pogrom lag aber offenkundig in der hohen Verschuldung der Bürger bei den hiesigen Juden"). Deggendorf remained "a 'Jew-free' place until the nineteenth century" („Bis ins 19. Jahrhundert hinein war Deggendorf ein ‚judenfreier' Ort").

30. Eisleben (EXIST1349 1; POG1349 NA -> 0)

Avneri (1968, 199) states that "Jews are first mentioned here in 1314 and then in 1372" („Erstmals werden Juden hier 1314 und danach 1372 genannt"), confirming Jewish presence in the fourteenth century. Alicke (2008, 1084) similarly notes that the "[f]irst mentions of Jewish families residing in Eisleben date from the fourteenth century; however, there were probably very few" („Erste Erwähnungen über in Eisleben ansässige jüdische Familien stammen aus dem 14. Jahrhundert; allerdings dürfte es sich dabei nur um sehr wenige gehandelt haben"). There is no mention of persecution.

31–32. Emden (EXIST1349 1 -> NA; POG1349 0 -> NA)

Avneri (1968, 209) notes that the "tradition of the Jewish community in Emden dates back to the beginning of the fourteenth century," but states that "documentary evidence from the period treated here is missing" („*Die Tradition der jüdischen Gemeinde in Emden reicht bis in den Anfang des 14. Jahrhunderts zurück. Urkundliche Nachrichten aus der hier behandelten Zeit fehlen*”). Alicke (2008, 1107) provides a more categorical statement that "the settlement of Jews in Emden or in the nearby surroundings dates from the first half of the sixteenth century; the first evidence of the existence of Jewish families in Emden is found from approx. 1560" („*Die Ansiedlung von Juden in Emden bzw. im nahen Umland datiert aus der ersten Hälfte des 16. Jahrhunderts; die ersten Belege über die Existenz jüdischer Familien in Emden finden sich ab ca. 1560*”). This suggests that they may actually have been no Jewish presence in the town at the time of the Black Death.

33–34. *Eschenau* (EXIST1349 1 -> NA; POG1349 0 -> NA)

Avneri (1968, 226) mentions a connection to a Jew in 1343 but notes that "[f]urther news is missing" („*Weitere Nachrichten fehlen*”). Alicke (2008, 1163) clarifies that Jewish inhabitants only settled in Eschenau "from the second half of the seventeenth century onwards" („*seit der zweiten Hälfte des 17. Jahrhunderts einige wenige jüdische Bewohner an*”).

35. *Frankfurt-Oder* (EXIST1349 1; POG1349 NA -> 0)

Avneri (1968, 251) confirms that "Jews lived in Frankfurt in the second half of the thirteenth century" („*Juden haben schon in der zweiten Hälfte des 13. Jahrhunderts in Frankfurt gewohnt*”), while Alicke (2008, 1288) states that "Jews were presumably settled in Frankfurt/Oder in the thirteenth century" („*Vermutlich waren Juden im 13. Jahrhundert [...] in Frankfurt/Oder ansässig*”). Neither mentions persecution during the Black Death.

36. *Freudenberg-Main* (EXIST1349 1 -> 0; POG1349 0)

Avneri (1968, 259) notes that Freudenberg was among the places that experienced Jewish persecution by Rindfleisch in 1298, stating that "Jews do not seem to have

settled there again during the period covered here" (*„Danach scheinen Juden sich in der hier behandelten Zeit nicht wieder dort niedergelassen zu haben“*). Alicke (2008, 1315–1316) similarly reports that while Jews settled in Freudenberg in the High Middle Ages, "in the wake of the so-called 'Rindfleisch persecutions' of 1298, the few Jewish inhabitants are said to have been murdered or expelled" (*„im Gefolge der sog. ‚Rindfleisch-Verfolgungen‘ von 1298 sollen die wenigen jüdischen Bewohner ermordet bzw. vertrieben worden sein“*). Alicke further indicates that "[f]urther evidence for Jewish presence in the town dates from 1442" (*„Weitere Belege für jüdische Anwesenheit im Orte stammen aus den Jahren 1442“*).

37. *Genthin* (EXIST1349 1; POG1349 NA -> 1)

Alicke (2008, 1432) documents Jewish settlement in Genthin from the fourteenth century, stating that "during the plague years, the Jews of the place are said to have been expelled from Genthin" (*„während der Pestjahre sollen die Juden des Ortes aus Genthin vertrieben worden sein“*).

38–39. *Glehn* (EXIST1349 0 -> 1; POG1349 NA -> 1)

Alicke (2008, 1484) states that "[i]n the wake of the plague pogroms, Jews are said to have been expelled from Glehn" (*„Im Gefolge der Pestpogrome sollen Juden aus Glehn vertrieben worden sein“*).

40. *Goch* (EXIST1349 1; POG1349 0 -> NA)

Avneri (1968, 281) mentions a Jewish man from Goch in 1282–1288, implying Jewish presence before 1349. Alicke (2008, 1502) confirms that "Jews lived in Goch already towards the end of the thirteenth century" (*Juden wohnten bereits gegen Ende des 13. Jahrhunderts in Goch*). Alicke further states that "even after the plague pogroms of 1348–49, presumably a few Jewish families lived in the place" (*auch nach den Pestpogromen von 1348/49 lebten vermutlich einige wenige jüdische Familien am Ort*), but it is unclear whether he is referring to the more general persecution or events in the town itself.

41–42. *Grossostheim* (EXIST1349 1 -> NA; POG1349 0 -> NA)

Avneri (1968, 306) notes that Jews in Grossostheim were affected by the Rindfleisch persecution in 1298, but explicitly states that "[o]ther reports are missing" („*Andere Nachrichten fehlen*"). Alicke's (2008, 1602) account only begins in the eighteenth century.

43. *Grünsfeld* (EXIST1349 1 -> 0; POG1349 0)

Avneri (1968, 307) states that while Jews were present in Grünsfeld in the second half of the thirteenth century, "[i]n 1298 the community was annihilated by Rindfleisch and his followers. After that, reports about Jews in Grünsfeld are missing" („*1298 wurde die Gemeinde durch Rindfleisch und seinen Anhang vernichtet. Danach fehlen Nachrichten über Juden in Grünsfeld*"). Alicke (2008, 1616) similarly notes the 1298 "Rindfleisch-Pogrom" and the massacre of Jewish community members, stating that "only from the beginning of the sixteenth century are Jewish residents again documented in Grünsfeld" („*Erst ab Anfang des 16. Jahrhunderts sind wieder jüdische Bewohner in Grünsfeld urkundlich nachweisbar*").

44. *Harmuthsachsen* (EXIST1349 0 -> 1; POG1349 0)

Alicke (2008, 1766) states that "already in the fourteenth century, 'protected Jews' are said to have lived in Harmuthsachsen; thus the village would be one of the oldest Jewish settlements in North Hesse," even if "written sources only date back to around 1600." („*Bereits im 14. Jahrhundert sollen ‚Schutzjuden‘ in Harmuthsachsen gelebt haben; damit wäre das Dorf eine der ältesten jüdischen Niederlassungen in Nordhessen. Allerdings stammen schriftliche Quellen erst aus der Zeit um 1600*"). There is no mention of persecution during the Black Death.

45–46. *Heidenheim a. d. Brenz* (EXIST1349 1 -> NA; POG1349 0 -> NA)

Avneri (1968, 346) mentions that a Pentateuch was written for a Baruch b. Eljakim ha-Lewi of Heidenheim in 1341, but adds that "[o]ther reports are missing" („*Andere Nachrichten fehlen*"), but Alicke (2008, 1802) states that only from "the mid-seventeenth century" is "the first documentary evidence of the existence of Jews in Heidenheim

is available" (*„Aus der Mitte des 17. Jahrhunderts liegen erste urkundliche Hinweise über die Existenz von Juden in Heidenheim vor“*).

47. Hof (EXIST1349 1; POG1349 NA -> 0)

Avneri (1968, 365) notes the presence of Jews in Hof by 1319 and states that there is "no information about their fate during the time of the Black Death; however, in 1351, a Jew named Mayr and his mother Bel received a letter of safe conduct for the lands of the Vogt of Weida, and it appears that they were living in Hof. A synagogue is mentioned in 1373, and the Judengasse (Jewish Alley) in 1412." (*„Über ihr Schicksal zur Zeit des Schwarzen Todes fehlt jede Nachricht; 1351 aber erhielten ein Jude Mayr und seine Mutter Bel einen Geleitsbrief für die Lande des Vogtes von Weida, und es scheint, daß sie in Hof ansässig waren. Eine Synagoge wird 1373, die Judengasse 1412 erwähnt“*). Alicke (2008, 1919–1920) also confirms the existence of a small Jewish community in Hof in the late Middle Ages and describes how it was destroyed in 1515.

