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**Changes in the Commemorative Streetscape of Leipzig over the past 100 years.**

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**Changes in the Commemorative Streetscape of Leipzig over the past 100 years. \*****Abstract (148 words)**

This paper presents the results of an interdisciplinary project which explores street name changes in Leipzig, a city in Eastern Germany, over the past 100 years. Our analysis focuses on the ways in which semantic choices in the streetscape are recruited to canonise traces of the national past that are “supportive of the hegemonic socio-political order” (Azaryahu 1997:480). We triangulate results from variationist sociolinguistics, Linguistic Landscape (LL) studies and geographical analysis to visualise waves of street (re)naming during a century of political turmoil. Drawing on historical archival data allows us to interpret spatial and temporal patterns of toponymic choices as the public embodiment of subsequent political state ideologies. The analysis provides quantitative and longitudinal support to Scollon & Scollon’s (2003) claim that the indexing of officially sanctioned identity and ideology as well as the appropriation of human space are performed by and in turn index state-hegemonic politics of memory.

\* This analysis is part of a 3-year project which aims to put single case analyses such as this one into a larger Eastern European context by comparing street name changes in Poland and Eastern Germany. We acknowledge the joint DFG-NCN Beethoven funding stream (#2902/3-1) for allowing us to conduct this project, as well as the intellectual contribution of our colleagues Malgorzata Fabiszak (PI), Anna Brzezińska, Patryk Dobkiewicz and Carolin Schneider. We would like to thank the *Leipzig Amt für Wahlen und Statistik* (office for voting and statistics), especially Herr Vöckler, for providing us with a database of street name changes. We would also like to thank the Albertina library in Leipzig for access to their archival materials.

## 1. INTRODUCTION

2020 has seen the toppling of statues, the defacing of monuments, mass protests about street names and calls for the renaming of army barracks. The semiotic reconning harnessed by the #BlackLivesMatter movement has brought to the fore the potent symbolism of commemoration as it is inscribed in the public cityscape. More generally, the current debates about memorial hegemony in the citytext present us with a vivid illustration of the performative power of changing denotation: The public elimination of the discredited ideology functions as a powerful mechanism to obliterate the geographical traces of “the memory [and the legacy] of ... [a] former [world view and/or] regime” (Azaryahu 2012:387). Civic linguistic acts of renaming therefore simultaneously demonstrate and contribute to the end of one bygone era and the beginning of a new one.

When ideologies change due to “ruptures in political history” (Azaryahu 1997:481), the material carriers of memory in the semiotic landscape need to be (re)constructed for the commemorative needs of the new present. The renaming of urban features (bridges, streets, neighbourhoods, even whole cities) is often the civic consequence of such shifts in *Weltanschauung*. As Lefebvre (1991:54) has aptly pointed out “a social transformation, to be truly revolutionary in character, must manifest a creative capacity in its effects on daily life, on language and on space.” In this light, commemorative toponymic (re) naming should be seen as the outcome of a complex interplay of forces, including the creation of memory, the indexing of officially sanctioned identity and ideology as well as the appropriation of human space.

Similar to other Eastern European countries that have seen changes in state ideology, commemorative (re) naming in Germany has been indexing fluctuations in political *Weltanschauung*: The encroachment of Nazi henchmen (*Göring, Göbbels, Himmler*, etc.) in the years following Hitler’s takeover in 1933, Soviet influence after WWII resulting in street names such as *Stalinallee* (‘Stalin avenue’) or *Leninstrasse* (‘Lenin street’) etc. The fall of the

Communist regime in 1989 and the subsequent political transformation leading to reunification (known as the *Wende*)<sup>1</sup>, “brought with it the eradication of socialist ideology from the semiotic landscape” (Buchstaller et al. 2020: 252). While contemporary scholarship has yet to fully grasp the complex and often highly localised post-transformation naming strategies, commemorative renaming is ongoing. Consider for example the recent memorialisation (in Leipzig in 2015) of *Capastrasse* after the famous photojournalist Robert Capa, who photographed an American soldier killed shortly before the end of WWII in this street (the famous “last man to die” picture).

To date, however, there is very little research that attempts to sketch the historical dimension of street renaming in Eastern Germany across the political turmoil that characterised the last century. The lion’s share of Azaryahu’s work explores renaming during individual political eras (such as Nazi Germany or the German Democratic Republic (GDR), see 1986, 1997, 2011, 2012 *inter alia*) and it predates more recent attempts to redress some of the injustices of the past as it is currently enshrined in public memorialisation. Also, none of the critical toponymy research on Eastern Europe engages with cutting-edge geovisualisation methods that allow exploring the spatiality of such name changes (but see Buchstaller et al. to appear).

Our project aims to fill these gaps by quantitatively investigating toponymic turnover in Leipzig<sup>2</sup>, a large city the former German Democratic Republic (GDR), now the Eastern part of Germany, across the entire past century (1916-2018). By investigating commemorative street (re)namings processes as reflexive and simultaneously constitutive of consecutive waves of political ideological orientation, the present paper aims to develop a comprehensive model of longitudinal changes in the Leipzig commemorative toponymy. Our analysis relies on a mixed methods approach that draws on geographical visualisation, linguistics landscape and variationist epistemologies. Triangulating changes in the commemorative streetscape with historical archival material gives us the opportunity to examine the complex processes

underlying ideologically-driven changes in commemorative street (re)naming, including their relationship to “power, language ideologies and [German’s expression of] ... their own and others’ entities” (Pavlenko & Blackledge 2004:1-2).

By providing a longitudinal quantitative perspective on the diachronic processes at play in Leipzig’s city-text, our research transcends static street name repositories. Unlike traditional LL studies, thus, we propose to systematically include the analysis of spatial metrics typically employed in geographical analysis. The overall objective of this article is to open new horizons on the ways in which “landscape and identity, social order and power” (Rubdy 2015:2) have been linked across the past hundred years by illustrating these complex processes in one Eastern European city.

## 2. CHANGING STATE IDEOLOGIES IN EASTERN GERMANY

Central and Eastern Europe offers an unparalleled case study for exploring transformations in representational politics as a result of changes in state ideology. 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. Figure 1 summarizes the historical time-line during the period of investigation.

### **FIGURE 1 ABOUT HERE**

This rapid turn-over of different forms of government means that the time-frame under investigation encompasses five consecutive eras that are characterized by antithetical state-sanctioned political ideologies and commemorative priorities (Assmann 2010, Vuolteenaho & Puzey 2018). As illustrated in Table 1, these eras are delimited by historical events that signal

the end of the former and the beginning of a new political *Weltanschauung*. We will implement these five natural break-points (Gerring 2012) to subdivide the 102-year time span on which our research is based.

### TABLE 1 ABOUT HERE<sup>3</sup>

Unsurprisingly, the rapid succession of changes in official state ideology have resulted in changes in the way collective memory is inscribed in the semiotic landscape (Assmann 2010). A famous case is the name change of whole cities: *Chemnitz* was renamed *Karl-Marx-Stadt* in 1953 and back to *Chemnitz* after 1989.<sup>4</sup> As this example vividly illustrates, commemorative renaming strategies in Eastern Europe functions as a powerful mechanism to obliterate referents of “the discredited past from the public sphere demonstrat[ing] the end of [one regime] ... and the beginning of a new era” (Azaryahu 2012:387). The mere fact that different versions of history exist – and are replaced in city textuality across time – illustrates the subversive potential of such public namings to create a natural order of things (see Fairclough 2003). More than a “barometer” of political changes, textual renewal is recruited as a powerful tool for creating a hegemonic, publicly enforced socio-political identity (Kaltenberg-Kwiatkowska 2011:165). Not surprisingly, therefore, researchers in memory culture have argued that commemorative renaming should be treated as an exercise in active forgetting (Assman 2010) or repressive erasure (Connerton 2008). In the next section, we briefly introduce the theoretical background of our investigation before describing our data and methodology in more detail.

### 3. THE LINGUISTIC GEOGRAPHY OF COMMEMORATIVE NAMING

The intersection of language and space has been explored throughout the disciplinary histories of both linguistics and geography. Within linguistics, the field of *linguistic landscape* (“LL”) studies has a pedigree going back to the 1970s. Initially concerned with the distribution of languages across, often contested, urban space, the field has since broadened, “integrat[ing] and embrac[ing] various theoretical and epistemological viewpoints ... develop[ing] new methodologies, and now cover[ing] a range of linguistic artifacts” (Van Mensel, Vandembroucke, and Blackwood 2016: 424). This expansion has resulted in a shift of focus “away from the question of the visibility of different languages to the ideological discourse of power, national identity and sovereignty connected with place naming” (Listewnik 2021:1). Only recently has the field taken a turn towards more sophisticated quantitative approaches, taking on board some of the theoretical and methodological premises of variationist sociolinguistics. Soukup (2020, see also Amos and Soukup 2020) has called this emerging sub-field VaLLS– variationist LL studies – and a number of researchers have demonstrated the value of exploring changes in the LL from an accountable, quantitative point of view (Buchstaller & Alvanides 2013, 2018, Hélot, et al. 2012:18 *inter alia*). At the same time, research within the framework of LL has started to take a more critical turn, drawing on approaches from discourse analysis, semiotics as well as the more affect-centered strands of geography. In particular the literature on critical toponymy, which focuses on the ideological affordances of semiotic choices in the city text, has provided important impulses to linguistic research on public textualities, expanding its remit to “the connection between power relations, public memory, identity formation and commemorative ... naming. [Much of this research has focused on the] underlying question ... which visions of history are entitled to be inscribed on street signs” (Azaryahu 2012: 388).

At the same time, critical toponymy, a research framework rooted in qualitative epistemologies, stands to benefit from the infusion of quantitative methods typical of variationist sociolinguistics (see Soukup 2020, Buchstaller and Alvanides 2018). To date,



however, integrated interdisciplinary studies remain few and far between (Rose-Redwood et al. 2010, Buchstaller et al. 2021, Fabiszak et al. 2021). The present article aims to infuse quantitative methodologies into linguistic landscape and critical toponymy research, connecting them more explicitly with geo-visualisation methods from human geography (see also Barni and Bagna 2015).

