Commemorative city-texts: Spatio-temporal patterns in street names in Leipzig, East Germany and Poznań, Poland

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ABSTRACT

This article contributes to research on commemorative naming strategies by presenting a comparative longitudinal study on changes in the urban toponymy of Leipzig (Germany) and Poznań (Poland) over a period of 102 years. Our analysis combines memory studies, linguistic landscape (LL) research and critical toponymy with GIS visualization techniques to explore (turnovers in) naming practices across time and space. The key difference between the two localities lies in the commemorative pantheon of referents —events, people, and places inscribed as traces of a hegemonic national past—that are replaced when commemorative priorities change. Other patterns are common to both study sites. Notably, in both Poznań and Leipzig, peaks of renaming occur at the threshold of regime change, after which commemorative renaming activity subsides. We report on our findings and propose methodological guidelines for analyzing street renaming from a longitudinal, transnational, and interdisciplinary perspective. (Collective memory, critical toponymy, memoryscape, linguistic landscapes, encoding of ideology, comparative analysis of Eastern Europe, longitudinal analysis, commemoration, GIS visualization)*

INTRODUCTION

The recent renaming of streets, squares, and bridges as a result of geopolitical events exemplifies the ways in which seemingly mundane landmarks in urban landscapes can be recruited to inscribe or contest hegemonic power via memorialization in the *city-text*[1] (The African Courier 2017; O'Sullivan 2018; Okrior, Burke, & Salih 2020; Kwai, Libell, & Anderson 2022 inter alia). Not surprisingly, the most vivid turnover in the commemorative landscape can be found at the cusp of

changes in state ideology, when a political regime gives way to a different regime. Case studies in post-communist societies such as East Berlin, Bucharest, Budapest, Moscow, Kyiv, Pristina, and Warsaw illustrate the dramatic renaming processes that in the early 1990s swept the toponymic landscapes of these cities as a result of power shifts and ideological-political reorientation (Azaryahu 1996; Foote, Toth, & Arvey 1999; Light 2004; Karolczak 2005; E. Palonen 2008; Sloboda 2009; Pavlenko 2010; Azaryahu 2012:389; Borowiak 2012; Majewski 2012; Demaj & Vandenbroucke 2016).[2] Whereas this research has accrued a wealth of knowledge on the ways in which commemorative (re)naming can be recruited as a powerful mechanism to overwrite collective memory during times of political transformations, the majority of linguistic landscape and critical toponymy[3] research is historically and geographically narrow, limited to city centres and focusing on denominational choices in one particular regime or on the basis of a short period of time (Pavlenko & Mullen 2015; but see Tufi 2019). Consequently, while we know a lot about the commemorative priorities that predominate at various stages of renaming, we lack longitudinal and comparative research that would put individual semiotic ruptures into a broader analytical context.

The analysis reported here contributes a longitudinal and comparative perspective on the ongoing revision of the 'ideological robe of the city', which Zieliński (1994) defines as an inscription of values, historical events, and figures representing the political position through monuments, commemorative plaques, names of schools, streets, and squares. We are treading new ground by exploring street name changes throughout a century characterized by consecutive waves of political transformation in Leipzig (East Germany) and Poznań (Poland). Street names illustrate the contested hegemonic nature of the city-text, inscribing official self-presentational narratives which support politically motivated memorialisation. As Tufi (2019:244) argues, and we agree, such *lieux de mémoire* (see Nora 1989; consider also Harjes' 2005:149 'memoryscape') mark the nexus between identity and memory, contributing to 'the linking with and legitimization of national discourses'. While commemorative naming is thus a fundamentally ideological practice of memory making, tapping into hegemonic notions of a common glorified past, commemorative renaming can be recruited as a powerful mechanism to overwrite memory during times of political transformations (Assmann 2016:22; see also Mitchell 2003). Post-colonial and post-communist struggles over public naming in particular show the vigor with which such narrative enactment in the city-text is linked to changes in nationhood, identity formation, and (counter)memorialization (Duminy 2018; Jenjekwa & Barnes 2018; Fabiszak & Rubdy 2021 inter alia). The mere fact that different versions of history are encoded in street naming choices —and that these hegemonic discourses are replaced across time—illustrates the subversive potential of streets to naturalise beliefs about the world, language, and society in public space, to be implanted into public memory. Azaryahu (1986:581–87) has gone so far as to argue that streets are 'propaganda carriers [since] … major political changes are reflected in the renaming of streets'. In

Moszberger, Rieger, & Daul's (2002:5) words, street names 'are carriers of the collective memory of our city, of its past and its destiny'.[4]

Our research draws on a combination of approaches—including collective memory studies, LL research, critical toponymy, and geographical information systems. The overall objective of this study is to inform our knowledge of the complex ways in which 'landscape and identity, social order and power' (Rubdy 2015:2) have been linked via street naming choices across the past hundred years in two Eastern European contexts. In particular we focus on two key research questions:

i. What were the longitudinal patterns of marking political ideology in street names in Leipzig and Poznań between 1916–2018?
ii. In which ways does the spatial distribution of street name changes in Leipzig and Poznań between 1916–2018 contribute to ongoing memory making via street names?

We first discuss our study areas and interdisciplinary methodology before describing our data and comparative results.

LL, COMMEMORATION, AND REGIME CHANGES IN LEIPZIG AND POZNAŃ

The openly ideological aspect of public commemoration and with it the explicit encoding of a hegemonic narrative on the linguistic landscape means that toponymic research sits at the crossroads of memory studies, LL research, and critical toponymy. Surprisingly, maybe, LL analysis has only recently started to connect with memory studies (Ben-Rafael & Shohamy 2016; Blackwood & Macalister 2019). Such research considers the signs in the LL as 'site[s] of memory' (Winter 1998:102) as signposts of a hegemonic narration based on collective memory. The most vibrant strand of research at this interface explores commemorative priorities and memorialization strategies in the city-text (Wee 2016; Wee & Goh 2016; Vuolteenaho & Puzey 2018) to understand the complex ways in which commemoration in public space as a 'practice of representation … enacts and gives social substance to the discourse[s] of collective memory' (Sherman 1994:186).

Yet, the majority of LL research into street renaming remains geographically and diachronically narrow, focusing on the city-text of a particular locale (city, area, or nation state) during narrowly defined time slices or sometimes covering a very short timespan. To date, very little of this work has explicitly engaged with the longitudinal historical perspective which would allow for the analysis of the signs in the LL over time (Pavlenko & Mullen 2015; but see Pavlenko 2010; Spalding 2013; Rusu 2021).[5] Even less work engages in a comparative perspective that explores the ongoing contestation of textual choices in the LL across geographies (but see Tufi & Blackwood 2015).