48–49. Ihringen-Kaiserstuhl (EXIST1349 1 -> NA; POG1349 0 -> NA)

Avneri (1968, 373-374) mentions that in 1349, during the interrogation of Freiburg Jews regarding well poisoning, "Gotlieb from Waldkirch named the Jew Anselm from 'Veringen' [Ihringen], who had come from Jerusalem via Strasbourg to Freiburg and brought poison. Other reports are missing" (*„Im Verhör der Freiburger Juden wegen der Brunnenvergiftung nannte Gotlieb aus Waldkirch 1349 den Juden Anselm von „Veringen“, der von Jerusalem über Straßburg nach Freiburg gekommen sei und Gift mitgebracht habe. Andere Nachrichten fehlen“*). This confession—presumably extracted under torture—seems unreliable. Alicke (2008, 2040) also provides no evidence of the presence of Jews in the town during the Black Death, noting instead that a "Jewish community in Ihringen only emerged in the first half of the eighteenth century" (*„ob allerdings damals auch in Ihringen Juden wohnten, kann nicht belegt werden. Eine jüdische Gemeinde in Ihringen entstand erst in der ersten Hälfte des 18. Jahrhunderts“*).

50. Kamen (EXIST1349 1; POG1349 0 -> NA)

Avneri (1968, 386) reports indirect evidence of settlement based on a local ruler's description in 1348 of the rights enjoyed by his Jewish subjects in the town, although he notes that "every report of them is missing" (*„doch fehlt jede Nachricht von ihnen“*). Alicke (2008, 2129) reports further on that protection letter, but then skips to 1413, when the "authorities again allowed five Jewish families to settle" (*„erlaubte die Herrschaft erneut fünf jüdischen Familien, sich im Ort anzusiedeln“*). The "again" (*„erneut“*) implies that Jews had disappeared from the town at some point from 1348 to 1413, which may have been due to persecution during the Black Death.

51–52. *Karlsruhe* (EXIST1349 0 -> 1; POG1349 0 -> 1)

Avneri (1968, 181) confirms for Durlach, "today a suburb of Karlsruhe" (*„heute Vorort von Karlsruhe“*), that "Jews are verifiable here in the 1340s" (*„Juden sind hier in den vierziger Jahren des 14. Jahrhunderts nachweisbar“*). He further states that "at the time of the Black Death, they were accused of poisoning wells and persecuted" (*„Zur Zeit des Schwarzen Todes wurden sie der Brunnenvergiftung beschuldigt und verfolgt“*). Alicke (2008, 2142) also notes that "Jewish families presumably lived in Durlach already in the fourteenth century" (*„vermutlich wohnten in Durlach bereits im 14. Jahrhundert jüdische Familien“*).

53–54. *Karlstadt* (EXIST1349 1 -> NA; POG1349 0 -> NA)

Avneri (1968, 387) notes that "Jews here fell victim to persecution by Rindfleisch in 1298" (*„Juden fielen hier 1298 der Verfolgung durch Rindfleisch zum Opfer“*), and speculates that there may subsequently have been a community because in 1331, "a Jew named Frumelin renounced a tithe from a vineyard in Neuberg near Karlstadt, whereupon a citizen of Karlstadt was granted the vineyard. If Frumelin also lived in Karlstadt, Jews would have settled there again after 1298" (*„ein Jude Frumelin auf einen Zehnten von einem Weinberg in Neuberg bei Karlstadt, worauf ein Karlstadter Bürger mit diesem belehnt wurde. Wenn Frumelin ebenfalls in Karlstadt lebte, hätten sich Juden dort abermals nach 1298 niedergelassen“*). Alicke (2008, 2149) states that "Jewish families are said to have lived in Karlstadt as early as the late Middle Ages; they formed a small community and had

a prayer room" („Bereits im späten Mittelalter sollen in Karlstadt jüdische Familien gelebt haben; sie bildeten eine kleine Gemeinde und verfügten über einen Betraum"). Whether this was before or after the Rindfleisch pogroms is unclear.

55–56. *Kempton-Allgäu* (EXIST1349 1 -> NA; POG1349 0 -> NA)

Avneri (1968, 479) speculates about tax records indicating that there may have been Jews in Kempton but notes that "any other news about the residency of Jews there is missing, and thus it is not certain" („Im Falle von Leutkirch fehlt jede andere Nachricht über Ansässigkeit von Juden dort, und diese ist somit nicht gesichert. Das Gleiche gilt für Kempton und Wangen im Allgäu"). Aliche (2008, 2175) states that "a first reference to Jewish life in Kempton dates from 1373" („Ein erster Hinweis auf jüdisches Leben in Kempton stammt aus dem Jahre 1373").

57–58. *Königstein im Taunus* (EXIST1349 1 -> NA; POG1349 0 -> NA)

Avneri (1968, 444) notes that tax records show a Jewish presence in 1310, but "all news about Jews in Königstein are missing since then" („fehlen seitdem alle Nachrichten über Juden zu Königstein"). Aliche (2008, 2301) confirms that "already before the Black Death pogroms of 1348–1349, some Jewish families lived in Königstein," confirming Avneri's description of how they were taxed („Bereits vor den Pestpogromen von 1348/49 lebten in Königstein einige jüdische Familien, erstmals 1294 im Ort urkundlich nachgewiesen"). "In the following centuries," however, "there is little documentary evidence of Jewish life in Königstein" („In den folgenden Jahrhunderten gibt es allerdings nur wenige urkundliche Belege für jüdisches Leben in Königstein"). It is unclear whether the Jewish presence persisted until the Black Death.

59. *Krakow am See* (EXIST1349 1 -> 0; POG1349 0)

Avneri (1968, 452) mentions the killing of Jews in Krakow around 1325 due to alleged host desecration. Aliche (2008, 2333) details further how the town's Jewish residents were tortured, condemned, and executed, with their property confiscated. Crucially, Aliche notes that "[f]or four centuries thereafter, no Jews lived in the small Mecklen-

burg town" (*„Vier Jahrhunderte lang lebten fortan keine Juden in der mecklenburgischen Kleinstadt“*).

60. *Krautheim-Jagst* (EXIST1349 1 -> 0; POG1349 0)

Avneri (1968, 453) notes that the town's Jews were persecuted in 1336. "Jews are only mentioned there again at the end of the century" (*„danach werden dort Juden erst wieder Ende des Jahrhunderts genannt“*). Alicke (2008, 2336) similarly states that "at the time of the plague pogroms of 1348–1349, no Jews seemed to have lived in Krautheim" (*„zur Zeit der Pestpogrome von 1348/49 schienen in Krautheim keine Juden gelebt zu haben“*).

61. *Kronberg Taunus* (EXIST1349 1; POG1349 0 -> 1)

Avneri (1968, 458) notes that the Lords of Kronberg committed to protect the Jews living with them in 1344, but states that "the protection seems to have been ineffective at the time of the Black Death, because by 1367 no Jews lived in Kronberg and the synagogue was inhabited by Christians" (*„Der Schutz scheint jedoch zur Zeit des Schwarzen Todes unwirksam gewesen zu sein, denn 1367 lebten keine Juden mehr in Kronberg und die Synagoge war von Christen bewohnt“*). Alicke (2008, 2359) similarly reports that "[a]fter the plague pogrom of 1348–1349, which is said to have destroyed the Jewish community of Kronberg, only isolated references to Jewish life in the town exist" (*„Nach dem Pestpogrom von 1348/49, der auch die Kronberger Judengemeinde vernichtet haben soll, liegen nur vereinzelte Hinweise auf jüdisches Leben im Ort vor“*).

62–63. *Künzelsau-Kocher* (EXIST1349 1 -> NA; POG1349 0 -> NA)

Avneri (1968, 460) states that "Jews in Künzelsau were affected by the Rindfleisch persecution in 1298" (*„Juden wurden 1298 in Künzelsau von der Rindfleisch-Verfolgung betroffen“*). Alicke (2008, 2371) similarly notes that "Künzelsau was also among the places where they settled and formed a small community, which was partially destroyed by pogroms at the end of the thirteenth century" (*„Bereits im 13. Jahrhundert [...] Auch Künzelsau gehörte zu den Orten, wo sie sich ansässig gemacht und eine kleine Gemeinde gebildet hatten, die Ende des 13. Jahrhunderts durch Pogrome teilweise vernichtet*

wurde"). It is unclear to what extent the community survived by the time of the Black Death.

64–65. *Lambsheim* (EXIST1349 1 -> NA; POG1349 0 -> NA)

Avneri (1968, 464) reports that "[b]etween April 19 and 26, 1343, the Jews of Lambsheim were burned, probably as a result of a ritual murder accusation in the vicinity" (*„Zwischen dem 19. und 26. April 1343 wurden die Lambsheimer Juden verbrannt, wohl als Folge einer Ritualmordbeschuldigung in der Umgebung“*). He adds that "[o]ther reports are missing" (*„Andere Nachrichten fehlen“*). Alicke (2008, 2401) similarly notes that "Jews demonstrably settled in Lambsheim in the late Middle Ages; in 1343, Jews living here are said to have been burned because of an alleged ritual murder accusation" (*„Nachweislich siedelten sich schon im späten Mittelalter Juden in Lambsheim an; 1343 sollen hier lebende Juden wegen eines angeblichen Ritualmordbeschuldigung verbrannt worden sein“*). Alicke further states that "[i]n the following centuries, only isolated evidence of Jews appears in Lambsheim" (*„In den folgenden Jahrhunderten tauchen nur vereinzelt Belege von Juden in Lambsheim auf“*).