What is more, linguistic landscape and critical toponymy suffer from a dearth of research that would put changes in commemorative priorities into a longer historical context. LL scholarship acknowledges the historical forces that have brought about the “social order” (Blommaert 2013:51) of the status quo – including the establishment of post-colonial societies (e.g. Berg and Kearns 2002, Gorter et al. 2012, Buchstaller & Alvanides 2018), the transition of post-socialist states in Eastern Europe to social democracies (i.e. Czepczyński 2008, Gnatiuk 2018), and calls for regime change in North Africa (Dabbour 2017, Messekher 2015, Shiri 2015). However, to date, LL landscape research tends to be conducted within a rather constricted time-frame. While recent work has started to broaden the diachronic scope (Spalding 2013, Pavlenko 2010, Buchstaller et al. 2020), Pavlenko and Mullen’s (2015) criticism holds that “LL researchers overlook diachronicity at their peril” (Mensel, Vandenbroucke, and Blackwood 2016:441).

The field of critical toponymy engages much more explicitly with the historical events that have triggered changes in representational politics in the context of spatial justice and privilege, including as a consequence of political changes (Helander 2009, Stiperski et al. 2011), or shifts in market economy and /or gentrification (Osman 2011, Sakizlioglu and Uitermark 2014 *inter alia*). But what is still largely missing in this research tradition is a longitudinal time-frame to investigate the “wave[s] of renamings that swept” (Azaryahu 1986:590) through time and space and hence a longitudinal analysis of public textuality. Such an approach, especially when based on quantitative, accountable data, facilitates comparative analysis (Azaryahu 2011) not only on the temporal axis but also across different geographies.

In this paper, we explore the repercussions of changes in state-sanctioned commemoration over the past 100 years in the city of Leipzig.

Processes of changing officially sanctioned commemorative textuality in public space obviously transcend street naming; currently, debates are circling around the names of bridges (Listewnik 2021), airports (Olen 2020), schools (Aldermann 2002), train stations (Rubdy 2021), and army barracks (Ismay 2020). Traditionally, Linguistic Landscape research has taken a holistic approach to public denotation, focusing on “all public or commercial signs in a given region or territory” (Landry and Bourhis 1997:23). Critical toponymy and – increasingly research situated at the intersection with memory or LL studies – tends to assume a more focused approach, honing in on the political implications of specific “signs-in-place” (Van Mensel et al. 2016:427) such as graffiti (Pennycook 2008, 2010), disaster signage (Tann and Ben Said 2015) or shop windows (Collins and Slembruck 2007) amongst many others. The lion’s share of critical toponymic research, by contrast, centres on street (re) naming. This focus is due to a number of factors: Their pervasive nature in most (but not all, see Banda and Jimaima 2015) geographies, the relative administrative ease of changing street names (compared to airports or military installations) resulting in a reasonably robust turnover in this part of public infrastructure, combined with the availability of and access to official documentation. Apart from these practical aspects, critical toponymy has cogently demonstrated the symbolic value and political implications of street naming practices (see Azaryahu 2011, Rose-Redwood, Aldermann and Azaryahu 2009, 2018a,b, Berg and Vuolteenaho 2009 *inter alia*). Azaryahu (1997:480) in particular has argued that name choices in the streetscape overtly display and thereby embody political ideology: Naming “canonise[s] events, people, places as traces of the national past that are consciously commemorated [and as such] ... supportive of the hegemonic socio-political order.” Street names are thus particularly revelatory for tracing changes in representational politics since their commemorative potential is more subversive than the denotational semantics of heroes on

horseback, statues on pedestals, and military infrastructure. Zieliński (1994:195) has argued, and we agree, that street names are to be considered a focal part of “the ideological robe of the city” and can thus be used as a measurement of political change.

There is a rich literature documenting and analyzing commemorative street renaming following shifts in political power and the concomitant ideological reorientation in the 1990s in cities of post-Communist societies, such as East Berlin, Bucharest, Budapest, Kyiv, Pristina and Warsaw (Azaryahu 2012: 389, Light 2004, Foote, Toth & Arvey 1999, Palonen 2008, Sloboda 2009, Pavlenko 2010, Majewski 2012, Demaj 2013, Szerszeń 2014 *inter alia*). Taken together, these studies have revealed a dramatic denotational turnover in Eastern European streetscapes, indexing and in turn enshrining the transition to more or less democratic market economies in public memorialisation (Azaryahu 1997, Buchstaller et al. 2020, Vuolteenaho & Puzey 2018 *inter alia* for Eastern Germany). Our paper builds on this LL and critical ethnographic work, integrating findings from different methodological perspectives to develop a coherent framework for understanding the spatial patterns of commemorative street renaming in Leipzig over the past century.

#### 4. DATA AND METHODS

We draw on variationist sociolinguistics as well as methods developed in quantitative geolinguistics (Buchstaller & Alvanides 2013) and geospatial visualisation techniques (Oueslati, Alvanides, Garrod 2015) to map the toponymic traces of “ruptures in political history” (Azaryahu 1997:481) across time and space. Triangulating these spatio-temporal patterns with historical archival material contextualises quantitative results in terms of their relevance for memorialising, providing insights into the processes via which the spatial expression of commemorative semantics is negotiated across an eventful century (Fabiszak & Brzezińska 2016).

The starting point for our analysis is the early 2019 version of OpenStreetMap (OSM)<sup>5</sup> for Leipzig<sup>6</sup>, yielding 2150 unique street names.<sup>7</sup> We converted this information into a large excel spreadsheet (2150 rows by 102 columns representing the years from 1916-2018 = 219.300 cells). The Leipzig office for statistics and elections provided us with a data-base containing information about the rationale for renaming and the semantics of the street names, the exact dates (where available) when the renaming was proposed in the city council and when the decision was passed (Stadt Leipzig, Amt für Statistik und Wahlen, 2018, see also <https://tinyurl.com/yydlneb5>). We adopt the latter in our analysis since it is consistently available for the vast majority of streets (in the very few cases where the date of resolution could not be found, we reverted to the date of implementation).

The total number of street name changes in the city of Leipzig over the period 1916-2018 was 2230. To explore how changes in the official streetscape are recruited to index hegemonic state ideology, we collated information in the database with documents retrieved from the city archives and libraries, as well as information available online. On the basis of this data, we coded every street name change as to whether the incoming and the outgoing name encode a particular political ideology or worldview (see Fabiszak et al. 2021 for the details of the procedure). This ontological classification forms the basis of a fine-grained chronological analysis that locates the moments in time when larger shifts in the ideological robe of the city took place. Moreover, it allows us to determine whether the city text becomes more or less ideological during the five socio-political eras captured by our frame of investigation.

Figure 2, which contains an abridged snippet from our data-set during the years 1944-1945 (the end of the Nazi period and the immediate aftermath of WWII) illustrates our coding procedure. Data coding progressed started from 1916. Going forwards in time, information about street name(s) (changes) was entered manually row by row, noting for every street when a renaming took place as well as the ontological status of the street names involved. The

column ‘street semantics’ contains two values, one for the ontological status of the former street name and one for the new street name. P stands for a street name that is political-ideological in nature whereas N stands for a non-ideological street name. As is exemplified in the first two rows, *Pegauer Strasse* and *Wurzner Strasse* (non-ideological street names referring to towns in the vicinity of Leipzig, namely *Pegau* and *Wurzen* respectively)<sup>8</sup> were replaced by streets bearing the names of a communist partisan and a member of the underground resistance, *Erich-Ferl* and *Wolfgang Heinze*. These changes increase the number of streets encoding socialist ideology by two referents and – in line with Azaryahu (1997, 2011), Vuolteenaho & Puzey (2018) inter alia – we interpret them as commemorative acts supporting the officially sanctioned Weltanschauung of the new, incoming regime.

#### TABLE 2 ABOUT HERE

The third row in Table 2 illustrates a street named after *Paul von Hindenburg*, a celebrated general who led the German imperial army during the first world war and who went on to become the second president (1925-1933) of the Weimar Republic. Hindenburg’s key role in the *Machtergreifung* (take-over) of the Nazis in 1933 made him a hero of the 3<sup>rd</sup> Reich but a problematic figure for commemoration ever since. He was replaced on 1<sup>st</sup> August 1945 by *Friedrich-Ebert*, the first democratically elected president of Germany (1919-1925) and distinguished former chairman of the socialist party.<sup>9</sup> Renamings such as these thus vividly illustrate the turnover of civic “sites of memory” (Winter 1998:102), where one street name indexing a vanquished state ideology is publicly substituted by an iconic figurehead of the new political regime. We coded this renaming as PP.

The next row reveals that *Friedrich-Ebert-Straße* also replaces *Weststrasse* (West Street), another case where a non-ideological street name is transformed into an ideological one (NP). Together, these two last examples illustrate a relatively frequent occurrence in our

dataset, whereby several streets were merged into one, longer street. Cases such as these constitute a challenge to our geographical visualisation tools.

While the above renamings occurred on 1<sup>st</sup> August 1945, three months after the end of the German capitulation, they were not the first ones to occur. The last two rows in Figure 2 reveal that the most iconic Nazi iconography was purged from the streetscape almost instantaneously after the fall of the 3<sup>rd</sup> Reich: By 15<sup>th</sup> May, only seven days after Germany's unconditional surrender, *Adolf-Hitler-Straße* was reverted to its previous name, *Hauptstrasse* ('main street', which it had held up until 1933). Only four days later, the street memorialising one of the key martyrs of Nazi Germany, *Leo Schlageter*,<sup>10</sup> was changed to refer to *Gundorf*, a local municipality to the west of Leipzig to which it is leading. On 1<sup>st</sup> August, this street switched referent again to commemorate *Georg Schwarz*, a communist MP and member of the antifascist resistance who was murdered during the 3<sup>rd</sup> Reich. Our data contain three such cases where renaming occurred in close succession in 1945. This unusually quick turnover can be explained by the geopolitical advances of the allied forces at the very end of WWII: In April 1945, Leipzig was liberated by American forces who immediately razed the most egregious Nazi iconography from the streetscape. When, in July 1945 and in accordance with the agreement of the Yalta conference, the region of Saxony was officially allocated to the Soviet zone of occupation, some streets were renamed again, often to publicly encode Leninist-Marxist political-economic ideology.

Double re-naming not only draws our attention to the extent to which the allied forces were aware of, and consequently exploited the potential of street names as propaganda carriers for their respective political-ideological needs. They also remind us that our analysis needs to be able to capture more than one change per year (in this case first PN and then NP) to provide an accountable basis for the quantification of commemorative (re)naming practices. The next sections illustrate the results of our interdisciplinary research project which analyses commemorative street name changes in Leipzig over the past 102 years.

