Street naming practices: A systematic review of urban toponymic scholarship

Mihai S. Rusu[*]

Department of Sociology and Social Work,
Lucian Blaga University of Sibiu, Romania

Street naming practices: A systematic review of urban toponymic scholarship

Abstract: Street names (odonyms) and their academic study constitute an important part of onomastic research. This paper takes stock of the growing literature on street naming processes and provides a meta-analytical systematic review of odonymic scholarship. To this purpose, a collection of 121 peer-reviewed articles on street names published in English language academic journals in the social sciences and the humanities were identified in the Scopus database. The statistical analyses conducted on these materials indicate (1) the temporal dynamics of knowledge production and the geographical hotspots in toponomastic scholarship, (2) the geopolitical settings and historical contexts framing these studies, (3) the theoretical perspectives employed to conceptualise street naming practices, and (4) the methodological outlines characterising the research done on street names in the

---

[*] Contact: Bd-ul Victoriei, Nr.10, Sibiu, 550024, Romania, mihai.rusu@ulbsibiu.ro

literature. The conclusions point out four main clusters of toponomastic research and indicate directions for future inquiry in street name scholarship.

Keywords: Street names, street renaming, toponomastics, odonyms, place names.

Pratiques de dénomination des rues : Une revue systématique de la littérature sur la toponymie urbaine

Résumé : Le nom des rues (odonymes) et leur étude scientifique constituent une partie importante de la recherche onomastique. Cette étude fait le bilan de la littérature croissante sur le processus de l'attribution de noms des rues et offre une méta-analyse systématique de la littérature existante sur les odonymes. Dans ce but, on a identifié et utilisé un nombre de 121 articles en anglais dédiés à ce sujet, publiés dans des revues à comité de lecture en sciences humaines et sociales faisant partie de la base de données Scopus. L'analyse statistique menée sur cette collection d'articles en anglais met en évidence (1) la dynamique temporelle de la production scientifique et la concentration géographique de la recherche sur la toponymie, (2) les contextes géopolitique et historique qui encadrent ces études, (3) les perspectives théoriques utilisées pour la conceptualisation des pratiques de l'attribution des noms des rues et (4) les cadres méthodologiques employés par la recherche portée sur les noms des rues dans cette littérature. Les conclusions soulignent quatre groupes principaux d'étude et indiquent les directions pour la recherche future dans le domaine toponymique.

Mots-clés : Nom des rues, changement de noms de rues, toponomastique, odonyms, noms des endroits.

Straßenbenennungspraktiken: Eine systematische Untersuchung der urbanen toponymischen Erforschung

Zusammenfassung: Straßennamen (Hodonyme) und ihre akademische Untersuchung sind ein wichtiger Bestandteil der Onomastik Forschung. Die vorliegende Studie zieht eine Bestandsaufnahme der wachsenden Literatur zu Straßenbennenungprozesse und bietet einen metaanalytischen systematischen Überblick über die Forschung der Hodonyme an. Zu diesem Zweck wurde in der Scopus Datenbank eine Sammlung von 121 wissenschaftliche Artikel identifiziert, die in englischsprachigen Fachzeitschriften der Sozial- und Geisteswissenschaften veröffentlicht wurden. Die statistische Analyse des Korpus zeigt (1) die zeitliche Dynamik der Wissensproduktion und die geografischen Hotspots der bisherigen Forschung der Toponomastik, (2) die geopolitischen Rahmenbedingungen und die historischen Kontexte und deren Einfluss auf die Studien (3) die theoretischen Perspektiven, die zur Konzeptualisierung der Grundsätze und Verfahren der Straßenumbennenung angewandt wurden und (4) die methodologischen Zugänge, die die Forschung zu Straßennamen in der Literatur charakterisieren. Die Schlussfolgerungen weisen auf vier Hauptcluster der Toponomastik Forschung hin und bieten einen Ausblick auf zukünftige Forschungsrichtungen der Straßennamenkunde.

Schlüsselbegriffe: Straßennamen, Umbenennung der Straßen, Toponomastik, Hodonyme, Ortsnamen.

Street naming practices:
A systematic review of urban toponymic scholarship

MIHAI S. RUSU

1. Introduction

Toponomastics in general and the study of street naming practices in particular occupy an important place in the tradition of onomastic research (Neethling 2016). Over the last century, a growing body of scholarship has explored an increasing variety of issues related to odonyms and street naming processes. In the last decades, place-name scholars have convincingly demonstrated the crucial importance of street names in both the administrative management of landscape and the ideological politicization of space. Their research emphasised how, as toponymic means of spatial inscription, street names form an integral part of a society's nominal apparatus devised for designating, individualising, and identifying places (Rose-Redwood et al. 2011).