66–67. *Lichtenfels* (EXIST1349 1 -> NA; POG1349 0 -> NA)

Avneri (1968, 480) notes the first mention of Jewish presence in Lichtenfels in 1268, stating that "[t]he first news about Jews comes from the second half of the thirteenth century: in 1268 Count Hermann von Henneberg was indebted to Jews in Lichtenfels" (*„Die erste Nachricht über Juden stammt aus der zweiten Hälfte des 13. Jahrhunderts: 1268 war Graf Hermann von Henneberg bei Juden in Lichtenfels verschuldet“*). He also reports a persecution in 1298, where "[t]hirty years later they were hit by the persecution by Rindfleisch; the young teacher Lemlein b. Baruch was then burned" (*„Dreißig Jahre später traf sie die Verfolgung durch Rindfleisch; der junge Lehrer Lemlein b. Baruch wurde damals verbrannt“*). Crucially, Avneri then states that "[a]fter this date, all news about Jews in Lichtenfels is missing" (*„Nach diesem Datum fehlt jede Nachricht über Juden in Lichtenfels“*). Alicke (2008, 2516) corroborates the thirteenth-century presence, mentioning that "first Jewish settlement in Lichtenfels occurred during the thirteenth

century—first mentioned in 1268; however, it was probably only very few families” (*„Erste jüdische Niederlassung in Lichtenfels erfolgte im Laufe des 13. Jahrhunderts – erstmals 1268 erwähnt; allerdings dürfte es sich dabei nur um sehr wenige Familien gehandelt haben“*). Alicke then jumps to the early fifteenth century.

68. *Lohr* (EXIST1349 1 -> 0; POG1349 0)

Avneri (1968, 493) mentions that Jews in Lohr were affected by the Rindfleisch persecution in 1298, stating that “[f]urther news is missing” (*„Weitere Nachrichten fehlen“*). Alicke (2008, 2559) similarly notes that “[i]n all probability, a medieval Jewish community existed in Lohr, which was destroyed by the so-called ‘Rintfleisch-Pogrome’ of 1298” (*„Aller Wahrscheinlichkeit nach hat in Lohr eine mittelalterliche jüdische Gemeinde bestanden, die durch die sog. ‚Rintfleisch-Pogrome‘ von 1298 [...] vernichtet wurde“*).

69–70. *Malchin* (EXIST1349 1 -> NA; POG1349 0 -> NA)

Avneri (1968, 521) states that while Jewish moneylenders are mentioned in a city book during 1331–1332, “it is not said that these were residents of Malchin. Jews are only certainly traceable in Malchin from 1378” (*„es ist aber nicht gesagt, daß diese in Malchin ansässig waren. Mit Sicherheit sind Juden erst 1378 in Malchin nachweisbar“*). Alicke (2008, 2657) notes that “[i]n the decades before the plague pogroms of 1348–1349, individual Jews were already present in Malchin, Mecklenburg; afterward, documented references to Jewish residents only appear again towards the end of the seventeenth century” (*„In den Jahrzehnten vor den Pestpogromen von 1348/49 hielten sich bereits vereinzelt Juden im mecklenburgischen Malchin auf; danach tauchen erst wieder gegen Ende des 17. Jahrhunderts urkundliche Hinweise auf jüdische Bewohner auf“*).

71. *Mellrichstadt* (EXIST1349 1 -> 0; POG1349 0)

Avneri (1968, 534) notes Jewish presence in Mellrichstadt in the late thirteenth century, including a burning of Jews in 1283 and the Rindfleisch persecution in 1298. He states that “since then, all news about Jews in Mellrichstadt is missing” (*„seitdem fehlt jede Nachricht über Juden in Mellrichstadt“*). Alicke (2008, 2736) reports the same persecution and notes that “only at the beginning of the fifteenth century are there

again indications of Jewish life in Mellrichstadt" (*„Erst zu Beginn des 15. Jahrhunderts finden sich wieder Hinweise auf jüdisches Leben in Mellrichstadt“*).

72. Münzenberg-Wetterau (EXIST1349 1; POG1349 0 -> NA)

Avneri (1968, 566) notes that "perhaps the Jews of Münzenberg were also affected by the plague persecution" ([566] *„Vielleicht wurden auch die Juden von Münzenberg von der Pestverfolgung betroffen“*), although Alicke (2008, 2898) makes no mention of persecution during the Black Death.

73–74. Neuleiningen (EXIST1349 0 -> 1; POG1349 NA -> 1)

Avneri (1968, 476–477) explicitly states that "Jews are verifiable here in the first half of the fourteenth century" (*„Juden sind hier in der ersten Hälfte des 14. Jahrhunderts nachweisbar“*), and that "at the time of the Black Death, several Jewish families lived in the village" (*„Zur Zeit des Schwarzen Todes lebten mehrere jüdische Familien in dem Dorfe“*). Count Friedrich of Leiningen "was unable to protect the Jews in Leiningen itself from persecution" (*„Er vermochte jedoch nicht, die Juden in Leiningen selbst vor der Verfolgung zu behüten“*) Alicke (2008, 2971) corroborates this, noting that "already in the first decades of the fourteenth century, several Jewish families are said to have lived in Alt- or Neu-Leiningen" (*„Bereits in den ersten Jahrzehnten des 14. Jahrhunderts sollen mehrere jüdische Familien in Alt- bzw. Neu-Leiningen gewohnt haben“*). They "were expelled or killed during the persecutions of the plague years" (*„die während der Verfolgungen der Pestjahre vertrieben oder umgebracht worden sind“*).

75. Neuruppin (EXIST1349 1; POG1349 NA -> 0)

Avneri (1968, 580) states that "Jews lived at the beginning of the fourteenth century in Neuruppin in considerable numbers" (*„lebten Juden zu Anfang des 14. Jahrhunderts in Neuruppin in ziemlicher Menge“*) and mentions a synagogue in 1362. Alicke (2008, 2987) confirms that "[t]he existence of Jews in Neuruppin has been documented since the mid-thirteenth century" (*„Seit Mitte des 13. Jahrhunderts ist die Existenz von Juden in Neuruppin belegt“*), and notes the presence of a synagogue and mikveh in the late Middle Ages. Neither source reports any pogroms during the Black Death.

76–77. *Northeim* (EXIST1349 1 -> NA; POG1349 0 -> NA)

Avneri (1968, 597) states that “[i]t is questionable whether Jews lived here before the mid-fourteenth century” („*Es ist fraglich, ob Juden hier vor der Mitte des 14. Jahrhunderts gelebt haben*”). While a 1304 plan for a loan from Jews is mentioned, Avneri clarifies that “the Jews do not necessarily have to have been residents in Northeim” („*aber die Juden müssen nicht in Northeim ansässig gewesen sein*”). Alicke (2008, 3098) similarly notes that the existence of Jews is first mentioned in 1304, but “whether Jewish residents already lived permanently in Northeim at this time cannot be proven beyond doubt. [...] Confirmed knowledge that Jews lived in Northeim is only available from the mid-sixteenth century onwards” („*ob allerdings bereits zu diesem Zeitpunkt jüdische Bewohner in Northeim dauerhaft wohnten, lässt sich nicht zweifelsfrei nachweisen. [...] Gesicherte Kenntnisse darüber, dass Juden in Northeim gelebt haben, liegen aber erst ab Mitte des 16. Jahrhunderts vor*”).

78. *Oberglogau* (EXIST1349 1; POG1349 NA -> 1)

Avneri (1968, 615) mentions a report that “in 1349 the Jews are said to have been robbed there” („*1349 sollen dort die Juden beraubt worden sein*”), but immediately adds that “the news does not appear credible” („*Die Nachricht erscheint nicht glaubwürdig*”). Alicke (2008, 3133), however, states that “in 1348/49, pogroms probably also occurred here” („*1348/49 kam es wohl auch hier zu Pogromen*”).

79–80. *Oels* (EXIST1349 0 -> 1; POG1349 NA -> 0)

Alicke (2008, 3177) states that in Oels, “Jews demonstrably settled since the beginning of the fourteenth century” („*haben sich Juden nachweislich seit Anfang des 14. Jahrhunderts angesiedelt*”). He mentions no persecution during the Black Death. Only with “the ‘Capistrano persecution’ in Breslau (1453)” did “the Jews living in Oels also have to leave the region” („*Im Zusammenhang der ‚Capistrano-Verfolgung‘ in Breslau (1453) mussten auch die in Oels lebenden Juden die Region verlassen*”).