## 5. THE TIMELINE OF STREET RENAMING IN LEIPZIG

Figure 2 plots the entirety of street name changes over the 102-year period covered in this analysis, revealing the consecutive “wave[s] of renamings that swept” through time and space in the Leipzig streetscape (Azaryahu 1986:590). There are five areas of activity that correspond to the natural breaks in German history we pinpointed above: A small peak (1919-1920) after WWI and in the early years of the Weimar Republic and a large cluster of ononymic activity in 1928 and during the early years of the Nazi regime. The most evident spikes, however, are evident at the cusp of two later ideological ruptures: The years 1945-1950 signalling the end of the Nazi regime after Germany’s defeat in WWII and the years following German reunification in 1989. These findings provide quantitative support for Azaryahu’s (2012:385) assertion that “the commemorative renaming of streets in the context of regime change is a common strategy employed to signify the break with the past ... [and as such a] measure of historical revision.”

Note here that two peaks occur during particularly active phases of urban sprawl and we have marked these with an asterisk in Figure 2. While the city of Leipzig continued to grow over the 102-year period, city expansions in the years 1925 and 1999 incorporated exceptionally large numbers of surrounding municipalities (Gemeinden) into the city boundary with about 15.000 and 45.000 people respectively becoming part of the Leipzig local authority during these years.<sup>11</sup> Hence, rather than purely an outcome of ideologically motivated renaming processes, we would assume that the heavy semantic turnover in the following years was at least partly an artefact of the administrative corollaries of city expansion. What this effectively means is that we need to pinpoint the temporal zones when ononymic activity was dominated by population growth necessitating toponomic decisions, i.e. finding official referents for new streets and solving doublets.

**FIGURE 2 ABOUT HERE****FIGURE 3 ABOUT HERE**

Figure 3 goes some ways towards this goal, splitting up the semiotic processes that have swept over the Leipzig streetscape in the past century. The yellow line traces the chronological patterns of the new 1098 streets that were introduced into the streetscape during the last century. The green line illustrates the temporality of the 1132 renamings. What becomes immediately obvious is that the spike in semiotic modification during the Nazi period (years 1933-1939) was largely due to the naming of new streets (i.e. streets that did not exist before). Similarly, numerous upward bumps during the GDR regime (most noticeably so during the years 1977-1980, 1986-1988) were caused by an increase in the total number of streets, not by street re-naming. The time frame 1993-1997, a few years after reunification, is also dominated by naming of new streets.

Crucially, Figure 3 identifies those temporal zones when the total number of streets remained constant. It is during these chrono-semiotic moments, when ononymic activity is not dominated by administrative geo-textual needs, that upticks in bona fide re-naming activity are most evident. Non-surprisingly, such zones of heightened toponymic transformation are situated at the cusp of turnovers in state ideologies: A modest spike in 1919 following WWI and massive spikes following the end of WWII (during the years 1945-1951) and after the transformation in 1991. As we pointed out above, the two upswings in the years 1929-1931 and 2000 are concomitant with large city expansions and we will revisit them in more detail below.

What we do not know yet is the extent to which the observed changes in urban semiotics are strategic, recruiting street names as “carriers of ... collective memory” (Moszberger, Rieger and Daul 2002:5) to infuse ideological semantics into urban toponymy.



The following analytic step therefore explores the extent to which the consecutive regimes differ in their propensity to publicly enshrine their political Weltanschauung. To do so, we operationalised the classification of streets as +/- ideological (see also Buchstaller et al. 2020, Ruby 2021, Fabiszak et al. 2021, Buchstaller et al to appear) to establish a taxonomy which differentiates the main processes via which street names were changed and/or introduced into the semiotic landscape. As Table 3 illustrates, these processes can be differentiated broadly into two outcomes, which we exemplify with street names from our Leipzig data.

### TABLE 3 ABOUT HERE

The first group of processes are those that result in the infusion of a new political ideology into the linguistic landscape and we will refer to them as ‘ideological processes’ in the remainder of this paper. Processes of this type include the introduction of new streets with ideological denotation into the city text such as the naming in 1982 of a new street *Straße der Solidarität* (‘street of solidarity’ [with other Eastern Block countries]). Infusion of a new ideology can also be caused by two types of renaming scenarios. The first is when streets change their status from bearing non-ideological names to ideological names, as the example of renaming from *An der alten Elster* to *Hindenburgstraße* in 1930 illustrates. The second constitutes the replacement of ideology, which is the case when a name indexing a particular world-view is replaced by a name indexing a different, often competing referent (and its associated political-ideological connotation), as is exemplified by the substitution of *Hindenburgstraße* by *Friedrich-Ebert-Straße* in 1945.

On the other side are processes that do not infuse a new ideology into the streetscape and which we refer to here as ‘non-ideological’.<sup>11</sup> These processes include the naming of a new street with a non-ideological name or indeed the renaming of a non-ideological street by another non-ideological street. The example given in Table 3, the commutation of *Drosselweg*

into *Goldammerweg* (both local types of birds) in 1997 is a typical illustration of such a process being triggered by urban sprawl. In this particular case, the Seehausen local authority became incorporated into the city of Leipzig during the large city expansion in 1999, resulting in two *Drosselstraßen*, one of which had to be renamed. The spike in 2000 in Figure 3 is constituted of many such examples. Finally, in some cases, streets were renamed so as to strip away their problematic ideological load and turn them into neutral signifiers, as was the case with *Adolf-Hitler-Straße* becoming *Hauptstraße* in 1945.

Condensing the wealth of outcomes underlying street renaming allows us to explore to which extent subsequent political regimes mobilize the streetscape for their ideological needs. Before we move on to quantify the occurrence of these types of processes over time, we need to contend with the fact that longer ideological-political eras have a disproportionate amount of time to effectuate changes in the streetscape (with the extremes of the 12-year Nazi regime as opposed to the 34-year GDR government). We therefore normalised the outcome of these two processes (+/- infusion of ideology) by the number of years over which the respective ideological political era stretched. The formula we employed is given in Figure 4. The line graph in Figure 5 illustrates the results of this normalisation, revealing the average number of outcomes averaged by year for every historical period over four consecutive political-ideological eras.<sup>13</sup>

**FIGURE 4 ABOUT HERE** <sup>14</sup>

**FIGURE 5 ABOUT HERE**

Figure 5 reveals that the average occurrence of these two types of semiotic processes fundamentally differs between the socio-political eras we consider in this project. More specifically, processes which do not result in the infusion of an ideology or political world

view occur preponderantly during historical eras described as democratic as per contemporary historical classification, namely the Weimar Republic with 20.2 non-ideological changes/year and the re-unified, post-1989 Germany with 12.6 non-ideological processes/year (or computed as percentages with only 35% and 32% ideological (re)namings respectively out of all changes in these respective eras). From the perspective of a person walking or driving the streets, this means that the ideological impact of the “robe of the city” (Zieliński 1994) reduced during these democratic periods. Non-democratic or authoritative forms of government (the interim Nazi and Socialist regimes), on the other hand, tend to manipulate street renaming processes to imbue the semiotic landscape with their political ideology. If calculated per number of years, the – relatively short – Nazi period reveals itself to be particularly active with 18.8 (re)namings with ideological intention/year (or 64% and 66% ideological changes out of all changes respectively).

Figure 5 thus reminds us that it is not enough to plot the chronological spikes of street (re)namings. We also need to explore the degree of ideological indexicality encoded in the cityscape during consecutive regimes. But while the findings illustrated in Figure 5 provide complementary information to Figures 2 and 3, we have yet to analyse the more fine-grained diachronic distribution of these types of toponymic processes within and across the eras characterised by changing state-ideological orientation. Figure 6, which plots ideological vs. non-ideological changes in street names on a year-by-year basis, provides the missing evidence that allows us to fully interpret the longitudinal trajectory we have observed. More specifically, Figure 6 helps us interpret the spikes at the cusp of socio-political regimes in Figures 2-3.

High values in the red line pinpoint those temporal zones with the largest influx of commemorative ideology in the Leipzig streetscape. What is immediately obvious is that the most substantial incursion of ideological semantics is situated at the most profound contrasts in political Weltanschauung, namely the end of WWII, when right-wing Nazi official

semantics was expelled and replaced with communist denomination. Another phase of vigorous toponymic activity resulting in ideological infusion is situated in 1934-1936, when the democratic Weimar Republic gave rise to the Nazi regime. The political transformation of the *Wende*, notably, did not result in an outright toponymic turnover resulting in ideological changes. What we see is a drawn-out process lasting several years and partly obfuscated by city extensions.

### **FIGURE 6 ABOUT HERE**

Overall, thus, processes of resemioticisation in the streetscape are primarily situated at the cusp of radical transformations in political *Weltanschauung*, when subsequent regimes encode their own ideological world view into public toponymy. At later stages in any respective era, toponymic fervor tends to die down. For the Nazi regime, semiotic activity ceases entirely during WWII.<sup>15</sup> For the other eras we hypothesize that once semiotic saturation has achieved a satisfactory level, inertia sets in and pressures to transform the streetscape are outweighed by the costs<sup>16</sup> of changing street names. As a next step, we map the geographical distribution of changes in the Leipzig streetscape during the consecutive waves of political-ideological reorientation that characterize recent Eastern German history.

## **6. SPATIO-TEMPORAL ANALYSIS OF STREET RENAMING IN LEIPZIG**

Our analysis relies on geographical visualisation of the temporal changes discussed earlier and presented here in four maps, each illustrating changes in street (re) naming in the respective historical era. These maps are complemented by the two types of statistics we have operationalized above: The percentage of street (re) naming processes which do and do not infuse new ideological semantics during the respective era as well as the average number of

streets that are affected by these processes per year. Taken together, these analytics allow us to trace the spatiality of ongoing re-semanticisation in the Leipzig streetscape. We will now focus on these consecutive waves of public memorialisation in more detail.

With over 30 streets (re)named per year (N=529 in total), the short era covering the immediate aftermath of WWI and the Weimar Republic (14 years) is characterised by the highest density of toponymic change when averaged by year. Figure 7 reveals that a majority (63%) of street (re)namings during the Weimar Republic is non-ideological (and hence blue) in nature. The spike in non-ideological renamings in 1919, immediately after the first world war and as Germany was establishing its first democracy, is a reflection of the fact that the street names reflecting the dynastic state ideology of the Prussian Kaiserreich were purged from the semiotic landscape (see Azaryahu 1986:182). More specifically, this year saw the ousting of four kings: Friedrich, Albert, Leopold and Wilhelm, replaced with names referring to German cities. Also, as we discussed above, the bulk of odonymic activity during this era was borne out of the need to build new streets for the rapidly increasing number of inhabitants (in 1917 N = 542.845, in 1933 N = 713.470, <https://bit.ly/2URNuW4>). Not surprisingly, a full 61% (N=322) out of all changes in the streetscape during this era were new namings (of which approximately 46% (N=148) were ideological in nature). In comparison with the low ratio of ideological renaming (13%) we note that even during an era with little zeal to change existing public symbols, the introduction of new streets into the cityscape is exploited as an opportunity to do identity work. This finding makes sense given the high administrative, bureaucratic and financial costs of changing street names.