However, besides this primary, pragmatic, and denotative function of spatial localization, street names are also used in symbolic and connotative ways to inscribe political meaning onto the landscape. When employed as toponymic means of ideologising space with the symbols of power, icons of identity, and historical remembrances that legitimate the political regime, street names render space into politically loaded memorial landscapes (Dwyer & Alderman 2008).

Perhaps less visually conspicuous but more intrusive and politically efficient than raising statues and erecting monuments, the city street nomenclature system provides powerful means of communicating the dominant ideological ethos as well as of staging the past into the public space (David 2011). Together with other topo-memorial artefacts such as statues and monuments, urban namescapes constitute important nominal devices used to ideologically appropriate space by constructing political geographies of public memory that underpin a current regime's claim to legitimacy (Hoelscher & Alderman 2014; Foote & Azaryahu 2007).

Beyond the scholarly world of onomastics and place-name studies, odonyms, street name politics, and street renaming have become hot topics of public debate in the contemporary context of social unrest. The renaming of streets in the aftermath of a regime change, especially in the postsocialist setting of the Central and Eastern European countries, has featured heavily in

the toponomastic scholarship. The symbolic importance of street names, the contentious politics of toponymics, as well as the claim of renaming the streetscape as a means of historical and reparative justice were recently brought onto the top of the public agenda in the United States and the United Kingdom over the legacy of colonial and/or confederate past.

2. Methodological approach: a meta-analytical systematic review

Against this theoretical and socio-cultural background, this paper sets out to take stock of the toponomastic scholarship done on street naming practices through a quantitative, secondary analysis of the academic literature on street names. Most review articles that aim to provide a comprehensive overview of the state of the art in a particular field of study in the social sciences usually resort to narrative reviews. These types of materials review the relevant literature and offer a synthetic, but unsystematic account of the scholarship done in that domain of inquiry. This approach contrasts starkly with the conventional method of meta-analysis employed in medicine and clinical research and increasingly more in psychotherapy and cognate fields. Whereas narrative reviews provide synthetic insights based on qualitative assessments, meta-analysis consists in a quantitative technique of calculating the effect size based on conducting a statistical synthesis of results reported by a collection of studies carried out on the same topic (Borenstein et al. 2003).

Since research in toponomastic scholarship varies wildly in terms of methodological approaches, the standard technique of quantitative meta-analysis is unsuited for synthesising this body of works. To overcome such obstacles, social scientists have advanced different methodologies designed to provide systematic reviews of qualitative research. These range from rather qualitative approaches such as the "meta-study" developed by Paterson et al. (2001) to the more quantitative method of summarisation – the "meta-summary" approach – put forward by Sandelowski & Barroso (2003). Looking for the middle-ground between the hermeneutically inclined meta-study and the statistically grounded meta-summary, this paper will employ a systematic review of secondary sources in toponomastic scholarship focused on researching street naming processes.

To this purpose, a meta-analytical model of data collection was used (Moher et al. 2009). In the identification phase, several criteria for selecting the material were introduced consisting of (1) peer-reviewed articles published in academic journals that were (2) written in English and were classified as belonging in (3) the subject area of social sciences and the humanities. A fourth criterion concerned (4) the journal database and for pragmatic reasons regarding searching capabilities and coverage, the Scopus platform was chosen. Establishing these conventional criteria limited considerably the scope of the research and excluded from the subsequent analysis a valuable body of toponomastic scholarship

written in other languages and published in other formats especially by linguists. These criteria are acknowledged as a limitation of this research and their implications are discussed in the concluding section of the paper.