81. *Oldenburg* (EXIST1349 1; POG1349 0 -> 1)

Avneri (1968, 627) states that "Jews lived here in the first half of the fourteenth century" (*„Juden lebten hier in der ersten Hälfte des 14. Jahrhunderts“*), confirming Jewish presence, but adds that "[f]urther news is missing" (*„Weitere Nachrichten fehlen“*) regarding persecution. Alicke (2008, 3203) nevertheless provides more specific information, noting that "in the course of the plague pogroms in the middle of the fourteenth century, the Jewish families were probably expelled from here" (*„Im Zuge der Pestpogrome Mitte des 14. Jahrhunderts wurden die jüdischen Familien vermutlich von hier vertrieben“*).

82. *Pretzfeld* (EXIST1349 1; POG1349 NA -> 0)

Avneri (1968, 663–664) mentions Suezlein von Pretzfeld, who was listed as a Jewish citizen of Nuremberg in 1338 and "apparently died as a martyr between this date and 1349" (*„Anscheinend starb er zwischen diesem Datum und 1349 als Märtyrer“*). But this individual was a citizen of Nuremberg, implying his martyrdom occurred there, not in Pretzfeld. Alicke (2008, 3386) confirms early Jewish settlement in Pretzfeld, stating that "first documented evidence of Jewish settlements in Pretzfeld dates from the fourteenth and fifteenth centuries" (*„Erste urkundliche Belege über Ansiedlungen von Juden in Pretzfeld stammen aus dem 14. und 15. Jahrhundert“*), and notes that Jews "presumably lived in the village after 1300, having fled a pogrom from Nuremberg" (*„vermutlich lebten bereits nach 1300 Juden im Dorf, die vor einem Pogrom aus Nürnberg geflüchtet waren“*).

83. *Rathenow* (EXIST1349 1; POG1349 NA -> 0)

Avneri (1968, 676) notes that while Jews in Rathenow are first explicitly mentioned in 1371, "they had already been settled there before" (*„daß sie dort schon vorher ansässig gewesen waren“*). Alicke (2008, 3423) similarly states that "already in the fourteenth century a few Jews are said to have settled in the locality of Rathenow" (*„Bereits im 14. Jahrhundert sollen sich wenige Juden in der Ortschaft Rathenow angesiedelt haben“*). Neither mention persecution during the Black Death.

84–85. *Reichenbach* (EXIST1349 0 -> 1; POG1349 NA -> 0)

Alicke (2008, 3462–3463) states that the first Jews settled in Reichenbach at the end of the thirteenth century („Die ersten Juden siedelten sich Ende des 13. Jahrhunderts im an einer alten Handelsstraße gelegenen Reichenbach an“). He mentions that “[t]he few Jewish families were expelled in 1453 in connection with the activities of the monk Capistrano or the host desecration trial in Breslau” („Die wenigen jüdischen Familien wurden 1453 im Zusammenhang mit dem Auftreten des Mönches Capistrano bzw. des Hostienschändungsprozesses in Breslau aus Reichenbach vertrieben“), but makes no mention of persecution during the Black Death.

86–87. *Rotenburg an der Fulda* (EXIST1349 1 -> NA; POG1349 1 -> NA)

Avneri (1968, 706) states that “at the time of the Black Death, the Jews of Rotenburg were affected by the general persecution” („Zur Zeit des Schwarzen Todes wurden die Rotenburger Juden von der allgemeinen Verfolgung betroffen“), and mentions “Sara of Rotenburg and her son, who found refuge in Erfurt in 1357, apparently belonged to the survivors” („Sara von Rotenburg und ihr Sohn, die 1357 in Erfurt Aufnahme fanden, gehörten offenbar zu den Überlebenden“), implying both Jewish presence and persecution during the Black Death. Alicke (2008, 3568), however, notes that while “from the beginning of the town’s founding in the thirteenth century, some Jewish families are said to have lived permanently in Rotenburg,” Jewish life “can only be proven from the beginning of the fifteenth century” („Von Anbeginn der Ortsgründung im 13. Jahrhundert sollen einige jüdische Familien dauerhaft in Rotenburg gelebt haben. Belegen lässt sich jüdisches Leben in Rotenburg allerdings erst ab Anfang des 15. Jahrhunderts“).

88–89. *Rüthen* (EXIST1349 1 -> NA; POG1349 0 -> NA)

Avneri (1968, 725) mentions a “Jewish bishop Samuel of Rüthen” who moved to Cologne in 1279, but does not explicitly state the existence of a Jewish community in Rüthen itself in the mid-fourteenth century. Alicke (2008, 3603) states that “already around 1270 some are said to have lived here” („bereits um 1270 sollen vermutlich einige hier gelebt haben“) but also notes that “since the mid-fifteenth century, Jews lived—

documented—in the locality of Rütthen” (*„Seit Mitte des 15. Jahrhunderts wohnten Juden – urkundlich nachweisbar – in der Ortschaft Rütthen“*).

90. *Saalfeld* (EXIST1349 1; POG1349 NA -> 1)

Avneri (1968, 725) notes Jewish presence in Saalfeld at the beginning of the fourteenth century, including a synagogue. He reports that “at the time of the Black Death, the Jews are said to have been expelled from Saalfeld” (*„Zur Zeit des Schwarzen Todes sollen die Juden aus Saalfeld vertrieben worden sein“*), and that the synagogue was subsequently sold in 1364. Alicke (2008, 3606) confirms this, stating that “[i]n the course of the plague pogroms of 1348–1349, they were expelled from here” (*„Im Zuge der Pestpogrome von 1348/1349 wurden sie von hier vertrieben“*).

91. *Salzwedel* (EXIST1349 1; POG1349 NA -> 1)

Avneri (1968, 731) notes that Jews were present from the beginning of the fourteenth century, although “[b]etween April 1349 and February 1407, there is no longer any mention of Jews in Salzwedel, and it can be assumed that the persecutions at the time of the Black Death were the reason for this” (*„Zwischen April 1349 und Februar 1407 ist von Juden in Salzwedel nicht mehr die Rede, und es ist anzunehmen, daß die Verfolgungen zur Zeit des Schwarzen Todes der Grund dafür waren“*). Alicke (2008, 3639–3640) corroborates this. “Although the Jews—even during the plague years—had been guaranteed safety by the city council, Salzwedel Jews soon became victims of persecution: they were partly expelled, partly killed” (*„Zwar war den Juden – auch in den Pestjahren – seitens des Stadtrats Sicherheit garantiert worden, doch wurden Salzwedeler Juden auch bald Opfer von Verfolgung: Sie wurden teils verjagt, teils umgebracht“*).

92. *Schwabach* (EXIST1349 1; POG1349 NA -> 0)

Avneri (1968, 749) mentions a Jew from Schwabach in 1338 but provides no information regarding persecutions during the Black Death. Alicke (2008, 3728) states that the roots of the Jewish community in Schwabach lie in the late Middle Ages, with the first mention of a Jew in 1337. Alicke also notes that “in 1384 a pogrom is said to

have occurred here" („1384 soll es hier zu einem Pogrom gekommen sein"). There is no mention of persecution during the Black Death.

93–94. *Sternberg* (EXIST1349 0 -> 1; POG1349 NA -> 0)

Alicke (2008, 3947) describes how "the persecution of Jews in Mecklenburg, which had already reached a first peak around 1325–1330, culminated again in 1492, when Jews were found guilty of 'host desecration' and subsequently burned at the stake outside the gates of the small town of Sternberg" („Die Verfolgung der Juden in Mecklenburg, die bereits um 1325/30 einen ersten Höhepunkt erreicht hatte, kulminierte nochmals 1492, als Juden des ‚Hostienfrevels‘ schuldig gesprochen und daraufhin vor den Toren des kleinen Städtchens Sternberg auf dem Scheiterhaufen verbrannt wurden"). But there is no mention of any persecution during the Black Death.

95. *Stettin* (EXIST1349 1; POG1349 NA -> 1)

Avneri (1968, 795) states that "nothing is verifiable about persecutions at the time of the Black Death" („Verfolgungen zur Zeit des Schwarzen Todes sind nicht nachweisbar"). Alicke (2008, 3949) nevertheless states that "[d]uring the plague period 1348–1349, the Jewish population was expelled" („In der Pestzeit 1348/49 wurde die jüdische Bevölkerungsgruppe vertrieben").

96. *Stralsund* (EXIST1349 1; POG1349 NA -> 1)

Avneri (1968, 798) states that in 1350, "the Jews were probably expelled from the city or killed" („1350 wurden die Juden wahrscheinlich aus der Stadt verbannt oder umgebracht"). He describes the Lübeck council's call for Duke Otto of Brunswick-Lüneburg "to also exterminate the Jews in his land," which referenced negotiations on the matter with the authorities in Stralsund („die Juden auch in seinem Lande auszurotten, und hierbei auf die in dieser Angelegenheit von den Behörden Rostocks, Wismars und Stralsunds gepflogenen Verhandlungen hinwies"). Alicke (2008, 3974) does not discuss the fourteenth century.