One particular aspect that characterises the odonymic memory politics of the Weimar Republic, especially in comparison with the subsequent two regimes, is the conspicuous reluctance to encode system-specific ideology on the key traffic axes leading to the city centre. One of our hypotheses at the start of the project was that those arteries transporting visitors to the administrative and commercial hubs situated around the ring road in the middle

of these maps would be recruited for representational purposes and thus targeted by ideologically motivated toponymic activity. However, for the Weimar Republic, this seems not to be the case: The only large street leading to the centre that has been infused with regime-specific ideology is the aforementioned *Hindenburgstraße*, memorialised in 1930.

When commemorative street naming processes did occur during the Weimar Republic, they were mainly situated in the smaller residential streets at the outskirts of the city. The cluster of red streets leading to a crescent in the lower middle area of the map is the site where traditional German mythology was publicly consecrated. It is here that we find *Siegfried-Platz*, *Krimhildstrasse* and *Nibelungenring* ... all of whom are characters from the German national epos, the Nibelungensage. Named as a group in 1930/31, the encoding of this middle high poem is an act of commemorating nationalist German identity in the cityscape. Crucially, none of these streets have been renamed since. This might be because the symbolism of memorialising the German national epos has not been called into question at any later historical stage, probably because inscribing German identity via heroic but apolitical figures has not been considered problematic by consecutive state ideologies.

The other southern cluster of ideological incoming streets in Figure 7 is the commemoration of a group of Germanophone poets (*Theodor Storm*, *Gottfried Keller* etc.) whose works had been recently published by Leipzig publishing houses. It is important to remember in this respect that until WWII, “Leipzig was **the** center of publishing, book production, and [printing] ... Among the most prominent business were publishers like ... Brockhaus, Reclam, [and Baedeker] .... The Duden, Meyers Konversationslexikon, and 90% of sheetmusic and scores worldwide were printed here” (Verheyen 2019, **bold ours**). Encoding the artistic geniuses whose oeuvres are being put in print in this very city is thus an act of assigning “semantic features to the dimension of” prestige (Hymes 1964:117, Silverman 1966), a public display of Leipzig’s intellectual pre-eminence, which we count as

self-presentational and ideological. As with the German mythology discussed above, these streets remain in place. Indeed, the remit of poets and musicians has since been expanded.

### FIGURES 7-10 ABOUT HERE

The situation is very different in the North of Leipzig, which features a cluster of streets commemorating territories that had been ceded to Poland as part of the Treaty of Versailles (1919). This cluster of naming, which occurred in 1932, encodes into public space this “lost but not forgotten land” (“Verlorenes – doch nicht vergessenes Land”).<sup>17</sup> As we will see below, this is an early semiotic instantiation of the widely felt resentment about the abjuration of territory which the Nazis harnessed as part of their geopolitical propaganda just a few years later.

The equally short Nazi regime (Figure 8) also exhibits a high tally of ononymic activity (29 per year, N=351), of which a large proportion (73%) is again new and thus due to city growth. Contrary to the Weimar Republic, however, the vast majority of (re)naming processes during this era (64%) aim at the infusion of nationalist ideology into the streetscape. Most iconically, the key traffic artery from the south towards the city center now bears the name *Adolf-Hitler-straße* (since 1933).<sup>18</sup> Several other large streets approaching the ring are renamed to encode personages that memorialize 3<sup>rd</sup> Reich Weltanschauung. This includes the commemoration of heroes of the armed forces and Nazi martyrs: SA henchmen Walter Blümel and Alfred Marietta (both in 1933), admiral Count Spree (in 1934), General Ludendorff, one of the main enablers of Hitler (in 1937) as well as the leader of the Saxony regional branch of the Nazi Party, Martin Mutschmann (in 1933). Kaiser (‘emperor’) Maximilian I (1459-1519), commemorated in 1936, was important to the Nazis for a number reasons, including his consolidation of the Holy Roman Empire of the German Nation.

Another aspect that likely appealed to Nazi ideology were his public acts of antisemitism (Green 2013, Bell 2001).

Part of the ring street itself was renamed in 1933 to commemorate Martin Luther, likely much less a tribute to Luther's role in reforming religious dogma rather than a symbol of German national pre-eminence. Summarily, the strategy of encoding German luminaries into the roads approaching the city center reveals the powerful semantic force of impressing nationalist German ideology on the urban experience of the flâneur.<sup>19</sup>

Some aggregates of toponymic activity during the Nazi era are worth commenting on: The conspicuous cluster of residential streets at the bottom right of the map commemorates the historical battle of the nations against Napoleon which had been fought in this area in 1818 and for which a large monument was erected close-by in 1913. What is interesting is that of all the military commanders commemorated in this area, the Russian generals remain to this day, whereas Austrian and Prussian soldiers were purged during the Soviet-controlled GDR regime. As we will see below, they were summarily replaced by German (*Heinrich Zille, Heinrich Mann, etc.*) and European (*Zola, Cervantes, Cézanne, etc.*) poets, lyricists and playwrights.

In the North of the city, and interspersed by a collection of streets commemorating SS officers, we find two clusters adding more 'lost' territories into the streetscape, including areas that are now situated in Alsace, in the Czech Republic and in Poland. There is also an area memorialising Germanic Gods (*Wodan, Balder, Forsethi etc.*, named as a group in 1937) and a cluster of locally renowned German painters and architects. After the annexation of Austria to the 3<sup>rd</sup> Reich on 12. March 1939, a collection of streets commemorates Austrian cities, starting with Hitler's birthplace of *Braunau* (named 5. November 1939).

In sum, apart from referencing key personages that epitomise the Nazi ideology and assert German supremacy, the commemorative priorities of the 3<sup>rd</sup> Reich seem to have been primarily militaristic/geopolitical in nature. Again, most of the incoming ideology can be



found in the namings of new streets whereas the percentage of ideologically motivated **re-**naming is much lower (with only 19% N=66 ideological re-namings, in stark contrast to the following GDR regime). What this effectively means is that the Nazi approach to the Leipzig semiotic streetscape was not a tabula rasa policy, purging previous street names to introduce new, ideologically more aligned referents (contrary to Azaryahu's 1986:81 findings for Berlin and Buchstaller et al.'s (to appear) findings for Posnan in Poland). This reticence to resemioticize the streetscape might come as a surprise for a regime whose propaganda strategy for the public sphere is well documented (Rutherford 1978, Spotts 2003, Steinweis 1993). Notably, however, the archival materials we consulted contain numerous laws, by-laws, bills and decisions which attest to the 3<sup>rd</sup> Reich's effort to enshrine a timeless Aryan heritage via a seemingly intransigent, stable urban semiotics. Similarly, Buchstaller et al. (2021:244-245) argue that, apart from the aforementioned aversion to the bureaucratic costs of changing street names, the Nazis were reluctant to change "good old German names that had grown over the years and commemorated German sons". Hence, rather than raze the extant semantics and turn the public streetscape into one large propaganda billboard, the ministry of the interior issued a memo that "a change in street name is only appropriate in exceptional circumstances, when warranted and indeed necessitated such as when the denomination of a street is running contrary to the nationalist state ideals, if the name is considered offensive by large parts of the citizens, or when it results in confusion".<sup>20</sup>

As we see in Figure 9, the opposite strategy to commemorative semioticisation seems to have been deployed during the GDR regime. The end of the war, and with it Soviet occupation followed by a USSR-controlled government, brought a dramatic ideological transformation in commemorative street (re-)naming practices. Overall 789 streets, the largest total number, were (re-) named between 1945 and 1988 (Figure 8). When averaged over the numbers of years, this only amounts to 18 street (re)namings per year. But as we know from Figure 6, the years in the immediate aftermath of WWII (1945-1950) saw a gigantic

odonymic turnover. Undesirable commemoration was eliminated, being replaced by antifascist, antimilitaristic and of course socialist-communist street names (Azaryahu 1986:81). Hence, the cluster of admirals and the areas ‘lost’ due to the Treaty of Versailles in the center north of the city were summatively replaced in 1947-1950 by a group of Russian artists and scientists (*Gogol, Tolstoi, etc.*), who were joined by a collection of communists, resistance fighters persecuted by the Nazis, as well as artists deemed as “degenerate” during the 3<sup>rd</sup> Reich. Also in 1950, the site commemorating German and Austrian generals who fought in the battle of the Nations in the south east was purged to make space for international and German artists. The massive and swift resemioticisation at the beginning of this era is thus tantamount to an official disavowal of the previous regime whereby the losers vanquish from the cityscape and with them their publicly encoded ideology (on the concept of “victors of history” see Jaraus 1991:85). As Azaryahu (2012:385) rightly pointed out, “the commemorative renaming of streets in the context of regime change is a common strategy [of historical revision], .... employed to signify the break with the past”.

What is immediately noticeable is that the impact of GDR odonymic policy is broadly distributed across the cityscape. Overall, the USSR-supported regime accomplished a remarkable resemioticisation of the streetscape with around half of all Leipzig streets being affected by changes in total during this era. Of these changes, 66% were (re)namings resulting in an ideological outcome that was in line with official communist-socialist Weltanschauung.<sup>21</sup> But apart from the thorough ideological saturation of public toponymy, we also note the strategic geographical placement of street names bearing regime-specific semantics: The representative square in front of the main train station was named *Platz der Republic* ‘square of the republic’ in 1953 in honour of the foundation of the GDR. It was flanked by *Rosa-Luxemburg-Straße* on the one side and *Breitscheidstraße*<sup>22</sup> on the other. As discussed above, *Adolf-Hitler* was expelled from the main southern artery only a few months after April 1945 to memorialize *Karl Liebknecht*. All other, large parallel streets were

bestowed upon communist revolutionaries or heroes of the socialist insurgency, including *Rosa Luxemburg* in the North, *Ernst Thälmann* in the East, *Marx* and *Lenin* in the South East. These icons of socialist-communist ideology were accompanied by a legion of dignitaries of socialist-communist *Weltanschauung*, victims of Nazi brutality, resistance members and communist class fighters (*Arthur-Hoffman, Richard Lehmann, Georg-Schumann, Georg Schwarz, Gerhard Ellrodt* etc.).<sup>23</sup> The North East even features a whole area commemorating resistance fighters and members of the Putsch against Hitler. This summative recruitment of the streetscape for system-specific memorialisation fully supports Azaryahu's (1986:581-7) assertion that "it is not surprising that [streets have been called] propaganda carriers [since] ... major political changes are reflected in the renaming of streets". This exhaustive ideological entrenchment during GRD times made it increasingly impossible to travel on the main streets without being faced with official infrastructure consecrating regime-specific ideology. Notably, a full 60% of all semiotic encoding during the GDR era is due re-naming, which suggests that the infusion of ideology in the streetscape trumped the associated costs and efforts. One could argue that the existence of highly problematic Nazi symbolism made renaming necessary. However, 18% of all renamings were of the type NP, meaning that previously non-ideological streets were usurped for the Marxist-Leninist cause (compared to 14% during the Nazi era).