What this effectively means is that we lack comparative research that puts emphasis on 'which visions of history are entitled to be inscribed' in public naming

by situating such an analysis into a broader international context (Azaryahu 2012:388). For example, we do not know to what extent the commemorative priorities of the Nazi regime as they are expressed via semiotic encoding in the city-text differ across national contexts. What is needed, in short, is research on politically-ideologically motivated (re)naming practices that examines the 'wave[s] of renamings that swept' through time and space (Azaryahu 1986:590; see Pavlenko & Mullen 2015).

Our article explores commemorative (re)naming in two study sites, Leipzig in East Germany and Poznań in Poland, over a period of 102 years. Frequent changes in state ideology make nations in Central and Eastern Europe a paradigm case for the study of transformations in representational politics. Having established their first democracies after WWI, these states were occupied and/or governed by Nazi Germany until the end of WWII. Post-1945, the USSR-aligned countries were ruled by communist/socialist regimes until the end of the cold war brought parliamentary democracy. The rapid turn-over of forms of government means that consecutive eras are characterized by antithetical state-sanctioned political ideologies and commemorative priorities (Assmann 2010; Vuolteenaho & Puzey 2018). The comparative analysis of naming practices in the streetscapes of Leipzig and Poznań through a century characterised by consecutive waves of political transformation allows us to explore naming practices as an instrument to insert various types of worldview and political ideology[6] into the city-text.

Our analysis begins during WWI and continues up until 2018. As the historical timeline of Eastern Germany and Poland in Figure 1 reveals, the key political thresholds for both Leipzig and Poznań fall roughly on the same years and thus lend themselves to direct comparison. Note in this respect two minor discrepancies in this otherwise parallel history: the establishment of the first democratic regime after WWI differs by one year, and the Nazi period has a slightly later starting point in Poland: while Hitler came to power in Germany in 1933, the invasion of Poland resulting in Nazi occupation took place six years later.

Another important difference between the two sites of investigation is the issue of official language. The ethnolinguistic identity of the population of Leipzig has been German since medieval times and the city has remained part of a nation state whose official language is German throughout the analysed period. Poznań, by contrast, underwent three changes in the language of administration: in 1920 from German to Polish, in 1939 from Polish to German, and in 1945 from German to Polish. As a result, throughout the century covered by our study, street name changes in Leipzig continue to be recruited to serve the ideological commemoration of heroes and values indexing consecutive ethnolinguistically German regimes while erasing old layers of commemoration.

In Poznań, apart from these politically indexical[7] changes, code shifts also resulted in large-scale changes in non-commemorative street names—for example, when German names were translated into Polish such that *Bahnhofstrasse* 'Railway Station Street' was changed to *ulica Dworcowa* 'Railway Station
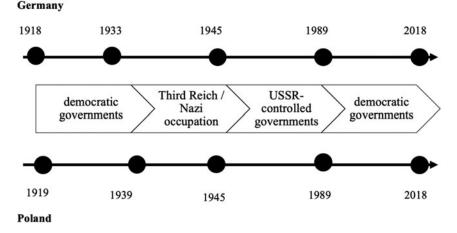
Germany

FIGURE 1. Division of the investigated period into political eras.

Street'. In such word-for-word translations, the semantic meaning of the street name was retained, but the linguistic code changed. Research on language policy has long argued that language change in public spaces is inherently ideological, even when the outcome (in terms of semantic content) may not necessarily be viewed as such. This is because code choice functions as the ethnolinguistic symbol par excellence, indexing the core values/worldview/political philosophy of a given nation. In our study we focus on COMMEMORATIVE street renaming, where commemoration concerns inscribing state sanctioned political ideology through a commemoration of historical personages, dates, and values. We revisit the issue of direct translations of street names in much more detail below.

DATA AND METHODS

We took great care to ensure comparability in terms of the geographical and temporal dimension and uniformity in data collection and analysis. The two study areas are equal in size: Leipzig has a population of 587,000 and 2,325 streets were included in the investigation.[8] Poznań is inhabited by 535,000 people and has 2,582 streets in 2018. We used the same data sources for tracing street renaming patterns, including street name lists we were provided with by the local authorities, historical and contemporary maps, address books, and newspaper announcements.

We used GIS-based[9] visualization to map street naming turnover across time and space. The starting point for our visualizations is the early 2019 version of Open-StreetMap (OSM).[10] We converted this information into a 'naming' spreadsheet, each row representing a street and each column containing the name allocated to this street every year from 1916 to 2018. This allowed us to calculate street name

changes for every street (by counting name changes by row) as well as for every year (by counting name changes by column). In addition, a 'coding' spreadsheet was created for characterising these street name changes by the type of (re) naming that occurred, as explained below. These changes were summarised by year and by era/period to generate graphs of change over time, as well as by street to produce the maps in QGIS.[11]

We now briefly explain our coding procedure. In order to answer the question which political era is most active in encoding its ideology in the city-text we need to quantitatively capture the preponderance of those changes that infuse or conversely reduce ideological semantics in the streetscape. To this aim, we coded every street renaming in two ways: whether the previous street name represented a state ideology or worldview and whether the subsequent new name was explicitly marking such ideology or not (see Fabiszak, Buchstaller, Brzezińska, Alvanides, Griese, & Schneider 2021). Table 1 illustrates our coding scheme. The street name before the change and the new name are contained in the columns to the left. The following columns mark whether these previous and the subsequent names were explicitly ideological (I) in nature or not (N). The final column marks whether the outcome of this process was a street name marking worldview/political ideology or not.

Example (1) in Table 1 demonstrates the most typical case of an ideological process of street name change, where one state ideology is replaced with another (II) resulting in an ideological outcome. Hindenburg, a Prussian general and President of the Weimar Republic deemed worthy of commemoration in 1930, is replaced in 1945 by Friedrich Ebert, the leader of the Social Democratic Party of Germany and the first President of the Weimar Republic. Example (2) is a case when a street name that was not overtly marking state ideology, *Nordstraße* 'North Street', is replaced with an ideologically loaded personal name (NI). Example (3) shows a case when a new street is named for the first time with a political ideological name (*Straße der Solidarität*) in 1982, likely commemorating the solidarity with other Eastern Block nations (XI). In all of these renaming processes, the outcomes are ideological in the sense that the (re)named streets index the new political state ideology.