97. *Trebnitz* (EXIST1349 1; POG1349 NA -> 0)

Avneri (1968, 824) confirms Jewish presence in Trebnitz before 1349, noting that "the residency of a Jew in Trebnitz is first mentioned in 1346" (*„1346 wird erstmals die Ansässigkeit eines Juden in Trebnitz erwähnt“*), and that "other reports are missing" (*„Andere Nachrichten fehlen“*). Alicke (2008, 4109–4110) similarly states that "Trebnitz was one of three cities in the Duchy of Oels that housed Jews within its walls in the Middle Ages" (*„Trebnitz gehörte zu den drei Städten im Herzogtum Oels, die im Mittelalter Juden in ihren Mauern beherbergten“*). He also mentions that "the appearance of the fanatical Franciscan monk Johann von Capistrano sealed the end of the Jewish community there" (*„das Auftreten des fanatischen Franziskaner-Mönchs Johann von Capistrano das Ende der dortigen Judenschaft“*). There is no record of persecution during the Black Death.

98. Tübingen (EXIST1349 1; POG1349 0 -> 1)

Avneri (1968, 835) notes that there is no mention of persecutions during the Black Death (*„In den Tübinger Quellen verlautet nichts von dem Vorfall, und ebensowenig wird von Verfolgungen oder nachheriger Neuaufnahme berichtet“*). Alicke (2008, 4141), by contrast, states that during the plague years, Jews "were probably expelled from the city" (*„in den Pestjahren wurden sie vermutlich aus der Stadt vertrieben“*).

99. Ulrichstein-Vogelsberg (EXIST1349 1; POG1349 NA -> 0)

Avneri (1968, 846) states that it is "unknown whether Jews then settled in Ulrichstein" (*„Ob sich daraufhin Juden in Ulrichstein niedergelassen haben, ist unbekannt“*). Alicke (2008, 4173), however, believes that "presumably a few Jewish families already lived in the small town of Ulrichstein in the fourteenth century" (*„Vermutlich haben bereits im 14. Jahrhundert wenige jüdische Familien im kleinen Orte Ulrichstein gelebt“*), mentioning a privilege granted in 1347. There is no report of persecution during the Black Death.

100. Unna (EXIST1349 1; POG1349 NA -> 1)

Avneri (1968, 848) documents Jewish presence in Unna from 1304, with protection letters issued in 1336 and 1347, and mentions money lending activities in 1348, confirming Jewish settlement during the Black Death period. Alicke (2008, 4181) similarly

notes the earliest traces of Jewish settlement from the late thirteenth century and confirmed evidence from the mid-fourteenth century, including the 1336 protection letter. Regarding the Black Death, Alicke states that "in the plague years of the mid-fourteenth century, Jews are also likely to have been killed in Unna—as in nearby Minden and Hamm" (*„In den Pestjahren Mitte des 14. Jahrhunderts dürften auch in Unna—wie im nahen Minden und Hamm - Juden getötet worden sein“*).

101. *Waibstadt* (EXIST1349 1; POG1349 0 -> 1)

Avneri (1968, 859) notes the presence of Jews in Waibstadt in the first half of the fourteenth century, based on a 1337 agreement, but provides no information regarding persecutions during the Black Death. Alicke (2008, 4255), however, states that during the plague pogroms of 1348–1349, "the Jewish families living in Waibstadt were expelled and thus the medieval Jewish community was destroyed" (*„Während der Pestpogrome 1348/49 wurden die in Waibstadt lebenden jüdischen Familien vertrieben und damit die mittelalterliche Judengemeinde zerstört“*).

102–103. *Warendorf* (EXIST1349 0 -> 1; POG1349 NA -> 1)

Alicke (2008, 4309) states that "Jews must have lived in Warendorf even before the plague pogrom of 1348–1349. After that, for about 200 years, there was virtually no Jewish life in the Münster diocese" (*„nach dem vorliegenden Text müssen demnach bereits vor dem Pestpogrom von 1348/49 Juden in Warendorf gelebt haben. Danach war etwa 200 Jahre lang so gut wie kein jüdisches Leben im Stift Münster zu verzeichnen“*).

104–105. *Wetter* (EXIST1349 0 -> 1; POG1349 NA -> 0)

Alicke (2008, 4396) states that "first indications that Jews lived in Wetter date from the first half of the fourteenth century" (*„Erste Hinweise darauf, dass Juden in Wetter gelebt haben, stammen aus der ersten Hälfte des 14. Jahrhunderts“*). There is no mention of persecution during the Black Death.

106. *Wiesbaden* (EXIST1349 1; POG1349 NA -> 0)

Avneri (1968, 904) mentions a "Josiban from Wiesbaden" who was resident in Altweilnau in 1348 (*„Ein Josiban von Wiesbaden war 1348 in Altweilnau ansässig“*), while Alicke (2008, 4427) notes that "a first indication that Jews lived in Wiesbaden dates from 1330; subsequently, only very few families were always resident here" (*„Ein erster Hinweis darauf, dass Juden in Wiesbaden gelebt haben, stammt aus dem Jahre 1330; in der Folgezeit waren hier stets nur sehr wenige Familien ansässig“*). Neither source reports any persecution during the Black Death.

107–108. *Wildeshausen* (EXIST1349 0 -> 1; POG1349 0 -> 1)

For EXIST1349, Avneri (1968, 905) states that "The only news about Jews in Wildeshausen is from the time of the Black Death. On June 21, 1350, the council and community expelled the Jews from the city" (*„Die einzige Nachricht über Juden in Wildeshausen ist aus der Zeit des Schwarzen Todes. Am 21. Juni 1350 vertrieben Rat und Gemeinde die Juden aus der Stadt“*). Alicke (2008, 4440) similarly notes that "Jews resided in Wildeshausen—near Oldenburg—until their expulsion in the course of the plague pogroms 1348/50" (*„Bis zu ihrer Vertreibung im Zuge der Pestpogrome 1348/49 haben sich Juden in Wildeshausen – bei Oldenburg – aufgehalten“*).

109. *Wittenberg-Elbe* (EXIST1349 1; POG1349 NA -> 0)

Avneri (1968, 915) mentions that "Duke Rudolf I expelled Jews from Wittenberg and the country" in 1304 (*„1304 vertrieb Herzog Rudolf I. die Juden aus der Stadt Wittenberg und dem Lande“*), and that they were later granted residence rights again. He also describes the "Judensau" relief on the parish church as reflecting "the anti-Jewish sentiment widespread in this period and in this area" (*„die in dieser Periode und in dieser Gegend verbreitete judenfeindliche Gesinnung“*). Alicke (2008, 4472) states that a Jewish quarter existed in the late Middle Ages and that Jews "were already expelled for the first time at the beginning of the fourteenth century" (*„Sie waren bereits Anfang des 14. Jahrhunderts erstmals vertrieben worden“*), with a final expulsion in 1440. There is no mention of persecution during the Black Death.

110. *Wunstorf* (EXIST1349 1; POG1349 NA -> 0)

Avneri (1968, 927) notes that Jews must have settled in Wunstorf by the end of the thirteenth century, with their presence confirmed by tax records and rights in 1300 and 1315, although "further reports are missing" (*„Weitere Nachrichten fehlen“*). Similarly, Alicke (2008, 4525) confirms that "settlements of Jews in Wunstorf are first documented from the beginning of the fourteenth century" (*„Erstmals sind Ansiedlungen von Juden in Wunstorf bereits aus dem beginnenden 14. Jahrhundert urkundlich nachweisbar“*). Neither source reports any persecution during the Black Death.

111. *Zeitz* (EXIST1349 1; POG1349 NA -> 0)

Avneri (1968, 938) notes that "the earliest news about Zeitz Jews dates only from the fourteenth century," noting taxes levied on them in 1329 and 1350 (*„Die früheste Nachricht über Zeitzer Juden stammt erst aus dem 14. Jahrhundert“*). Alicke (2008, 4557) similarly states that Jews "are first mentioned in documents in the fourteenth century" (*„erstmalig werden sie im 14. Jahrhundert urkundlich erwähnt“*). No persecution during the Black Death is reported.

112. *Zülpich* (EXIST1349 1; POG1349 NA -> 1)

Avneri (1968, 944) states that "[o]ur last news is from the year 1336; thereafter, probably at the time of the Black Death, the community was affected by a persecution" (*„Unsere letzte Nachricht ist vom Jahre 1336; danach, wohl zur Zeit des Schwarzen Todes, wurde die Gemeinde von einer Verfolgung betroffen“*). Alicke (2008, 4582) further confirms this, noting that "[a]fter their expulsion or murder in the course of the plague pogroms" (*„Nach ihrer Vertreibung bzw. Ermordung im Zuge der Pestpogrome“*), only a few Jewish families returned temporarily.