The GDR also continued the strategy of encoding the canon of eminent German, Russian as well as international artists (*Gorki, Goya, Rodin, Shakespeare*, etc.), which were translated, published or discussed in the learned institutions of the city, a commemorative practice that had begun during the Weimar Republic. Enshrining the city's artistic heritage into public memory serves to buttress existing toponymy indexing cultural capital and prestige. It also connects with a further display of Leipzig's intellectual pre-eminence that was amplified during the GDR era: The commemoration of prominent scientists (*Max-Planck, Wilhelm Röntgen, Marie Curie, Michael Faraday*, etc.). While many Nobel Prize winners

and universal geniuses had indeed studied, taught or done research at Leipzig University, encoding their scientific reputation in public textuality is a strategy to market by then over 500 “years of scientific tradition” (<https://bit.ly/2Hp4Q9K>), advertising Leipzig as a city of sciences with a “strong international reputation for outstanding achievements” (<https://bit.ly/395Rbjn>). We thus interpret the encoding of artistic and scientific excellence as part of a larger city branding strategy, promoting Leipzig as a destination for national and international tourists, scientists or even business opportunities (see Guyot and Seethal 2007: 60, Hagen 2011: 25-26, Rose-Redwood et al. 2019). While it might seem counterintuitive to assign commercial interests to a socialist street naming policy, critical research has argued that tapping into marketable imaginaries is one of the major yet under-explored “strategies for branding, selling, legitimising, and characterising” urban toponymy (Madden 2018: 1611). The commodification of street names in particular forms part of the under-the-radar toponymic strategies highlighting the “commercialization of public place-naming systems” (Rose-Redwood (2011: 34, see also Rose-Redwood, Vuolteenaho, Young and Light 2019.)

Finally, the asterisks in Figure 9 highlight the occurrence of a toponymic strategy that is typical for the socialist-communist regimes of former Eastern Europe: The encoding of values (*freedom, unity, solidarity, etc.*) underpinning Marxist-Leninist philosophy. In the German language, this naming patterns follows a particular constructional frame shown in Figure 11. Apart from values, the referent slot (see Goldberg 2009) can be filled with events (either marked via an iconic date or the occasion itself, which might in fact have provided the initial template for this construction)<sup>24</sup>, or with the names of groups/organisations carrying positive connotations in Marxist-Leninist Weltanschauung.

#### **FIGURE 11: ABOUT HERE**

While many streets have since been renamed, the areal distribution of streets following this constructional template remains visible in German geography until this day. A search of the *Die Zeit Online* database (Biermann et al. 2018) reveals spatial patterns which clearly delineate the former geographical expansion of the GDR (see also Knabe 2006).

### FIGURES 12 AND 13 ABOUT HERE

Notably, the productivity of this constructional template shows a bimodal temporal pattern: 12 streets were named before or in 1951. Following a 25-year stretch of inactivity we find another 7 streets which were commemorated in the late 70s until the mid-1980s. We can only speculate what caused this lag in denomination but it is interesting to note that the lull in the use of this formulaic naming strategy corresponds to the beginning of a period generally referred to as Khushchev's Thaw, when, after Stalin's death in 1953, repression, censorship and propaganda in the Soviet Union and its allied states were relaxed. Our data shows no other discernible effects of de-Stalinization apart from the disappearance of *Stalinallee* (in 1956), mirroring many cities in the Soviet-influenced zone (see Azaryahu 1986, Knabe 2019).

During the subsequent political transformation (known as the *Wende*), street names and public symbols that reflected the GDR's understanding of socialist tradition were publicly called into question and locally specific debates ensued as to which ones ought to be changed (Harmsen 1991). Figure 10 reveals the summative result of the post-1998 de-commemoration effort: Most of the street (re)namings are blue, with the highest percentage (68%) of non-ideological outcomes of all eras investigated. Considering the line graph in Figure 6, we note two spikes, and we will consider both briefly. The removal of state ideology is at its most vibrant in 1991: During this year alone, 52 streets are renamed, 36 of which (70%) changing towards non-ideological outcomes, resulting in a thorough purging of socialist-communist traditions from the streetscape. The replacements themselves are interesting political

statements: Almost all streets following the fixed socialist construction have disappeared, often being supplanted by referents from the far West (and North-West) of the country (cities such as Kiel and Hamburg). A similar strategy, which expands the imaginary geography of the recently unified German nation has been described by Vuolteenaho & Puzey (2018).

Some socialist-communist figureheads (*Marx, Thälmann, Lenin*, etc.) are being extricated from the streetscape together with a wealth of social communist resistance fighters, union leaders and party members. Often, these streets are being reverted to their old non-ideological names if one was available, a strategy described by Azaryahu (2018: 59) as follows: “When regime change is construed in terms of restoration, commemoration may assume the form of recommitment, namely, the reinstatement of names removed by the former regime, for renaming streets is about substituting one name for another” (see also Knabe 2019). In Buchstaller et al. (2021) we have argued that the act of reinstating the former geosemiotics aligns with a more general strategy also found in architecture: The attempt to reconnect with the reality before the Nazi regime (which was more prominent in West Germany but see for example Bundesministerium für Verkehr, Bau und Stadtentwicklung 2009). Note again that while these acts of street name change are ideologically motivated, in sum, they result in a decrease of commemorative national ideology in the Leipzig semiotic landscape. But while the transformation brought with it the drastic reduction of socialist ideology from the semiotic landscape, the geosemiotic turnover in Leipzig is far from complete. Thus, contrary to other cities who have made a more consolidated effort to eradicate socialist street names (see Azaryahu’s findings for Berlin 1997:492, consider also Schwerk 2013), in Leipzig there are few “attempts ... to effect the last residues of the GDR past from the street signs” and many streets continue to bear the names of socialists, including *Karl Liebknecht* and *Rosa Luxemburg* (see also Knabe 2006).<sup>25</sup>

Finally, while the city branding strategy to encode its scientific and artistic heritage continues throughout capitalist democracy, it is here that we first find traces of a different

type of *Weltanschauung* enshrined into the streetscape: The explicit encoding of minority groups (especially those that were denied civil rights during previous regimes) and the public eulogy of personages standing up for humanitarian values. Of the 16 ideological street (re)namings in 1991, five commemorate Jews who were persecuted during the 3<sup>rd</sup> Reich and/or had to flee Germany, one memorialises the former mayor of Leipzig who resisted the Nazi's oppression of minorities and political opponents. We also find a woman artist replacing two consecutive streets previously held by men.<sup>26</sup> This trend to encode civil rights into the public streetscape has amplified in the following years. In 2000, the year with ample ideological encoding, we find seven streets giving visibility to women scientists, artists and women's rights activists, ten streets are anti-anti-Semitic in denotation, commemorating either Jewish personages or people standing up to anti-Semitic acts. Other streets encode minority rights, such as the one dedicated to Luz Long, the Olympian long jumper who defied the Nazis by befriending fellow athlete Jesse Owens, or to Max Spohr, a publisher who made essential contributions to the gay emancipation movement in the late 1880s. We also find five more Hitler-Putschists and – for the first time – commemorations that are explicitly critical of the GDR regime. These semiotic choices, which we call, extrapolating from Angermeyer's (2017) research "punitive", include non-left-leaning intellectuals, journalists who stood up for the free press and Wolfgang Zill, a young man who died during an attempted border crossing.

## 7. CONCLUSION

Due to their symbolic value, public naming practices overtly display and embody political ideology by being "supportive of the hegemonic socio-political order.... [Naming] canonise[s] events, people, places as traces of the national past that are consciously commemorated in the city scape" (Azaryahu 1997:480). To date, research on street name changes has been conducted in vastly different fields with little cross-pollination. Moreover,

the analysis of politically-ideologically motivated renaming practices has failed to consider semiotic turnover within the full “time-space matrix of long and short historical periods” that characterise Eastern Europe (Azaryahu 1997:480). The present paper is the first to investigate the ongoing “battle for the representation” (Trumper-Hecht 2009:238) of competing state ideologies as they find expression on street signage during a century up political upheaval.

Longitudinal analysis of the complex (re)renaming patterns allows us to trace the geo-semiotic correlates of repeated waves of regime change in a large Eastern European city. By triangulating methods from variationist sociolinguistics, historical archival research, LL analysis and geovisualization, our analysis explores the geo-spatial zones in which street names as semiotic carriers of memory are constructed and reconstructed for the representational needs of the respective regime. Apart from the encoding – and replacement – of regime-specific *Weltanschauung*, our analysis has revealed the use of place naming as a city branding strategy as well as, more recently, the public eulogizing of civil rights activists and minority groups.

Overall, as our quantitative historical analysis of the Leipzig streetscape illustrates, state-sanctioned changes in the city text provide a “window” to the character of a society (Huebner 2006), bringing to the fore its commemorative priorities and spatial semantics.

### Notes:

<sup>1</sup> The *Wende* (German for ‘turn’) refers to the political-ideological transformation in the former Eastern Germany as a result of the fall of the Inner-German wall, which marks the beginning of the political reunification process between East and West Germany.

<sup>2</sup> Widespread bombing and the post-war division of Berlin made establishing continuous geo-referencing points difficult. We therefore chose to explore Leipzig, the second largest Eastern German city with 587,857 inhabitants in 2019 (down from 604,380 in the 1919



census, see Statesman's Year-book 1921). While the relatively smaller city Dresden is the capital of Saxony, Leipzig is famous as the city of music, trade, science and publishing.

<sup>3</sup> The dates given here are a simplification of a much more complex timeline of historical events. For example, soon after Germany's surrender, the Potsdam Conference from July/August 1945 designated the territory that later became the GDR as the Soviet occupation zone. The *German Democratic Republic* was not officially formed until the constitution of the provisional government on 7<sup>th</sup> October 1949. The time zone given here thus covers Soviet occupation as well as the USSR-controlled GDR regime. Similarly, while the fall of the Berlin Wall occurred on 10<sup>th</sup> November 1989, the treaty that ratified the unified country did not come into effect until 3<sup>rd</sup> October 1990.