Examples (4)–(6) result in outcomes that do not overtly encode or erase state ideology from the streetscape. Example (4) is a case where the name of the Prussian emperor Friedrich II (the Great) is expunged in 1920 by the Polish administration of Poznań and replaced with a non-ideological landmark name *ulica Pocztowa* 'Post Street' (IN). In example (5), the renaming of the German *Am Kinderspielplatz* 'At the Playground' to *ulica Wesoła* 'Cheerful Street' exemplifies an exchange between street names that do not refer to any political ideology. Finally, example (6) is a case of a naming of a new street with a non-ideological nature-related name: *ulica Ogórkowa* 'Cucumber Street' (XN). As we have pointed out in Fabiszak and colleagues (2021), we realize that the change of the linguistic code from German to Polish is in itself inherently ideological. Yet, our understanding of

TABLE 1. *The coding procedure of street name changes*
(I = overtly ideological, N = not overtly ideological, X = street does not exist).

	Street name before change	Street name after change	Previous name	New name	Outcome
(1)	Hindenburgstraße	Friedrich-Ebert-straße	I	I	ideological
(2)	Nordstraße'North Street'	Hindenburgstraße	N	I	ideological
(3)	Ø	Straße der Solidarität 'Street of Solidarity'	X	I	ideological
(4)	Friedrichstrasse	ulica Pocztowa'Post Street'	I	N	not overtly ideological
(5)	Am Kinderspielplatz'At the Playground'	ulica Wesoła'Cheerful Street'	N	N	not overtly ideological
(6)	Ø	ulica Ogórkowa'Cucumber Street'	X	N	not overtly ideological

Note: *Straße* is the German cognate for 'street'.

ideology in this study is much narrower and primarily concerns imprinting of political state ideologies such as nationalism, Nazism, communism, and democracy into the city-text.

Note that while these street name changes result in outcomes that do not overtly stand in for the political ideology or worldview of a new regime, it is indeed possible that these name choices may have been prompted by the desire to avoid debates about the signifiers and their underlying semantic load. Indeed, we agree with K. Palonen (2018) that every street-renaming decision is ideologically motivated (i.e. the choice to replace one name indexing a state ideology with another, the erasure of such an ideological name and its replacement with a name that does not overtly encode a political ideology, or even the choice to replace a non-ideological name with another non-ideological one to avoid debate and future re-namings). Yet, at the same time, such a blanket analysis does not allow us to hone in on the important differences in the OUTCOME OF THESE DECISIONS, namely whether these (re)naming processes do or do not infuse state ideological semantics into the city-text, exposing those walking and driving the streetscape to a more or less thick 'ideological robe of the city'. As the examples above illustrate, street (re) naming can be viewed as process during which various stakeholders infuse the existing city-text with the values and ideology they ascribe to, take out ideologically problematic semantics, or decide to keep street names ideologically neutral. Indeed, we would like to argue that establishing a typology of the outcomes of street name changes is useful because it allows us to explore such outcomes of commemorative street renaming comparatively across the two cities (and the respective national context in which they are situated).

For example, the German national epos, the *Nibelungen Saga*, was commemorated in Leipzig during the Weimar Republic (1919–1932), resulting in streets named after the heroes and heroines of this middle high German poem (*Kriemhildstraße, Siegfriedstraße*,[12] etc.). Such namings are inspired by a worldview that aims to commemorate nationalist German identity in the city-text, resulting in an expansion of the ideological robe of the city. The Nazi regime (1933/39–1944), continued this naming theme, also carrying it over into the occupied territories as part of a strategy of introducing Germanic names and Germanic mythology to the Poznań city-text. None of these streets has been renamed in Leipzig ever since, possibly because inscribing German identity via heroic but apolitical fictitious figures seems not to have been considered problematic by consecutive state ideologies in a German city. In Poznań, by contrast, the symbolism of memorialising the German national epos was called into question since the fall of the Nazi Reich in 1945, resulting in renaming, as was the case with *Brunhildweg*, a newly named street, to *ulica Santocka*, a toponymic name derived from *Santok,* a town towards the North-West of Poznań. Other streets saw the restoration of preoccupation names, as was the case with *Kriemhildstrasse* > *ulica Biała* 'White Street'. The example of the street names related to the *Nibelungen Saga* thus shows the value of our coding strategy for comparative research. The naming of streets named after well-known, canonical literary characters does not seem particularly ideologically loaded from an emic perspective, but when observed in another national context it is interpreted as indexical of a certain ethnocultural worldview and as such highly ideological. In this article, we therefore code street names that inscribe a particular sociocultural worldview as well as those indexing a political ideology as 'ideological'. Our approach, therefore, differs from K. Palonen's (2018:31) assumption that 'all naming of streets is politicizing, independently of the content of the names' by distinguishing between ideological vs. non-ideological outcomes of street renaming.

LONGITUDINAL PATTERNS OF STREET NAME CHANGES

The following sections explore changes to the ideological robe of the two cities across a century characterized by consecutive changes in political-ideological regimes and their respective commemorative priorities.

Similarities in renaming patterns

As a first step, we trace the occurrence of street (re)naming outcomes that do and do not overtly encode state ideological worldview, personages, or places comparatively on a year-by-year basis. Not surprising, as Figures 2 and 3 reveal, the waves of hegemonic state ideology have resulted in parallel patterns of change in the official city-text in Leipzig and Poznań.
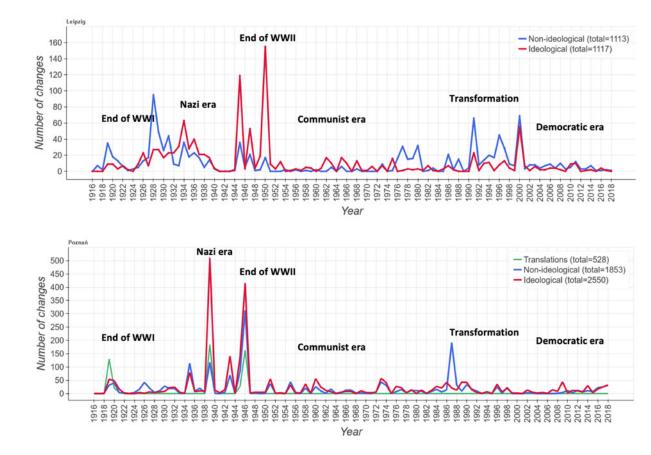
FIGURE 2. Ideological and non-ideological street renamings in Leipzig and Poznań, 1916–2018. While data gathering begins in 1916 to provide us with a list of street names in the pre-democratic era, the starting point for the democratic governments were 1918 in Leipzig and 1919 in Poznań (cf. Figure 1).