113. *Zwickau* (EXIST1349 1; POG1349 NA -> 0)

Avneri (1968, 950) confirms Jewish presence in Zwickau in the first half of the fourteenth century, noting that Markgraf Friedrich promised in 1308 to protect Jews and Christians and that a "Jewish street" (*„Judengasse“*) was mentioned in 1330. Similarly, Alicke (2008, 4600) states that "Jews were settled in Zwickau since the first half of the

fourteenth century" („In Zwickau waren Juden seit der ersten Hälfte des 14. Jahrhunderts ansässig“). There is no report of persecution during the Black Death.

The coding of pogroms in the 1920s up to Hitler becoming Chancellor on January 30, 1933 is even more problematic. The presence of Jews in a town in the 1920s (EXIST20s) is implicitly 1 in all towns because Voigtländer and Voth's (2012, 1357) dataset is supposed to consist of "all the municipalities with twentieth-century data on Jewish population and anti-Semitic outcome variables." They then claim to code pogroms in the 1920s up to the Nazis taking power, which is taken to mean when Hitler became Chancellor on January 30, 1933 (POG20s). To code this variable as 1, Voigtländer and Voth (2012, Online Appendix, 1) describe reading Alicke (2008), who "focuses on 'positive' information, and mentions when an event actually occurred." When they find such information, they set POG20s to 1, and "to zero otherwise. We define a pogrom as a violent outrage against the Jewish population, involving physical violence against and/or the killings of people. Therefore, political agitation through *Brandreden* (incendiary speeches), attacks on Jewish shows, or the desecration of cemeteries are not coded as pogroms." It is clear, then, that their POG20s variable is supposed to depend on physical violence against persons, and it is on this basis that their dataset must be corrected:

114. *Altenburg* (EXIST20s 1; POG20s 1 -> 0)

Alicke (2008, 70) documents that "[a]s early as the end of the 1920s, an anti-Jewish hate campaign began in Altenburg, carried out by NSDAP members; Jewish families were frightened with insults, threats, and graffiti" („Bereits Ende der 1920er-Jahre setzte in Altenburg eine antijüdische Hetzkampagne ein, die von NSDAP-Angehörigen getragen wurde; mit Beleidigungen, Bedrohungen und Schmierereien wurden die jüdischen Familien verängstigt“). There is, however, no mention of physical violence.

115. *Bad Bergzabern* (EXIST20s 1; POG20s 1 -> NA)

Alicke (2008, 201) notes that at the end of the 1920s, the Jews of Bergzabern "were confronted with the first antisemitic attacks. The attacks were led particularly by

young men of the strong South Palatinate NSDAP, who agitated with slogans like 'We don't need a Jewish republic' and 'Jews out of the country'" („Mit ersten antisemitischen Attacken waren die Juden Bergzaberns Ende der 1920er-Jahre konfrontiert. Die Angriffe wurden besonders von jungen Männern der starken südpfälzischen NSDAP geführt, die mit Parolen wie ‚Wir brauchen keine Judenrepublik‘ und ‚Juden hinaus aus dem Land‘ agitierte“). It is unclear whether the "antisemitic attacks" („antisemitischen Attacken") involved physical violence or only political agitation using the slogans mentioned.

116. *Bad Hersfeld* (EXIST20s 1; POG20s 1 -> 0)

Alicke (2008, 228) states that in the mid-1920s, anti-Jewish incidents occurred, leading to "synagogue desecrators" (*Synagogenschänder*) being punished and an incident in a café where a Jewish doctor and his companions were "provoked" (*proviziert*) and later "rudely jostled" (*angerempelt*) outside. Jostling does not, however, seem to cross the threshold for physical violence.

117. *Berlin* (EXIST20s 1; POG20s NA -> 0)

Alicke (2008, 424–444) does not mention any physical violence against Jews from 1920 to January 30, 1933.

118. *Braunschweig* (EXIST20s 1; POG20s 1 -> 0)

Alicke (2008, 632) notes that "already in the 1920s, antisemitism became noticeable in Braunschweig, because in 1928–1929 the synagogue was desecrated several times" („Bereits in den 1920er Jahren wurde in Braunschweig der Antisemitismus spürbar, denn 1928/29 wurde die Synagoge einige Male geschändet"). Beyond property damage, however, there is no mention of physical violence against Jews before January 30, 1933.

119. *Buchen-Odenwald* (EXIST20s 1; POG20s 1 -> 0)

Alicke (2008, 705) reports that in August 1931, the synagogue was the target of an attack („Im August 1931 war die Synagoge erstmals Ziel eines Anschlages"). But other than property damage, there is no mention of physical violence against Jews before January 30, 1933.

120–121. *Burgau* (EXIST20s 1 -> 0; POG20s NA -> 0)

Alicke's (2008, 732) account ends in the nineteenth century and gives no indication that there were Jews present in the 1920s.

122. *Dormagen* (EXIST20s 1; POG20s NA -> 0)

Alicke (2008, 953) notes increasing "economic and social discrimination" (*„wirtschaftlichen und gesellschaftlichen Diskriminierung“*) in the 1920s, but no physical violence is mentioned.

123. *Duisburg* (EXIST20s 1; POG20s 1 -> 0)

"During the 1920s," Alicke (2008, 998) reports, "there were isolated antisemitic incidents in Duisburg, which became increasingly worse over the years. As early as the summer of 1930, antisemitic excesses occurred in Duisburg; harassment of Jewish children in schools and on the streets also increased. The group of Eastern Jewish residents in particular became the target of antisemitic propaganda. SA and SS members had already resorted to open violence against Duisburg Jews by the end of February 1933" (*„Während der 1920er-Jahre gab es in Duisburg vereinzelte antisemitische Vorfälle, die im Laufe der Jahre immer schlimmer wurden; so kam es schon im Sommer 1930 in Duisburg zu antisemitischen Exzessen; auch Belästigungen von jüdischen Kindern in den Schulen und auf den Straßen nahmen jetzt zu. Besonders die Gruppe der ostjüdischen Bewohner wurde zur Zielscheibe antisemitischer Propaganda. SA- und SS-Angehörige waren bereits ab Ende Februar 1933 zur offenen Gewalt gegenüber Duisburger Juden übergegangen“*). This suggests that there had been no physical violence against Jews before January 30, 1933.

124. *Erfurt* (EXIST20s 1; POG20s 1 -> 0)

Alicke (2008, 1137) notes that during and after the First World War, antisemitism became more noticeable in Erfurt, stating that in 1924 "the Erfurt synagogue was defaced with Nazi slogans for the first time" (*„1924 wurde die Erfurter Synagoge erstmals mit NS-Parolen beschmiert“*). No physical violence is mentioned before January 30, 1933.

125. *Gau-Odernheim* (EXIST20s 1; POG20s 1 -> 0)

Alicke (2008, 1393) documents the "first violent attacks on Jewish families" in Gau-Odernheim in the summer of 1933 („*Im Sommer 1933 kam es hier zu ersten gewalttätigen Übergriffen auf jüdische Familien*“).

126. *Lauingen-Donau* (EXIST20s 1 -> 0; POG20s 0)

Alicke's (2008, 2447–2448) account ends in the sixteenth century, after which there appears to have been no permanent Jewish presence in the town.

127–128. *Neuleiningen* (EXIST20s 1 -> 0; POG20s NA -> 0)

Alicke (2008, 2971) indicates that the Jewish community in Neuleiningen dissolved in 1902, "when no Minyan could be formed anymore" („*Als dann kein Minjan mehr zustandekam, löste sich die Gemeinde auf und das Gebäude wurde 1902 an die Kommune veräußert*“).

129. *Öhringen* (EXIST20s 1; POG20s 1 -> 0)

Alicke (2008, 3199) notes that in the 1920s, the "first nationalistic-antisemitic discord had already occurred in the 1920s—arson, poisoning of domestic animals, and a proposed ban on ritual slaughter were expressions of a spreading anti-Jewish sentiment" („*Erste nationalistisch-antisemitische Misstöne hatte es bereits in den 1920er-Jahren gegeben – eine Brandstiftung, Vergiftung von Haustieren und ein angestrebtes Schächtverbot waren Ausdruck einer sich ausbreitenden antijüdischen Stimmung*“). But there is no mention of physical violence before January 30, 1933.

130. *Perleberg* (EXIST20s 1; POG20s NA -> 0)

Alicke (2008, 3297) notes that "only a few Jews lived in the city" when the Nazis came to power („*Zu Beginn der NS-Zeit lebten nur noch vereinzelt Juden in der Stadt*“), but he reports no violence against them before January 30, 1933.

131. *Rastatt* (EXIST20s 1; POG20s NA -> 0)

Alicke (2008, 3417–3421) provides no reports of physical violence against Jews before January 30, 1933.

132. *Saalfeld* (EXIST20s 1; POG20s NA -> 0)

Alicke (2008, 3605–3608) does not report any violence against Jews before January 30, 1933.