<sup>4</sup> A parallel case in Poland saw the renaming of *Katowice* to *Stalinogród* in 1953 and back to *Katowice* in 1956 during Khrushchev's Thaw.

<sup>5</sup> OpenStreetMap is open data, licensed under the Open Data Commons Open Database License (ODbL) by the OpenStreetMap Foundation (OSMF), <https://www.openstreetmap.org/copyright>

<sup>6</sup> Like most historical cities, Leipzig experienced waves of expansion over the centuries. During the 20<sup>th</sup> century, various surrounding municipalities (*Gemeinden*) were annexed. The study area for this project includes all expansions up to and including 1995.

<sup>7</sup> We excluded streets for which we could not find entries in google maps and those which were not contained in the official list, as well as doubled entries.

<sup>8</sup> The suffix *-er* marks the genitive case.

<sup>9</sup> The GDR's official antimilitaristic and anti-Nazi ideology resulted in the early eradication of Hindenburg's name from the official streetscape in what is now Eastern Germany (fewer than 10 streets bear the name Hindenburg in the territory of former East Germany, see Biermann et al. 2019). In the West, Hindenburg's dual commemorative load as a war hero as well as the person facilitating Hitler's rise to power means that he continues to play a

contentious role in the streetscape of many cities. At present, there are 438 streets, squares and bridges that bear the name Hindenburg in Germany (ibid.) and many communities are currently grappling with his problematic commemorative heritage (see i.e. Thamer, n.d. for the city of Münster).

<sup>10</sup> Leo Schlageter (1894–1923) was a soldier and member of the *Freikorps* (a paramilitary army of volunteers). Due to his sabotage of the French occupying troupes after WWI he was executed in 1923 and he was operationalised by the Nazis as a martyr soon after.

<sup>11</sup> The areas annexed in 1999 are outside of our study area as defined it above. Crucially, however, the annexation of these *Gemeinden* to Leipzig city had tangible repercussions on street naming in our area, as will discuss below.

<sup>12</sup> We are aware that any process that injects or eradicates street names that index a political world-view is by definition an ideological act (see K. Paunonen 2018). Similarly, the choice not to allocate an ideological referent to a new street or indeed expunging ideological semantics is also often, though not always, politically motivated. What drives our decision to differentiate toponymic processes by their outcome is that this analytical step allows us to make a distinction we consider vital for the understanding of the streetscape: The increase or decrease of publicly displayed ideology in the city as text and thus its accessibility to the visitors and inhabitants of the particular street (see Fabiszak et al. 2021).

<sup>13</sup> The last years of WWI (1916-18) covered a very short time span with low numbers of street (re)namings. There were no ideological (re)namings at all with the only toponymic activity being new streets coming in with non-ideological names (N=3 in 1917 and N= 2 in 1918) and streets being renamed (N=4 in 1917). Due to this dearth of data points, we decided to conflate this era with the succeeding Weimar Republic (early democracy).

<sup>14</sup> It is difficult to provide estimates of the number of streets being affected by changes per era. This is because the number of streets increased during all eras – in the case of the GRD, for example, there were about 160 more streets in 1988 than there were in 1945 so it is not

entirely clear which number to use as the denominator for calculations (depending on whether we take the starting point or the end point, between 52% and 58% of all streets were affected). This is why we prefer to report average changes over the number of years in a respective era as we do in Figure 5. Below, we will also calculate percentages of (non)ideological changes over all street name changes in a respective political era.

<sup>15</sup> Indeed, the only time when onymic activity is conspicuously absent is during the WWII (1939-1945), which speaks to the widespread persistence of street (re)naming processes.

<sup>16</sup> In Buchstaller et al. (2021, 2022) we report that amongst the many arguments found in Eastern German newspapers against street renaming, practical bureaucratic and financial arguments are very frequent.

<sup>17</sup> According to the United States Holocaust Memorial Museum, Germany was forced to “forfeit ... 13 percent of its European territory (more than 27,000 square miles) and one-tenth of its population (between 6.5 and 7 million people)”. <https://encyclopedia.ushmm.org/content/en/map/german-territorial-losses-treaty-of-versailles-1919>.

<sup>18</sup> This street name demonstrates adherence to the top-down policy directives implemented to normalize spelling: The commemorated head noun should be 5 syllables or less and all personal names had to be hyphenated (Nachrichtendienst des Deutschen Gemeindetages 1.2.1937: 129. “Schreibweise bei Straßennamen”)

<sup>19</sup> While the concept of the flâneur goes back to Baudelaire, we use it here in line with Walter Benjamin (2007), who proposed it as an analytical tool: The explorer of modern urban experience and as such, the ultimate observer-participant.

<sup>20</sup> Beschluss 26. Juli 1939 (2) “Eine Umbenennung ist deshalb nur in besonderen Ausnahmefällen am Platze. Sie ist dann gerechtfertigt und auch erforderlich, wenn die Bezeichnung einer Straße usw. dem nationalsozialistischen Staatsgedanken entgegensteht, ferner dann, wenn ein Name in weiten Kreisen der Bürgerschaft Anstoß erregt. Eine Umbenennung kann auch aus Gründen der Verkehrserleichterung geboten sein, wenn z.B.

Namen zu ständigen Verwechslungen Anlaß geben oder wenn Doppelbenennungen vorliegen.” (Ministerialblatt des Reichs- und Preußischen Ministeriums des Inneren 1939)

<sup>21</sup> These findings are supported by Buchstaller et al.’s (2021) research on Annaberg-Buchholz, a smaller town about 120 km (70 miles) south of Leipzig, where we reported that ideological (re-)semioticisation during GDA times was at an all-time high.

<sup>22</sup> *Rudolf-Breitscheid* (commemorated in 1945) was a socialist who joined the SPD (social democratic party) in 1912, only to switch to the more leftist USPD (Independent Social Democratic Party) 5 years later. He voted against the enabling act in 1933 which gave Hitler total power and fled to France via Switzerland. He was found by the Gestapo and interned in the Buchenwald concentration camp where he died in 1944.

<sup>23</sup> While there are too many streets to name here, one example shall suffice to illustrate this commemorative strategy: *Georg Schumann* (commemorated in 1947) was a locksmith, communist and resistance fighter against the Nazi regime. He was elected political leader of the Communist Party of Germany (KPD) for the district of Leipzig. In 1945, he was executed for his political beliefs.

<sup>24</sup> The first occurrence of this construction in Leipzig was the 1909 naming of the *Straße des 18 October* ‘Street of 18th October’ (some of which became *Deutscher Platz* ‘German square’), named after the victory of the allied troupes over Napoleon in the Battle of Nations in Leipzig in 1813.

<sup>25</sup> Leipzig is not alone in retaining communist commemorative street names. Biermann et al. (2018) reveal that many heroes of the socialist cause of have kept their place in (mainly Eastern) German cityscape (searches in the Die Zeit Online database reveal the following number of hits: Rosa Luxemburg (N=262), Karl Liebknecht (N=301), Ernst Thälmann (N=420), August Bebel (N=585), and Karl Marx (N=484)).

<sup>26</sup> In line with widespread attempts to counteract the normalisation of white hegemonic masculinity in urban textuality (Oto-Perelias 2018, Bancilhon et al 2021, Oto-Peralías &

Gutiérrez-Mora 2021), the under-representation of women in the streetscape has recently resulted in compensatory naming via guerilla movements (see Buchstaller 2021). In Leipzig itself, while we are not aware of any stated top-down compensatory policies, our interviews with city officials suggest that precedence is given to women when new streets are being named.

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Table 1. Historical political-ideological eras as implemented in the present article

Timeline	State ideology defining the political era	Historical event delimiting end point in Europe
1914 to end of 1918	Monarchy, World War I	armistice agreement, 11. November 1918
1919 to start of 1933	Early democracy of the Weimar Republic	Hitler assumes total power, 30. January 1933
1933 to mid-1945	Nazi dictatorship and WWII	Germany surrenders, 8. May, 1945 <sup>1</sup>
1945 to end of 1988	Socialist regime	fall of the Berlin wall, 10. November 1989 resulting in the “Wende”
since 1989	Unified democratic Germany	Ongoing

Table 2: Illustration of coding for street name changes

Name in 1945	Street semantics	Name in 1944
Erich-Ferl-straße (renaming: 01.08.1945)	NP	Pegauer Straße
Wolfgang Heinze-Straße (renaming: 01.08.1945)	NP	Wurzner strasse
Friedrich-Ebert-Straße (renaming: 01.08.1945)	PP	Hindenburgstraße
Friedrich-Ebert-Straße (renaming: 01.08.1945)	NP	Weststraße
Hauptstraße (renaming: 15.05.1945)	PN	Adolf-Hitler-Straße
Gundorfer Straße (renaming: 19.05.1945) → Georg-Schwarz-Straße (renaming: 01.08.1945)	PN / NP	Schlageterstraße

<sup>1</sup> We operationalise Germany’s capitulation as the end of WWII in Europe, being well aware that the formal Japanese surrender ceremony that ended the war in Asia was not until September 2, 1945.