FIGURE 3. Street sign for *Capastrasse* in Leipzig (photo by Frauke Griese) and *Skwer Ireny Bobowskiej* (photo by Anna Weronika Brzezińska, 1/9/2021).

More specifically, the peaks of heightened renaming activity fall in the same years in both cities. Prominent turnover of street names in both Leipzig and Poznań can be detected for the end of WWI, the beginning of the Nazi period (1933–1944 in Germany and 1939–1944 in Poland), the onset of the communist regime (following 1945 after the end of WWII), as well as the end of the Cold War (the years around the transformation in 1989).

Across time, thus, consecutive incoming regimes tend to support hegemonic 'public memory [and] identity formation' (Azaryahu 2012:388; Vuolteenaho & Berg 2016; Berg & Kearns 2016; Tufi 2019) by inscribing and effectively canonising events, people, and places as traces of the national past. Note here that the most profound contrasts in political ideologies, namely the shift from democracy to Nazism in the 1930s and the end of WWII, when Nazism was replaced with communism, resulted in an influx of system-specific ideological street names. The two blue peaks in the second half of the 1970s and 1980s in Leipzig (top chart) and a blue peak in the second half of the 1980s in Poznań (bottom chart) illustrate a preference for non-ideological names towards the end of the communist era.

Note also that ideology-driven processes of street renaming are primarily situated at the starting point of radical transformations in the sociopolitical system. This finding supports Azaryahu (2012:385), who observes that renaming practices legitimizing the hegemonic sociopolitical order are more prevalent at the cusp of a new regime, rather than once the regime is well-established. We hypothesize that the decline in renaming fervour in the later stages of any respective era is due to the

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onset of inertia (see Buchstaller, Schneider, & Alvanides 2023 for arguments against renaming, which include cost, bureaucratic hassle, etc.). Overall, thus, the timeline of street (re)naming across the past 102 years in both cities illustrates the consecutive 'wave[s] of renamings that swept' through time and space in the Eastern European streetscapes (Azaryahu 1986:590). Similarly to many other countries and polities that have seen changes in state ideology, commemorative street renaming in Leipzig and Poznań closely follows and indeed indexes fluctuations in political ideology.

Differences in renaming patterns

While the parallelism in the timelines of commemorative street naming patterns in the two cities is striking, there are some notable differences. The first is the magnitude of change: while the highest level of change in any one year in Leipzig reaches just about 160 (in 1950, shortly after WWII), in Poznań it reaches 600 changes per year in 1939 and 1946. This is related to the process that we have illustrated above on the basis of the street names related to the *Nibelungen Saga*: regime change in Poznań went along with changes in ethnolinguistic identity and thus a shift in linguistic code. Consequently, when the administration in Poznań changed from Prussian to Polish in 1920, from Polish to Nazi German in 1939, and from Nazi German to (communist) Polish in 1945, even street names with weak ideological load, and hence those which would have been retained if the same national identity persisted, were changed.[13]

Also, many street names were simply translated word-for-word as illustrated in the examples in (7) from 1919, with the same bird being encoded in German and Polish in (7a) and the equivalent referent (a ring road and a synagogue) being translated from one to the other language in (7b,c).

(7) a. *Kiebitzstrasse* 'Lapwing Street' > *ulica Czajcza* 'Lapwing Street'
     b. *Am Tempel* 'By the Synagogue' > *ulica Bóżnicza* 'Synagogue Street'
     c. *Ringchaussee* 'Ring Road' > *Szosa Okrężna* 'Ring Road'

While we discuss this issue in more detail below, in Figure 2, word-for-word translations of non-commemorative names from the previous official language into the consecutive one are represented by a separate green line on the Poznań chart. Hence, while bearing in mind the caveat voiced above that renaming into a new language of power is fundamentally ideological, we also note that translations are different from renamings in that their semantic denotation is not recruited to support (shifts in) state ideology (for a similar treatment of translation from German to Romanian in Sibiu, see Rusu 2021). Consequently, translations do not add to the peaks in ideological street renaming.

Ongoing commemorative street namings

Commemorative renaming is perennially unfolding. Consider, for example, the recent naming (in 2014) of *Capastrasse*, memorializing both the celebrated war photographer as well as the end of World War II in Leipzig (Anders 2006:6, see Figure 3). As is the case in many cities worldwide, a separate plaque provides explanatory commentary ('Robert Capa: 1913–1954. Photographer and antifascist. His world-famous photograph 'the last man to die' was captured on 18.04.1945 in a building on Jahnallee 61'). Similarly in Poznań, in 2012 a square was named after Irena Bobowska, a Polish resistance fighter executed in 1942 in the Berlin-Plötzensee prison by the Nazis. This commemoration strengthens the inscription of Polish national ideology. But it also contributes to the increasing visibility of women in the city-text. In Poznań, as in Leipzig, a separate plaque was added to inform the public about the commemorated person. The flower garland and the candle light are probably there because the photo was taken on September 1st, a day commemorating the outbreak of WWII in Poland. Ongoing commemorative practices such as these testify to the continued public engagement with memorialisation and the role of street names in memory formation (see Kosatica 2021).

Note also, in line with an increasing pushback against the normalisation of white hegemonic masculinity (Oto-Peralías 2018; Bancilhon, Constantinides, Bogucka, Aiellol, & Quercia 2021; Gutiérrez-Mora & Oto-Peralías 2022), both cities have seen their fair share of discussion regarding the canon of commemoration in recent years. In Poznań in 2017, the city council passed a resolution[14] to only give women's names to streets in 2018 (with justified exceptions) in order to commemorate 100 years of women's suffrage in Poland. While the stated aim of this policy was to start levelling the number of commemorated men and women, the 2018 resolution resulted in twenty-six streets being named after women and nineteen after men. This means that, despite the top-down policy and declared will to increase the representation of women in the city-text, the number of justifiable exceptions was quite high. Altogether, when it comes to identifiable individuals commemorated in the Poznań streetscape, the gender bias favouring men is clearly visible: 86% of commemorative street names are devoted to men, only 12.4% to women, and 1.6% to married couples. To contest the gender imbalance in street names, an artistic initiative, 'Women's streets', was launched, in which the names of five prominent women connected with Poznań were embroidered on billboards in September 2018. While guerrilla renaming of street names after women occurs sporadically in Leipzig as it does elsewhere (Meier 2015; Boffey 2018), we are not aware of any top-down initiatives to rectify the gender imbalance in the streetscape of Leipzig.