133. *Wittenberg-Elbe* (EXIST20s 1; POG20s NA -> 0)

Alicke (2008, 4472) notes that already at the beginning of the 1920s, "antisemitic graffiti appeared on house walls in Wittenberg; in 1925, the 'incidents' for which the NSDAP local group was responsible accumulated" („Bereits Anfang der 1920er Jahre kam es in Wittenberg zu antisemitischen Schmierereien an Hauswänden; 1925 häuften sich die ‚Vorfälle,‘ die die NSDAP-Ortsgruppe zu verantworten hatte"). Yet there is no indication that those incidents included physical violence.

Finally, the coding of the presence of Jewish places of worship and their destruction in the 1930s also has problems. There is a conceptual error because they first ask whether Alicke (2008) indicates the existence of a synagogue or prayer room in 1933 and then whether a synagogue or prayer room was damaged or destroyed during the *Kristallnacht* pogrom on November 9–10, 1938. Why they chose different years for these paired variables is never specified, but it has perverse results, with some towns being coded as having a place of worship that was not attacked, even though the building had already been closed and sold. Here, then, a more coherent definition is used. The variable SYN30s is coded as 1 if Alicke presents evidence that a synagogue or prayer room existed and it seems likely that it remained in use up to *Kristallnacht*. Voigtländer and Voth's (2012, Online Appendix, 2) definition for SYNATTACK is then used, coding it as 1 when a synagogue or prayer room is "destroyed or damaged":

134–135. *Altenburg* (SYN30s 0 -> 1; SYNATTACK 0 -> 1)

Alicke (2008, 70) documents that the Jewish community in Altenburg "at the end of the 1920s [...] established their prayer room in a rented back room in Pauritzer Gasse" („gegen Ende der 1920er Jahre [...] richteten in einem angemieteten Raum eines Hinterhauses in der Pauritzer Gasse ihren Betsaal ein"). Furthermore, Alicke details the events of *Kristallnacht*, noting that "the interior of the prayer room in Pauritzer

Straße was also smashed by SA members, the ritual objects torn out and desecrated” (*„Auch die Inneneinrichtung des Betsaales in der Pauritzer Straße wurde von SA-Angehörigen zertrümmert, die Ritualgegenstände herausgerissen und entweiht“*).

136. *Arnstein* (SYN30s 1 -> 0; SYNATTACK 0)

Alicke (2008, 150) documents that in 1938 the Jewish community was declared dissolved and the synagogue building was sold (*„1938 wurde die jüdische Gemeinde für aufgelöst erklärt, das Synagogenegebäude verkauft“*).

137–138. *Bad Königshofen i Grabfeld* (SYN30s 0 -> 1; SYNATTACK 0 -> 1)

Alicke (2008, 243, 245) documents the inauguration of a new synagogue in Bad Königshofen in July 1904, stating: “the Jewish community inaugurated its new synagogue in the neo-Gothic style on Bamberger Straße” (*Ende Juli 1904 weihte die jüdische Gemeinde [...] ihre neue, im neogotischen Stil errichtete Synagoge in der Bamberger Straße ein*). “During the November pogrom, an SA commando from outside ordered the destruction of the synagogue’s interior: Jewish men were ordered to destroy the furniture. The ritual objects were then thrown outside, while the building itself remained undamaged. According to other sources, however, the synagogue building was set on fire” (*Während des Novemberpogroms veranlasste ein auswärtiges SA-Rollkommando die Zerstörung der Inneneinrichtung der Synagoge: Jüdischen Männern war befohlen worden, das Mobiliar zu zerstören. Anschließend warf man die Ritualien nach draußen, das Gebäude selbst blieb unzerstört. Nach anderen Angaben soll das Synagogenegebäude allerdings in Brand gesetzt worden sein“*).

139. *Bad Orb* (SYN30s 1 -> 0; SYNATTACK 0)

Alicke (2008, 280) reports that the synagogue building on Solplatz was sold to a non-Jewish family before Kristallnacht (*„noch vor der ‚Kristallnacht‘ an eine nichtjüdische Familie verkauft wurde“*).

140. *Bad Windsheim* (SYN30s 1; SYNATTACK 0 -> 1)

A newspaper report from November 10, 1938, cited by Alicke (2008, 307), states that "[i]n the synagogue [...] fire had broken out" (*„In der Synagoge [...] war Feuer ausgebrochen“*). The synagogue building was subsequently sold on the same day and "partially demolished in spring 1939 'due to total dilapidation'" (*„im Frühjahr 1939 ‚wegen totaler Baufälligkeit‘ teilweise abgebrochen“*). Furthermore, a memorial plaque commemorates the "destroyed house of worship" (*„zerstörtes Gotteshaus“*), explicitly stating that the synagogue "was set on fire" (*„in Brand gesetzt“*).

141–142. *Bendorf-Rhein* (SYN30s 0 -> 1; SYNATTACK 0 -> 1)

Alicke (2008, 398) writes that "[d]uring the November pogrom, the Bendorf synagogue was devastated; the furnishings were either stolen or burned on the sports field" (*„Während des Novemberpogroms wurde die Bendorfer Synagoge verwüstet; die Einrichtungsgegenstände wurden entweder gestohlen oder auf dem Sportplatz verbrannt“*).

143. *Bödighheim* (SYN30s 1; SYNATTACK 0 -> 1)

Alicke (2008, 567) documents that the synagogue built in 1818 was "demolished by an individual during the 'Reichskristallnacht'" (*„Die 1818 erbaute Synagoge wurde während der ‚Reichskristallnacht‘ von einer Einzelperson demoliert“*).

144–145. *Cham* (SYN30s 0 -> 1; SYNATTACK 0 -> 1)

Alicke (2008, 800) describes how "an attempt had been made to set the prayer room on fire" during the November pogrom of 1938 (*„allerdings war der Versuch unternommen worden, den Betsaal in Brand zu setzen“*).

146–147. *Coburg* (SYN30s 0 -> 1; SYNATTACK 0 -> 1)

Alicke (2008, 813) documents that during the November 1938 pogrom, "the apartments and businesses of the Coburg Jews were also demolished, as was their prayer room in the private residence of Preacher Hirsch" (*„Auch Wohnungen und Geschäfte der Coburger Juden wurden demoliert, ebenfalls ihre Betstube in der Privatwohnung des Predigers Hirsch“*).

148. *Genthin* (SYN30s 1 -> 0; SYNATTACK 0)

Alicke (2008, 1432) reports that while a new synagogue was built in Genthin in the late 1920s, "already in 1936, the synagogue building, used for only a few years, was abandoned and sold; after renovations, the new owner then used it as a residential house" (*„doch bereits im Jahre 1936 wurde das nur wenige Jahre genutzte Synagogengebäude aufgegeben und verkauft; nach Umbauten nutzte es der neue Besitzer dann als Wohnhaus“*).

149–150. *Grossostheim* (SYN30s 0 -> 1; SYNATTACK 0 -> 1)

Alicke (2008, 1602) states that in November 1938, "significant acts of violence against Jewish properties and the prayer room located in a private building" occurred (*„In Großostheim kam es in den Abendstunden des 10. November 1938 zu erheblichen Gewaltakten gegen jüdische Anwesen und den in einem privaten Gebäude gelegenen Betraum“*).

151–152. *Grünsfeld* (SYN30s 0 -> 1; SYNATTACK 0 -> 1)

Alicke (2008, 1617) states that during the November pogrom, the "prayer room was plundered" (*„Beträum durch [...] geplündert“*).

153. *Harburg-Wörnitz* (SYN30s 1; SYNATTACK 0 -> 1)

Alicke (2008, 1757) reports that while the synagogue building was spared from arson during the November pogrom, the empty building was plundered by neighbors (*„Von einer Brandlegung blieb das Synagogengebäude während des Novemberpogroms verschont, doch wurde das leerstehende Gebäude von Nachbarn geplündert“*).

154–155. *Horb-Neckar* (SYN30s 0 -> 1; SYNATTACK 0 -> 1)

Alicke (2008, 1972) describes a memorial plaque on the building where the prayer room was located, stating that it "was devastated after the pogrom night of November 9–10, 1938" (*„Er wurde nach der Pogromnacht 9./10. November 1938 verwüstet“*).

156–157. *Ingolstadt* (SYN30s 0 -> 1; SYNATTACK 0 -> 1)

Alicke (2008, 2059–2060) details the attack on this synagogue during the November pogrom of 1938. SA men destroyed the inventory of the prayer room and ritual objects, either on site or by setting them on fire in the street (*„Während des Novemberpogroms 1938 zerstörten SA-Leuten das Inventar des Betsaales mitsamt den Ritualien entweder an*

Ort und Stelle oder steckten es auf offener Straße in Brand”). The synagogue building itself became “unusable for further use” shortly after the crowd moved in front of it (*„die kurze Zeit darauf für den weiteren Gebrauch unbenütztbar war*”). The furnishings and books were used to fuel a large pyre in the middle of the street (*„Die Einrichtungsgegenstände und Bücher [...] nährten einen großen Scheiterhaufen, der in der Mitte der Theresienstraße aufflammte*”).