Table 3: Taxonomy of semiotic processes in the streetscape

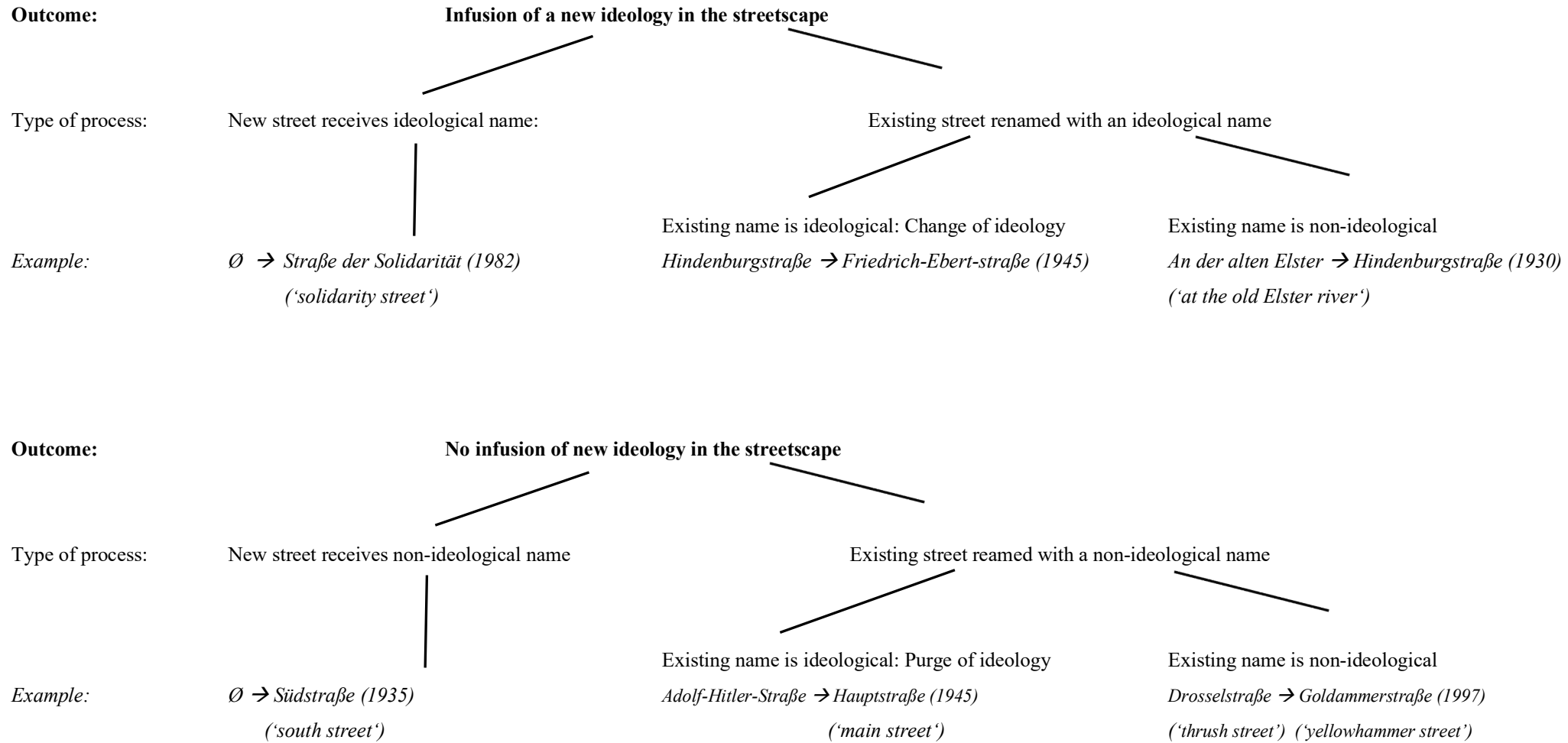


Figure 1: Political time-line of the present investigation

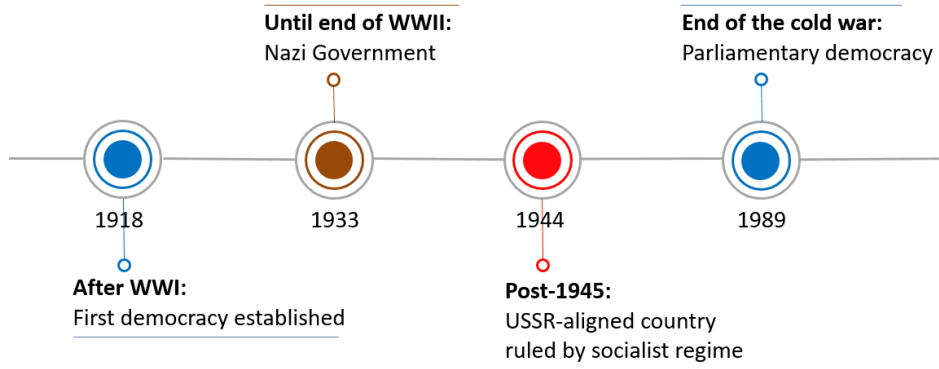
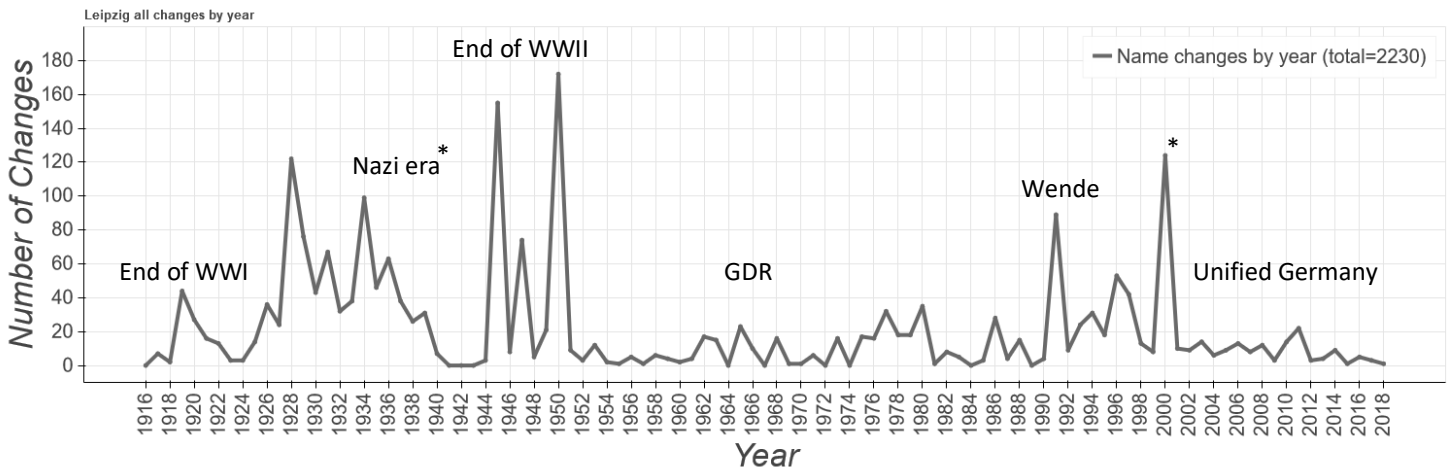


Figure 2: Total change in street names over the 102 years in Leipzig.



\*Peaks are at least partly due to urban expansion.

Figure 3: Change in street names over the 102 years in Leipzig split up by new namings vs. renamings

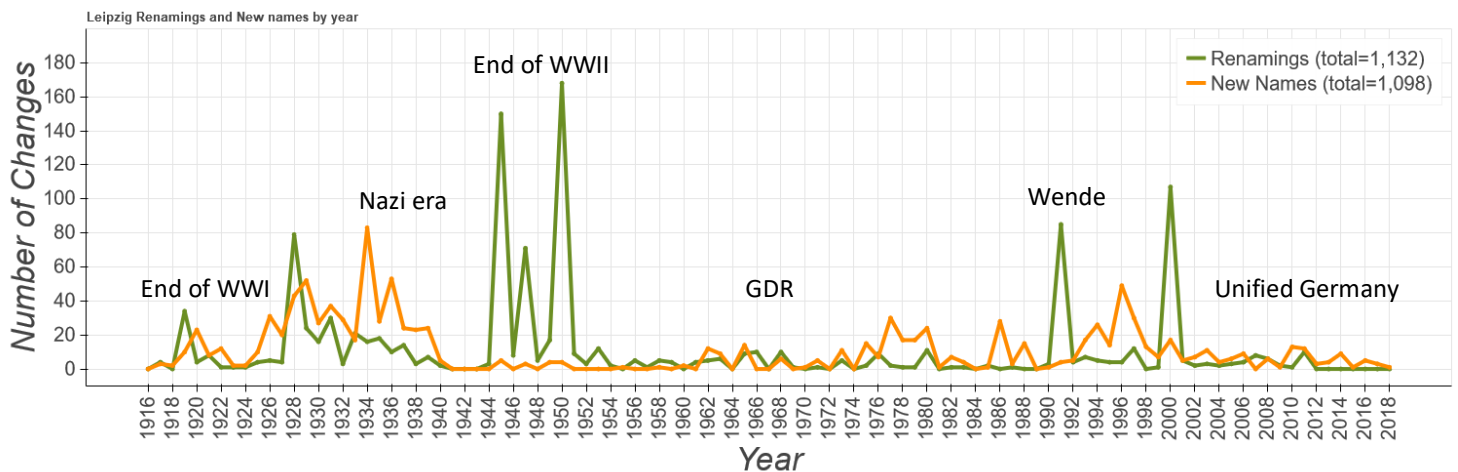


Figure 4: Normalisation technique for plotting ideological vs. non-ideological (re)naming across time.<sup>2</sup>

Ideological street (re)namings averaged by length of era =

$$\frac{N(\text{street (re)namings in this era which do infuse new ideology})}{\text{length of era (years)}}$$

Non-ideological street (re)namings averaged by length of era =

$$\frac{N(\text{street (re)namings in this era which do not infuse new ideology})}{\text{length of era (years)}}$$

Figure 5: Average number of (re)namings by outcome (normalised by length of regime in years)

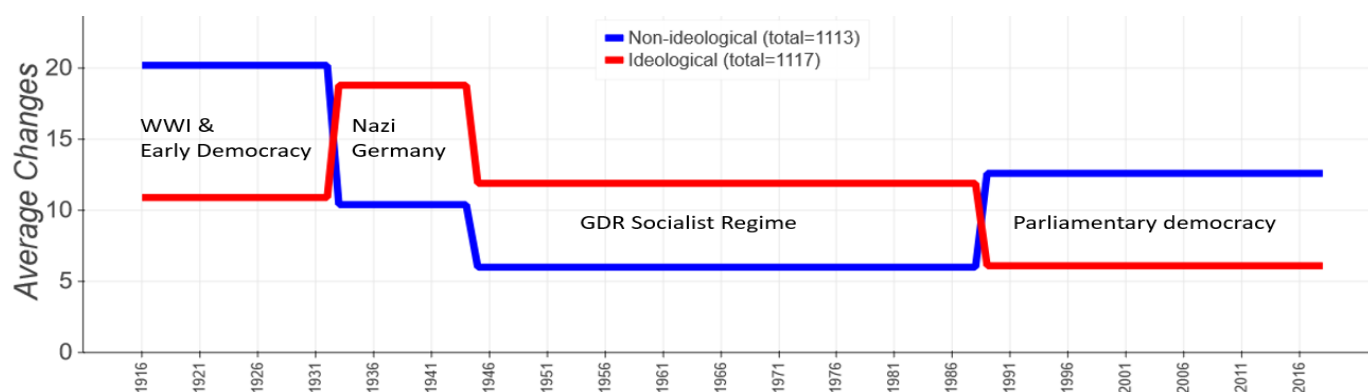
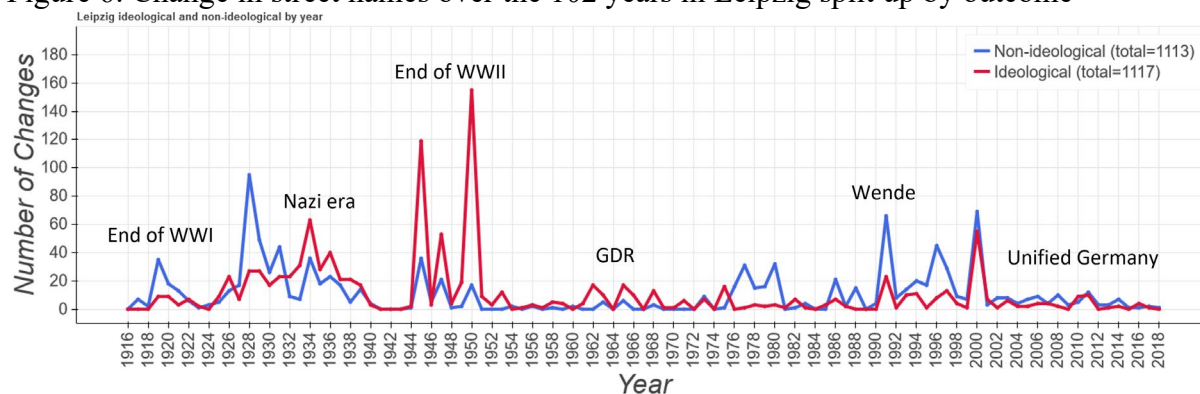