Within these narrow parameters, the search retrieved a total number of 1,499 materials. After removing the duplicates in the screening stage, the remaining records were assessed in terms of their eligibility. At this point, 800 articles were removed because they were not relevant to toponomastic research. The collection of 698 articles that reached this phase were subjected to a second round of eligibility assessment, in which only the relevant articles focused on street names were retained. In the end, the collection of materials included in this meta-analytical systematic review was reduced to 121 papers that explore various facets of street naming processes (see Figure 1).
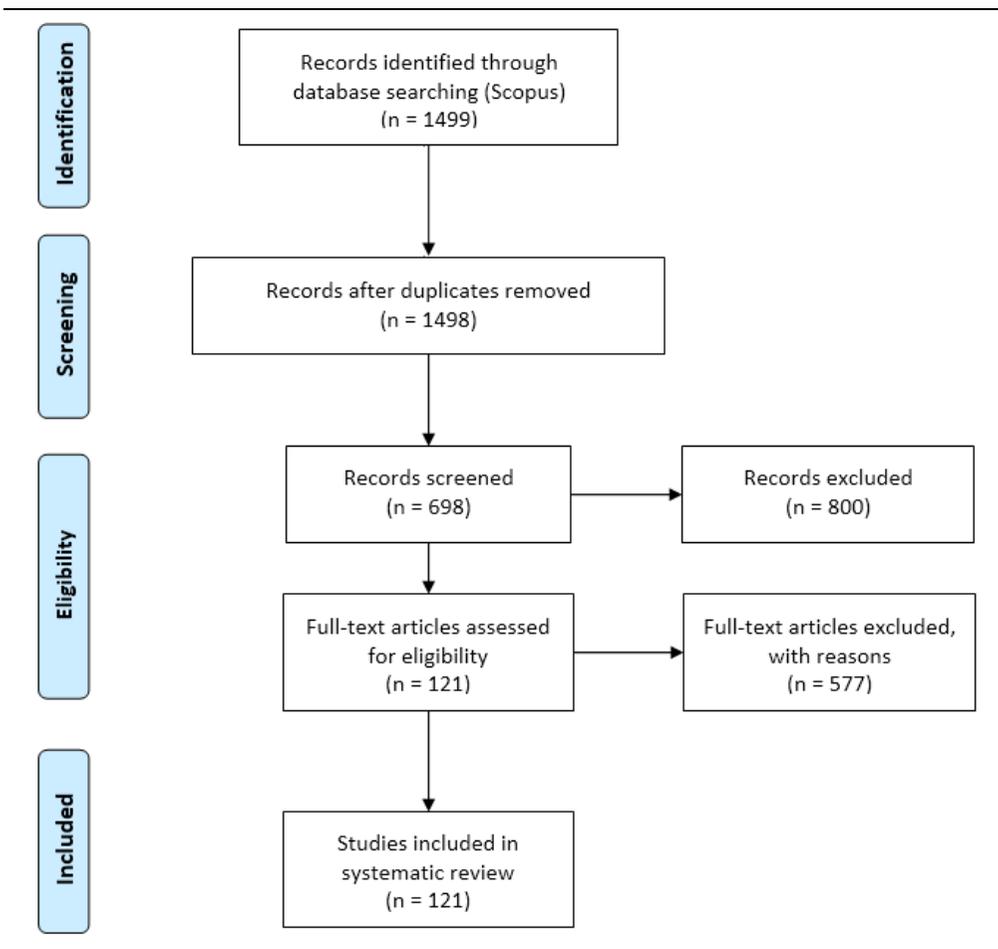

Figure 1: Flow diagram for systematic review

After collecting the materials, the data were meta-analysed along eight dimensions clustered in four main categories: (1) the time-space matrix of

toponymic research, (2) the geopolitical and historical contexts covered in these studies, (3) the conceptual framework employed to theoretically ground the analyses, and (4) the methodological underpinnings of the scholarship investigated in this paper. The first two categories constitute what Paterson et al.'s (2001) referred to as "meta-data", while the third and four correspond to "meta-theory" and "meta-method" respectively.

3. Results

3.1. Time-space matrix of toponymic research

In mapping the time-space matrix of the research done on street name practices, I first chart the temporal distribution of papers published in toponymic scholarship and then move on to address the spatial scattering of the locations in which these studies were based. Such a dual analytical strategy will reveal both the temporal dynamic of knowledge production and the areas of major interest – the geographical "hotspots" – in toponymic research.

3.1.1. Temporal distribution of papers published in toponymic scholarship

Street names studies underwent a scholarly boom in terms of knowledge production in the last decades. Figure 2 provides a visual depiction of the temporal dynamic of English-language articles published in the academic literature on street names. This time distribution is indicative of two main periods in odonymic research: (1) a classical period characterised by traditional toponomastic research based on linguistic approaches aiming to clarify the meaning of place names through digging their etymological roots (before 1985), followed by (2) a contemporary period dominated by critical toponymic studies after this date when the research on street naming practices took off in both quantitative (number of publications) and qualitative terms (theoretical sophistication).

Between 1940 and 1985, only eight articles on street names were published in the academic literature meta-analysed in this study. With a single exception that appeared in the *Scottish Geographical Magazine* (Meikle 1940), all the other articles were printed in *Names: A Journal of Onomastics* – the journal of the American Name Society published since 1952. What characterises these articles is their rather atheoretical, descriptive approach rooted in linguistic analyses of street names from cities and regions located in the United States (Denver – Davidson 1954; Pennsylvania – Pillsbury 1969; San Antonio – Gilpin 1970; Athens, GA – Algeo 1978) and the Middle East (Baghdad, Iraq – Dabbs 1962a, 1962b and Beirut, Lebanon – McCarthy 1975). Another common feature shared by these materials is that all the articles published in *Names* are authored exclusively by American scholars.
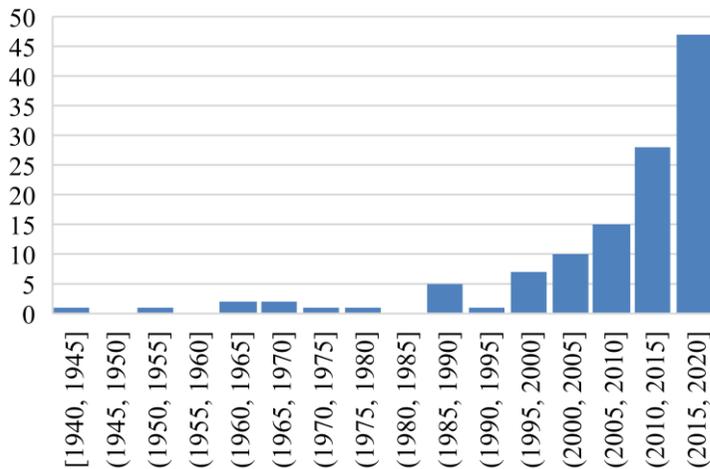
Figure 2: Temporal distribution of articles published on street name practices