THE SPATIAL DISTRIBUTION OF STREET NAME CHANGES IN THE FOUR POLITICAL ERAS

As the next step, we map the geographical distribution of changes in the Leipzig and Poznań streetscape during the consecutive waves of political-ideological reorientation that characterize recent Eastern European history.

The spatial distribution of renaming patterns in Leipzig

The four maps in Figure 4 visualize the (re)naming patterns that result in non-ideological (in blue) or ideological (in red) street names across the four historical eras in Leipzig. The grid-like patterns are housing estates developed during the respective regimes. As can be seen in the top left map, the short era covering the immediate aftermath of WWI and the Weimar Republic (sixteen years) is characterised by the highest density of toponymic change when averaged by year, with over thirty streets (re)named per year (N = 529 in total). Most of these (re)naming processes do not infuse new ideological semantics into the Leipzig city-text (note the high amount of blue in the top left map).

But while the Weimar Republic (as well as the post-1989 unified Germany illustrated in the bottom right panel) showed restraint in infusing the Leipzig landscape with ideology, the Nazi and the communist eras left a much more extensive ideological imprint on the streetscape. As a comparative glance at the four maps reveals, the USSR-controlled GDR government brought the most extensive ideological transformation in commemorative street (re)naming practices (bottom left panel). Overall 789 streets were (re)named between 1945 and 1988, many of which resulted in rewriting the 'ideological robe of the city' (Zieliński 1994).

Note in this respect that the maps in Figure 4 collapse whole political eras into one frame, regardless of the fact that longer ideological-political eras obviously have a disproportionate amount of time to impress their ideological viewpoint in the streetscape (with the extremes of the twelve-year Nazi regime as opposed to the thirty-four-year GDR government). Normalizing by the duration of regime provides a more differentiated result and we have added these calculations to the spatial mapping presented in Figure 4: the numbers in the brackets indicate average street name changes per year.

These figures show that the two historical eras described as democratic as per contemporary historical classification—the Weimar Republic in the post WWI period and the parliamentary democracy post-1989 transformation—tend to favour street (re)naming processes which do not result in the infusion of an ideology or worldview (with 20.2 and 12.6 non-ideological changes/year). The two more ideologically active periods, the Nazi and the GDR era, by contrast, prioritise (re)naming strategies resulting in politically aligned outcomes. The relatively short Nazi period especially comes to the fore as the period of most intense ideological outcomes (with 18.8 (re)namings that result in ideological street names per year).

Changes in street names during the Weimar Republic (1916–1932)

Changes in street names during the Nazi era (1933–1944)

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	N	average/year
Non-ideological	343	*(~20.2)*
Ideological	186	*(~10.9)*
Total (~average)	529	*(~31.1)*

	N	average/year
Non-ideological	125	*(~10.4)*
Ideological	226	*(~18.8)*
Total (~average)	351	*(~29.2)*

FIGURE 4. Spatio-temporal changes in street names in Leipzig 1916–2018.

Changes in street names (1989–2018)

	N	average/year
Non-ideological	379	(~12.6)
Ideological	182	(~6.1)
Total (~average)	561	(~18.7)

Changes in street names during the GDR (1945–1988)

	N	average/year
Non-ideological	266	(~6.0)
Ideological	523	(~11.9)
Total (~average)	789	(~17.9)

FIGURE 4. (Continued)

*The spatial distribution of renaming patterns in Pozna*ń

Figure 5 illustrates the consecutive waves of street renaming across the four political eras in the city of Poznań. Thicker lines indicate more than one change in one particular era.

The overall results for Poznań mirror the patterns described above for Leipzig: The democratic governments in the interwar period (years 1919–1939, top left) and post-1989 (bottom right) were relatively more restrained, both in terms of total changes to the streetscape as well as in terms of changes inscribing specific ideology (with 34.8 and 23 total changes per year; 15.3 and 13.9 changes resulting in ideological outcome per year). The Nazi and the communist administration, by contrast, show high rates of street name changes, altering the city-text to fit their commemorative needs (79.5 and 50.3 total changes per year; 62.0 and 26.9 changes resulting in ideological outcome per year). Also, as was the case for Leipzig during the Nazi and communist regimes, the big thoroughfares leading to other big cities (Berlin, Breslau/Wrocław, and Katowice) were frequent targets of renaming and often ideologically marked. But even more so than in Leipzig, the streets in the Poznań city centre, in particular the early twentieth-century Ring Road, continued to be an important focus for ideological re-inscription of the streetscape.

*The influence of change of official language on the Pozna*ń
street names

Crucially, as we pointed out above, when interpreting the Poznań maps we need to account for an added dimension: successive shifts in the official language of administration. Hence, apart from the change of political system from monarchy (until 1918), to democracy (1919–1938) to National Socialism (1939–1944) to communism (1945–1988) and back to democracy (since 1989), successive regimes in Poland continued to superimpose their worldview and language on the signs that constitute the city-text.