Figure 6: Change in street names over the 102 years in Leipzig split up by outcome



<sup>2</sup> It is difficult to provide estimates of the number of streets being affected by changes per era. This is because the number of streets increased during all eras – in the case of the GDR, for example, there were about 160 more streets in 1988 than there were in 1945 so it is not entirely clear which number to use as the denominator for calculations (depending on whether we take the starting point or the end point, between 52% and 58% of all streets were affected). This is why we prefer to report average changes over the number of years in a respective era as we do in Figure 5. Below, we will also calculate percentages of (non)ideological changes over all street name changes in a respective political era.

Figure 7: 1916 to 1932: WWI & Early Democracy

	N	%	(av. change / year)
Blue = non-ideological (re-)naming	343	65%	(~20.2)
Red = ideological (re-)naming	186	35%	(~10.9)
<b>TOTAL</b>	<b>529</b>		<b>(~31.1)</b>



Figure 8: 1933 to 1944: Nazi Germany & WWII

	N	%	(av. change / year)
Blue = non-ideological (re-)naming	125	36%	(~10.4)
Red = ideological (re-)naming	226	64%	(~18.8)
<b>TOTAL</b>	<b>351</b>		<b>(~29.2)</b>

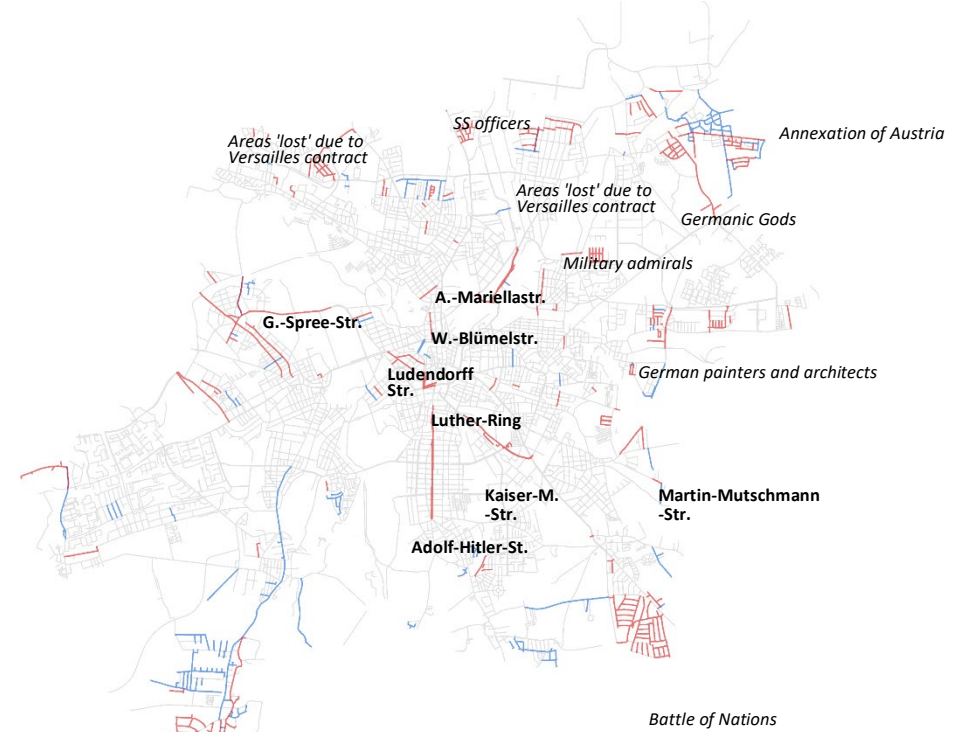


Figure 9: 1945 to 1988: GDR Socialist regime

	N	%	av. change / year
Blue = non-ideological (re-)naming	266	34%	(~6.0)
Red = ideological (re-)naming	523	66%	(~11.9)
<b>TOTAL</b>	<b>789</b>		<b>(~17.9)</b>

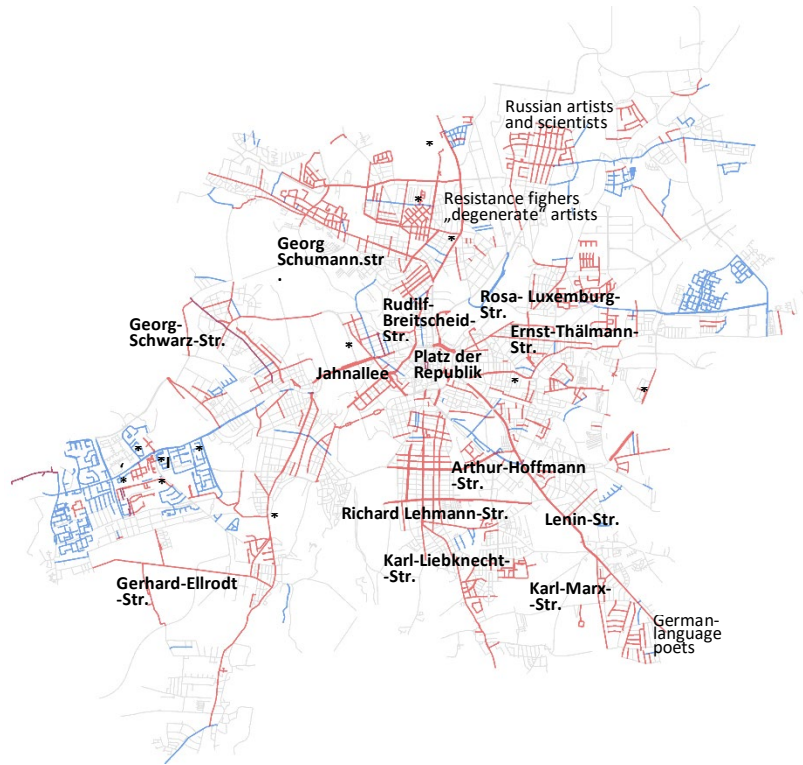


Figure 10: 1989 to 2018: Parliamentary democracy

	N	%	av. change / year
Blue = non-ideological (re-)naming	379	68%	(~12.6)
Red = ideological (re-)naming	182	32%	(~6.1)
<b>TOTAL</b>	<b>561</b>		<b>(~18.7)</b>



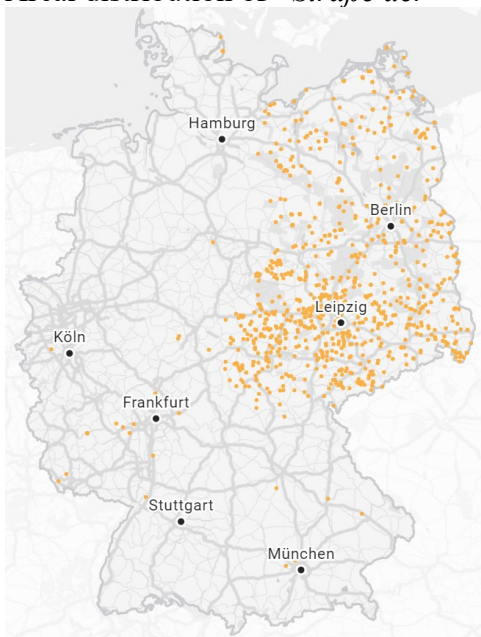
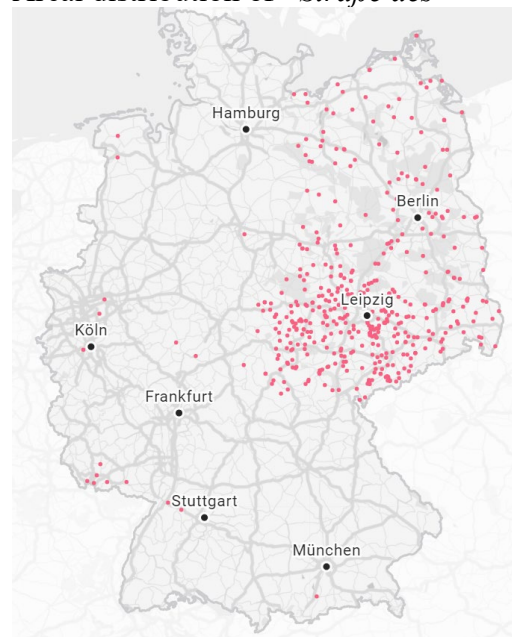


Figure 11: Constructional frame of German communist-socialist naming strategies

Construction: STREET + ART.GEN<sup>3</sup> + REFERENT [EVENT, GROUP/ORGANISATION OR VALUE]

Example:	Straße	der	Solidarität	(‘Street of solidarity’)
	Straße	des	Friedens	(‘Street of peace’)
	Straße	der	jungen Pioniere	(‘Street of young pioneers’)
				[socialist youth organization]
	Straße	der	Befreiung 8. Mai 1945	(‘Street of liberation 8 <sup>th</sup> May 1945’)
				[from National Socialism]

Figures 12 and 13: Areal distribution of streets fitting the constructional frame of communist-socialist naming strategies in Germany (n= 872).

Areal distribution of “*Straße der*”Areal distribution of “*Straße des*”

<sup>3</sup> The article in the genitive case is marked for gender and number (*der* = ART.GEN.F.SG./ART.GEN.PL, *des* = ART.GEN.M.SG./ART.GEN.N.SG). The ideological provenance of this construction is further supported by the fact that it was commonly called the “Russian genitive” (see Knabe 2019).