158. *Kamen* (SYN30s 1; SYNATTACK 0 -> NA)

Alicke (2008, 2131–2132) states that “whether the former synagogue building was also destroyed cannot be clearly determined” during the November 1938 pogrom (*„Ob auch das ehemalige Synagogengebäude zerstört wurde, lässt sich nicht eindeutig klären*”), even if a memorial plaque erected at the site in 1978 explicitly states: “Here stood the house of worship of the Kamen synagogue community, destroyed on November 9, 1938” (*„Hier stand das am 9. November 1938 zerstörte Gotteshaus der Synagogengemeinde Kamen*”).

159. *Neuruppin* (SYN30s 1 -> 0; SYNATTACK 0)

Alicke (2008, 2988) documents that the synagogue in Neuruppin, which had been in use since the 1860s, “was given up again at the end of the 1920s, as apparently due to the decline in the Jewish population, the holding of services was no longer possible” (*„diese wurde Ende der 1920er-Jahre wieder aufgegeben, da offenbar aufgrund des Rückgangs der jüdischen Einwohnerzahl die Abhaltung des Gottesdienstes nicht mehr möglich war*”).

160. *Pappenheim-Altmühl* (SYN30s 1 -> 0; SYNATTACK 0)

According to Alicke (2008, 3276), “[t]he last Jewish family left in the early summer of 1936” (*„Die letzte jüdische Familie verließ im Frühsommer 1936*”).

161–162. *Perleberg* (SYN30s 0 -> NA; SYNATTACK 0 -> NA)

Alicke (2008, 3296–3297) describes a meeting room being established in the nineteenth century, but it is unclear whether it functioned as a prayer room or still existed in the 1930s.

163–164. *Rastatt* (SYN30s 0 -> 1; SYNATTACK 0 -> 1)

Alicke (2008, 3420) states that during the November 1938 pogrom, "the synagogue on Leopoldsring was plundered, burned down, and later blown up" (*„die Synagoge am Leopoldsring ausgeplündert, niedergebrannt und später gesprengt“*).

165–166. *Rothenburg ob der Tauber* (SYN30s 1 -> 0; SYNATTACK 1 -> 0)

"On October 22, 1938," Alicke (2008, 3577) writes, "SA men in civilian clothes led the [Jewish] residents to the synagogue, where they were told they had to leave the town immediately. Five days later, Rothenburg declared itself 'free of Jews'" (*„Am 22. Oktober 1938 waren auf Anweisung des NSDAP-Kreisleiters Stenacker SA-Leute in Zivil und hatten die Bewohner in die Synagoge geführt, wo ihnen mitgeteilt wurde, dass sie umgehend die Stadt zu verlassen hätte. Fünf Tage später feierte Rothenburg ein ‚Freudenfest‘ anlässlich der ‚Befreiung von den Juden‘“*).

167–168. *Stade* (SYN30s 1 -> NA; SYNATTACK 0 -> NA)

Alicke (2008, 3895) notes that "a room for religious services was rented permanently" in the mid-nineteenth century, but "services were held only very irregularly" (*„Mitte des 19. Jahrhunderts war ein Raum für Gottesdienste dauerhaft angemietet worden [...] Allerdings fanden Gottesdienste nur sehr unregelmäßig statt“*). It is unclear whether the prayer room still existed in the 1930s.

169. *Walldürn-Odenwald* (SYN30s 1 -> 0; SYNATTACK 0)

Alicke (2008, 4273) documents that after the Nazi takeover in 1933, the prayer room was "given up and the house sold" (*„wurde der Betsaal aufgegeben und das Haus verkauft“*). Furthermore, the Jewish community "finally dissolved completely in 1937" (*„1937 löste sich die jüdische Gemeinde schließlich vollständig auf“*).

After all these corrections are made, the results look considerably different. In the replication of Voigtländer and Voth's (2012, 1365, Table 6) main OLS and Poisson regressions shown in Table B.1, the results appear impressive: the coefficient for Black Death pogroms is consistently positive and meets the arbitrary $p < 0.05$ threshold of statistical significance that is generally required for publication in five out of six

regressions. In the corrected version in Table B.2, on the other hand, only column 5 now meets that level. And it is notable that the data for the dependent variable in column 5—letters to the antisemitic magazine *Der Stürmer*—was collected by Voigtländer and Voth themselves from an archive in Germany, which it was not possible for the author of this paper to check.

It should be remembered, however, that the main argument of this paper is that even these corrected results cannot be trusted. As has been seen in this appendix, coding Avneri and Aliche's medieval data requires too many subjective calls, making it impossible to arrive at a "true" dataset. The coding errors are not the fundamental problem with Voigtländer and Voth's (2012) study. Rather, the problem is that they attempted to code it at all. Unfortunately, the "unambiguous information" that their research design requires does not exist, given the limitations of their sources. The version presented in Table B.2 might be considered more reliable, but no trustworthy results of such a research design can, in the end, exist.

	(1)	(2)	(3)	(4)	(5)	(6)
	Pogrom in the 1920s	NSDAP vote share in 1928 (%)	DVFP vote share in 1924 (%)	Deportations, 1933–1945	Letters to <i>Der Stürmer</i> , 1935–1938	Synagogue attacked, Nov. 1938
	(OLS)	(OLS)	(OLS)	(Poisson)	(Poisson)	(OLS)
Pogrom, 1348–1350	0.06070** (0.02258)	0.01419* (0.00567)	0.01469 (0.01095)	0.14184* (0.07049)	0.36948** (0.14338)	0.12392* (0.05220)
Log population	0.03895* (0.01520)	-0.00254 (0.00219)	-0.00123 (0.00418)	0.24143** (0.08397)	0.84781*** (0.04188)	0.04982*** (0.01174)
% Jewish	0.01351 (0.01141)	0.00174 (0.00190)	0.00701 (0.00442)	0.07433* (0.03476)	0.21753*** (0.03826)	0.02616* (0.01322)
% Protestant	0.00034 (0.00042)	0.00029** (0.00009)	0.00082*** (0.00018)	-0.00391*** (0.00116)	-0.00532* (0.00228)	0.00035 (0.00060)
Log Jewish population	–	–	–	0.81477*** (0.08201)	–	–
Observations	320	325	325	278	325	278
R ²	0.06630	0.05477	0.09148	–	–	–
Adjusted R ²	0.05444	0.04296	0.08012	–	–	0.09764

Table B.1
Voigtländer and Voth's Main Results, Panel A (Original)

Notes: Log population varies by regression. The 1925 census is used for columns 1 and 2; the 1919 census for column 3; the 1933 census for columns 4 to 6. Missing values are approximated. The Protestant population share is for 1925 throughout, while the Jewish population share is for 1925 in columns 1 to 3 and for 1933 in columns 4 to 6. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, . $p < 0.10$. Replicated from Voigtländer and Voth (2012, 1365, Table 6), using data from http://www.anderson.ucla.edu/faculty_pages/nico.v/Research/Persecution_Perpetuated_QJE_Replicate.zip.

	(1)	(2)	(3)	(4)	(5)	(6)
	Pogrom in the 1920s	NSDAP vote share in 1928 (%)	DVFP vote share in 1924 (%)	Deportations, 1933–1945	Letters to <i>Der Stürmer</i> , 1935–1938	Synagogue attacked, Nov. 1938
	(OLS)	(OLS)	(OLS)	(Poisson)	(Poisson)	(OLS)
Pogrom, 1348–1350	0.01081 (0.02166)	0.01094. (0.00614)	0.00823 (0.01179)	0.12289 (0.09768)	0.36807* (0.15412)	0.09206. (0.04817)
Log population	0.02887* (0.01189)	-0.00338 (0.00235)	-0.00250 (0.00437)	0.20756* (0.08381)	0.86658*** (0.02690)	0.02788** (0.00892)
% Jewish	0.00161 (0.00757)	0.00150 (0.00187)	0.00572 (0.00433)	0.06136 (0.03782)	0.22050*** (0.03787)	0.00483 (0.01308)
% Protestant	-0.00001 (0.00033)	0.00034*** (0.00009)	0.00091*** (0.00019)	-0.00427*** (0.00109)	-0.00625** (0.00231)	0.00007 (0.00047)
Log Jewish population	–	–	–	0.83794*** (0.07754)	–	–
Observations	320	322	322	276	298	263
R ²	0.04475	0.05615	0.09988	–	–	0.06250
Adjusted R ²	0.03262	0.04424	0.08853	–	–	0.04796

Table B.2
Voigtländer and Voth's Main Results, Panel A (Corrected)

Notes: Log population varies by regression. The 1925 census is used for columns 1 and 2; the 1919 census for column 3; the 1933 census for columns 4 to 6. Missing values are approximated. The Protestant population share is for 1925 throughout, while the Jewish population share is for 1925 in columns 1 to 3 and for 1933 in columns 4 to 6. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, . $p < 0.10$. Replicated from Voigtländer and Voth (2012, 1365, Table 6), using data from http://www.anderson.ucla.edu/faculty_pages/nico.v/Research/Persecution_Perpetuated_QJE_Replicate.zip, with corrections made as described here.

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