Hence, in Poznań, political as well as ethnolinguistic identity was performed via street name choices (see Tufi 2019). At the cusp of changes in regime, in 1919–1920, in 1939, and in 1945–1946, turnover in street names did not only pertain to the most ideologically marked political and military leaders. Rather, even apolitical luminaries such as writers, artists, and scientists were expulsed from the city-text, even those who in Leipzig were relatively resistant to change once they had been selected for commemoration and inscribed in the city-text (Goethe, Humboldt, Kant, Schiller). In Poznań, such names were replaced in the course of regime change to represent the respective German or Polish cultural imagery (encoded in the official national language). To explain this finding, we appeal to Halbwachs' (1925) concept of the social frame of reference of memory, which provides the criteria according to which values, persons, events, or places are deemed worthy of inscription and—qua commemoration—stand for the society and the
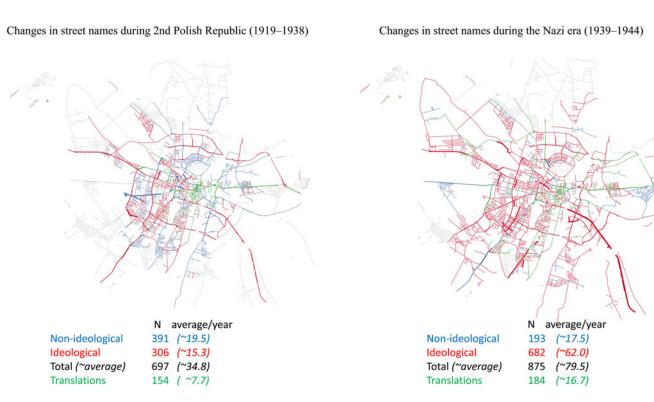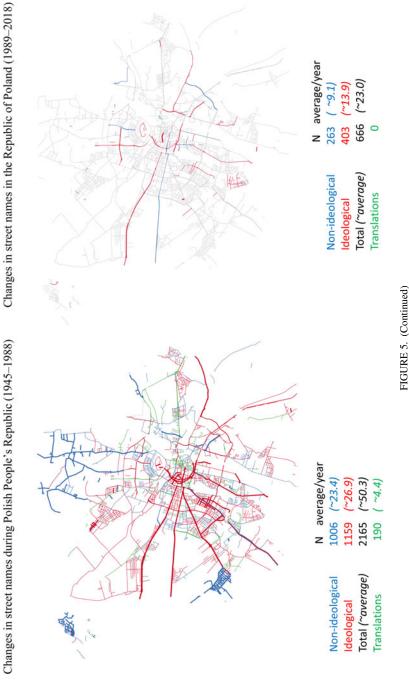
Changes in street names during 2nd Polish Republic (1919–1938)

Changes in street names during the Nazi era (1939–1944)

	N	average/year
Non-ideological	391	(~19.5)
Ideological	306	(~15.3)
Total (~average)	697	(~34.8)
Translations	154	(~7.7)

	N	average/year
Non-ideological	193	(~17.5)
Ideological	682	(~62.0)
Total (~average)	875	(~79.5)
Translations	184	(~16.7)

FIGURE 5. Spatio-temporal changes in Poznań 1916–2018. Streets marked in green are translations from German to Polish or vice-versa.

Changes in street names in the Republic of Poland (1989–2018)

Changes in street names during Polish People's Republic (1945–1988)

	N	average/year
Non-ideological	263	(~9.1)
Ideological	403	(~13.9)
Total (*average*)	666	(~23.0)
Translations	0	

	N	average/year
Non-ideological	1006	(~23.4)
Ideological	1159	(~26.9)
Total (*average*)	2165	(~50.3)
Translations	190	(~4.4)

FIGURE 5. (Continued)

ideals they represent (see also Tufi 2019). Not surprisingly, thus, even street names based on geographical names, a paragon of stability in many city contexts, were changed to reflect the boundaries of the respective new Polish national geographies (see also Vuolteenaho & Puzey 2018 for East Berlin).

Of course, as we pointed out above, an important strategy during changes in the language of administration is changing the linguistic code while retaining the semantics of the name, as in the aforementioned example when *Bahnhofstrasse* ('Railway Station Street' in German) changed into *ulica Dworcowa* ('Railway Station Street' in Polish) in 1919. But the dominant pattern during such shifts in ethnolinguistic identity seems to be to name streets after historical personages and geographical names representing the national imagery, which changes when the affiliation of the city with a particular nation state changes (cf. Handke 1998 on the increase of commemorative street names in Poland).

To explore the relationship between changes that index ethnolinguistic identity due to ruptures in frame of reference as opposed to word-for-word translations in Poznań, Table 2 compares the number of translations with the number of changes in the semantics of street names at the cusp of three consecutive political turnovers. In interpreting the results presented in Table 2 it is important to remember that the number of Poznań streets increased dramatically across the time interval, since new streets continued to be added to the city as it developed. Hence, whereas the raw figures suggest that the number of translated street names increased slightly over time, the percentages indicate that the proportion of street names that were translated by successive administrations decreased in the same period.

As Table 2 illustrates, even political turnovers that result in changes in ethnolinguistic identity do not completely overwrite the streetscape. Rather, there is always a core of street names that are retained (between 154 and 190, or at least 18%), even if the change in code requires their translation from one language into another. This is particularly the case with streets in the medieval city centre, many of which are

TABLE 2. *A comparison of the number of translations and the number of changes in the semantics of street names in Poznań.*

Years and languages	Regime change	Total N streets	Translations	Changes in semantics
1919–1921 German > Polish	Prussian province >2nd Polish Republic	348	154 (44.3%)	194 (55.7%)
1939 Polish > German	2nd Polish Republic> Nazi era	813	184 (22.6%)	629 (77.4%)
1945–1946 German > Polish	Nazi era > Polish People's Republic	1141	190 (16.7%)	951 (83.3%)

named after artisans who used to live and work there (*Töpfergasse* 'Potters' Alley' > *ulica Garncarska* 'Potters' Street'), or indeed streets leading to or being situated adjacent to churches (*Dominkanerstrasse* 'Dominican Street' > *ulica Dominikań-ska* 'Dominican Street') or other landmark buildings (*Fabrikstrasse* 'Factory Street' > *ulica Fabryczna* 'Factory Street'). These streets thus provide semantic stability to the city-text; they are descriptive and indicative of what can be found on a given street. Commemorative renaming, by contrast, which brings about semantic change, breaks this continuity and adds fluctuation to the streetscape. Rather than facilitating orientation in space, such names provide orientation in the ideology of the administration in power.

The cyclicity of street renaming

This section explores in more detail the impact of changes in the official language on the Polish streetscape. Figure 6 offers a side-by-side comparison of turnover in street names during the Nazi period in Leipzig and in Poznań.

In spite of the fact that the Nazi era in Poland is six years shorter than in Germany (starting in 1939 and 1933 respectively), at first glance, it seems that the Nazis have rewritten the streetscape of Poznań much more completely than that of Leipzig, both numerically (N = 351 in Leipzig vs. N = 875 in Poznań between 1939–1943) and in terms of its spatial coverage. Yet, such an interpretation does not do justice to the complexity of our data, since such geographical visualisation focuses on street renaming during one wave of change, without considering the cyclical history of street name choices. More specifically, what such maps cannot show is the tendency for incoming administrations to restore street names from previous regimes (and more specifically from a previous regime that was congruent in terms of ethnolinguistic identity and worldview). It is this complexity that we now turn to (see also Table 3 below).

As the city of Poznań developed in each era, new streets were added. Hence, at the beginning of our data collection, when the Polish administration took over Poznań after WWI (1919) from the Prussian (German-speaking) administration, the city contained 348 streets and discrete street names. All of these streets had German names. Existing street names could thus either be translated from German to Polish (pattern I), or changed (pattern II). As illustrated in Table 3 (see also Table 2 above), 44.3% of street names were translated and 55.7% underwent change in denotation.

For instance, after WWI German *Badegasse* 'Bath Street' was translated to *ulica Łazienna* 'Bath Street' (Pattern I), while *Bismarckstrasse* 'Bismarck's Street' was changed to *ulica Kantaka* (Polish nineteenth-century politician and activist), an instance of Pattern II.

At the next political turnover, in 1939, the Nazi administration occupying Poland had a number of options at their disposal (see Table 4 below). They could also translate Polish names into German (Pattern I). As a result, in 1939

FIGURE 6. Street (re)naming patterns during the Nazi era, Leipzig 1933–1944 on the left and Poznań 1939–1944 on the right.

TABLE 3. *The cyclicity of street renaming: Patterns of change.*

	1920–1921 Prussian >Polish	1939 Polish > Nazi
Pattern I: Translation	111 (43%)	175 (23%)
Pattern II: Semantic change	146 (57%)	502 (64%)
Pattern III: Recommemoration		103 (13%)

ulica Łazienna 'Bath Street' is translated again, this time from Polish into German and reverts to its original name *Badegasse* 'Bath Street' (Pattern I). An example of Pattern I followed by Pattern II is *ulica Bóżnicza* 'Synagogue Street', which was translated from German *Am Tempel* 'At the Synagogue' into Polish in 1919, but changed under Nazi administration to *Gleiwitzerstrasse*. In this way the Nazis achieve two ideological goals: (i) they erase the presence of the Jewish community from the streetscape, and (ii) commemorate the Gleiwitz incident, a false flag attack on the Gleiwitz radio station, which was staged by Nazi Germany and used as a casus belli justifying their invasion of Poland (Pattern II: semantic change). The third pattern of street renaming, recommemoration, occurred when the Prussian name of 1919 was reinstated in the city-text, as exemplified by the following chain of changes: 1919 *Goethestrasse* ('Goethe's Street', German poet) > 1920 *ulica Konopnickiej* ('Konopnicka's Street', Polish poet) >1939 *Goethestrasse*. As many as 13% of street names were recommemorated in 1939. Thus, if we allow for more in-depth analysis, we notice that what superficially looks like

TABLE 4. *Patterns of street renaming during the Nazi occupation of Poznań 1939–1944.*

1918	1921	1939
PRUSSIAN NAME	> TRANSLATED INTO POLISH	> TRANSLATED BACK INTO GERMAN (RESTORED)
Alter Markt 'Old Market Square'	> *Stary Rynek*	> *Alter Markt* 'Old Market Square'
PRUSSIAN NAME	> TRANSLATED INTO POLISH	> CHANGED INTO GERMAN CULTURAL REFERENCE
Am Tempel 'By the Synagogue'	> *ulica Bóżnicza* 'Synagogue Street'	> *Gleiwitzerstrasse* (from the city name *Gleiwitz*, see above)
PRUSSIAN NAME	> CHANGED INTO POLISH CULTURAL REFERENCE	> PRUSSIAN NAME RESTORED
Goethestrasse 'Goethe's Street' (German poet)	> *ulica Konopnickiej* 'Konopnicka's Street' (Polish poet)	> *Goethestrasse* 'Goethe's Street'

change (from Polish *Konopnicka* to German *Goethe*) may indeed be a restoration of the previous name (Pattern III). Indeed, Azaryahu (2018:59) points out that 'when regime change is construed in terms of restoration, commemoration may assume the form of recommemoration, namely, the reinstitution of names removed by the former regime, for renaming streets is about substituting one name for another'.

CONCLUSIONS

As Mitchell (2003:443) aptly points out, 'the capacity for … remembrances to be sustained [and introduced] is vastly dependent on the … power of the groups who produce and maintain them'. Street names are a prime example of a regime's hegemonic symbolic power to insert various types of worldview into public space. Following Tufi (2019:238), we thus consider street name signs as emplaced memory, as 'monuments both in an etymological sense … and as discursive devices positioned at the intersection of memory and identity' (see also Harjes 2005). Indeed, as our longitudinal investigation has illustrated, street names can be interpreted as both reflective and constitutive of transformations in ideology and worldview, a 'memoryscape' in Harjes' (2005:149) words.

Past research on commemorative street naming has tended to focus on theorizing political rationale for commemoration without considering the longitudinal ramifications of naming practices, at the expense of the historical interconnectedness of such changes (Azaryahu 2011). Also, to date, we lack analyses that compare the ways in which commemorative priorities of the same regime are enacted in street renaming practices in different locales. Our goal was to explore the turnover in memory formation in the public streetscape over time and thus to uncover the spatio-temporal patterns of such changes with an eye on the spread of the ideologically marked city-text. The analysis of patterns of ideological and non-ideological changes in street names in Leipzig and Poznań between 1916–2018 shows similar distribution of peaks of renaming activity over time, but at a different intensity of change. There are more renamings in Poznań, where the regime change also includes a change of nation-state affiliation and as such a complete ethnolinguistic turnover. But even when we disregard translations from German to Polish and from Polish to German of descriptive names (G. *Bahnhofstrasse* 'Railway Station Street' > Pl. *ulica Dworcowa* 'Railway Station Street'), the number of street renamings in the periods when ideological change (e.g. from Nazism to communism) overlaps with change in ethnolinguistic identity in Poznań (e.g. from German to Polish) is roughly three times higher than in Leipzig. The reason behind this is the mildly ideological national canon of poets, writers, scientists, and mythical heroes retained across regime changes within the same language-culture, but changed during turnovers that result in a shift in affiliation with a particular nation-state.

We were able to make this observation only because of the comparative perspective that we have adopted for analyzing street renamings in two different countries.

In doing so, we followed the approach common in many LL studies (Calvet 1990; Cenoz & Gorter 2006; Tufi & Blackwood 2015; Muth 2016; Siebetcheu 2016 inter alia), but rare in critical toponymy, which tends to focus on one location or several locations in one country. The comparative perspective has also allowed us to observe differences in the way the same regime (Nazism) treated the home ground vs. the occupied territory. The renamings in Poznań during this era were more extensive than in Leipzig, as Polish names were completely erased. This observation has parallels in colonial and post-colonial contexts, which underscores the difference between the symbolic appropriation of public space at home and in the dependent territories.

The longitudinal perspective of our study has also brought to the fore the fact that peaks of change are followed by periods of relatively little (re)naming activity as the revolutionary zeal for erasing old and instigating new heroes, symbols, and values wanes over time. Indeed, our quantitative analysis (see Figure 2) lends strong support to previous qualitative observations on this continuity in the city-text (Light & Young 2018; Fabiszak, Brzezińska, Dobkiewicz, & Dyrmo 2021). Yet, at the same time, different regimes contribute to a different degree to the influx of ideological names that can be observed throughout the whole century; commemorative naming is an ongoing process (see also Handke 1998; Rusu 2021).

Adding more diachronic depth to our study prevents superficial comparisons between the two locations, which in the Nazi era could have easily led to a misrepresentation of the prevailing renaming policy in Poznań. Analysing a whole century of changes, rather than only one wave of renamings thus fosters a systematic insight into cyclical re-commemoration patterns, which tend to be found when the new regime revendicates a previous regime, especially if they share a significant part of their worldview. This was the case in the Nazi era in Poznań, when some of the Prussian street names were recommemorated; in the communist era in Leipzig and Poznań, when some of the interwar street names were reconstituted; and in the post-communist era in Leipzig and Poznań when interwar street names were restored.

The GIS visualization techniques employed in our article facilitated the mapping of changes in their spatial dimension (Figures 4, 5, 6) and confirmed earlier observations (Light 2004; Azaryahu 2016:64; Light & Young 2018:189) made on smaller data sets that streets in the city centre and big thoroughfares undergo renaming more often than streets in the peripheral areas and small alleys. Unlike earlier studies, it also highlights the ideological nature of naming of new housing estates, particularly in Poznań, which both in the Nazi and the first decades of the communist eras were viewed as symbols of the regime's strength and efficiency.

A juxtaposition of diachronic and spatial analyses also points to the importance of considering the duration of each political era (Figures 4 and 5). Analysis of maps alone, which collapse periods of different length in a single 2D representation may lead to sweeping statements about the extent of ideological marking of the city-text in a given era. For example, in Figure 4 the communist era in Leipzig shows the

most extensive ideological marking of the urban toponymy. Yet, once divided by the number of years a given regime was in power, we see that it was indeed the Nazi period when ideological renaming was most intense (Figure 4).

Overall, the results of our study point to the importance of longitudinal studies in 'practice[s] of representation that enact … and give … social substance to … collective memory' (Sherman 1994:186), and to the benefits of integrating quantitative methods, including GIS visualizations, with qualitative case studies to illustrate longitudinal tendencies in the data.

NOTES

[1]We follow Rose-Redwood, Alderman, & Azaryahu's (2018:2–3) use of the term *city-text* when referring to the recent turn in cultural geography towards researching political and commemorative aspects of street renaming.

[2]Research on postcolonial territories reports similar findings; see Meital 2007; Kettaf 2017; Bigon & Njoh 2018; Dube 2018; Bigon & Ben Arrous 2019; Ghosh 2020; Rubdy 2021.

[3]Whereas linguistic landscape research developed out of sociolinguistics and language policy it focuses on the use of, usually written, languages in the public space; critical toponymy, which developed out of social geography and urban studies, explores the role of naming practice in exerting control over space.

[4]'Les noms de rues … sont porteurs de la mémoire collective de notre ville, de son passé et de son destin'

[5]There is an increasing number of work on various aspects of historicity in the city-text (Blommaert 2005, 2013; Blommaert & Huang 2010; Train 2016; Bendl 2019), but none of them look specifically at the streetscape. The present article aims to fill this gap.

[6]We understand worldview as a system of values and images of the past shared by a given community and transferred through school education, museums, and institutionalized forms of culture. In the context of street naming, different worldviews are expressed via reference to artists, writers, scientists, fictitious literary characters, and so on that stand for and index the values of a particular group. Such cultural references tend to be relatively stable across time in the city-text. Political ideology, by contrast, is a system of beliefs as well as a political programme that is often expressed in party manifestoes. In the city-text, political ideology is expressed through reference to political leaders, activists, and military commanders as well as values that stand for the political platform they represent. Notably, such references are more prone to change across time than writers and scientists. In our coding procedure discussed in the data and methods section we consider both street names referring to worldview and to political ideologies as ideological.

[7]The indexicality of a street name can differ from its semantics. To take an example relevant to the context of street (re)naming, a street named after a Jewish person retains its semantics (intention) throughout the period we investigate, as it refers to a particular historical person and their life. But its indexicality changes relative to the political regime. Whereas during the Weimar Republic, the name may index a person of local or national importance such as an artist or a benefactor, during Nazi

times the same name indexes an undesirable person, resulting in their erasure. Since the post-1989 democracy, finally, the reinstatement of Jewish street names indexes a memorializing approach to history, which includes reparations and the redressing of wrongs (on the indexicality in sociolinguistic constructions, see Eckert 2017).

[8]Like most historical cities, the two study areas experienced waves of expansion over the centuries as various surrounding municipalities were annexed. Consequently, the number of streets increased throughout the one hundred years of our investigation. Hence, for Leipzig, the study area for this project includes all expansions up to and including 1995.

[9]GIS stands for a geographic information system, which integrates location data with descriptive information and visualises it on a map.

[10]Open Street Map is a free geographical database, an open access collection of maps; see https://www.openstreetmap.org.

[11]QGIS or Quantum GIS is a free and open-source application for analyzing and visualizing geospatial data. The common identifier linking each street in the geographical database to the naming and the coding spreadsheet was the 2019 OSM street name, which remained 'frozen' throughout the project.

[12]Siegfried, Kriemhild, & Brunhild are characters in the *Nibelungen Saga*.

[13]As we explain in more detail in Fabiszak et al. (2021), the encoded concepts are often gradable, so that a street name commemorating a historical figure may be situated closer towards the ideological end of the scale, for example, in the case of political and military leaders (Hitler, Stalin), which change alongside changes of state ideology in both Leipzig and Poznań. Others are less ideological, for example, writers (Schiller, Molier), composers (Beethoven, Chopin), or artistic work from the national canon, whose names will be preserved unless the city changes the nation-state affiliation.

[14]Position no. LVII/1057/VII/17/2017 of the Poznań City Council taken November 21, 2017, on the naming of streets, plazas, and garden squares to commemorate remarkable women; see https://bip.poznan.pl/bip/uchwaly/lvii-1057-vii-17-2017-z-dnia-2017-11-21,72095/.

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