The mid-1980s constitute a turning point in the historical dynamic characterising the academic scholarship on street names. This development is linked to three factors. First, the exponential growth of scholarly interest in street naming practices recorded in the last decades can be traced back to Maoz Azaryahu's seminal study of street name changes in East Berlin published in 1986. In this pioneering work, Azaryahu (1986: 581) made the case for analysing street names as "indicators of political identity" and bearers of "symbolic value." By examining the patterns of renaming East Berlin's street nomenclature during the socialist German Democratic Republic (GDR), Azaryahu provided an analytical blueprint that was later employed by other scholars of toponymic change.

Whereas Azaryahu's ground-breaking work established a model, it was the upcoming "third wave of democratization" (Huntington 1991), especially after the regime changes of 1989 in the former socialist states from Central and Eastern Europe (CEE), that triggered an upsurge of toponymic research focused on documenting street name changes in the aftermath of major power shifts. Azaryahu himself further developed the analytical approach sketched out in 1986 with a study that surveyed the toponymic transformation of Berlin's urban namescape after the fall of the wall and the reunification of Germany in 1990 (Azaryahu 1997). Other cultural geographers picked up this analytical thread and unravelled it on several other capital-cities from the CEE region (Light 2004 in Bucharest; Gill 2005 in Moscow; Palonen 2008 in Budapest).

The development of a solid body of scholarship on the politics of street (re)naming following the demise of state socialisms across the CEE countries and former Soviet republics coincided with the "cultural turn" occurred throughout the social sciences and the humanities (Jameson 1998; Barnett 2002). Driven by social theories articulated by French intellectuals such as Michel Foucault, Jacques Derrida, Michel de Certeau, and Pierre Bourdieu,

place-name scholars started to pay increasingly more attention to the entanglements of naming, space, identity, and power. As a result of this theoretical infusion, the linguistic acts of place-naming were conceived of as discursive practices laden with power relations that are endowed with symbolic power, convey political meaning, and are underpinned by identity stakes (Berg & Vuolteenaho 2009).

The field of "critical toponymic studies" thus emerged differed significantly from the previous scholarship on place- and street names in three major ways: first, articulated at the intersection of cultural geography and political sociology, the critical toponymies was characterised by interdisciplinary research as opposed to traditional linguistic analyses. A second difference consisted of the new field being conceptually infused with social theory as opposed to the atheoretical descriptivism characterising conventional linguistic approaches to street names scholarship. Third, scholars embracing the tenets of critical toponymic research turned out to be highly sensitive to questions of power, hegemony, domination, and inequalities inscribed onto space through place-naming. This awareness of the power relations written into the naming processes contrasted dramatically with the political innocence underpinning the naïve empiricist approaches indulged by previous generations of toponomastic researchers (Vuolteenaho & Berg 2009; Azaryahu 2011; Rose-Redwood 2011).

3.1.2. Geographical "hotspots" in toponymic research

The analysis conducted in this paper distinguished between locations that have made the subject-matter of single case studies and places that were analysed as part of broader, comparative approaches. Figure 3 depicts the spatial distribution of these locations worldwide. The places analysed as single case studies are mentioned by name, while those included in comparative analyses are simply depicted as an unlabelled dot. The dots vary in size as a function of the total number of that location's presence in the toponymic scholarship surveyed in this article. In this regard, due to Azaryahu's works, Berlin features four times in the literature (Azaryahu 1986, 1997, 2011). In terms of this quantitative indicator, Berlin shares the status of being the odonymic capital of the world with four other metropoles – Paris, New York, Kyiv, and Dakar.

The map indicates several distinct geographical hotspots of toponomastic research, with the largest concentration of places located in the CEE region, the United States and Canada, Middle East, and sub-Saharan Africa (including South Africa) (see also the analysis conducted by Giraut & Houssay-Holzschuch 2016: 17, who coined the term "toponymic hotspots"). Besides indicating these regional clusters, Figure 3 also reveals the blank spots of odonymic research: Australia and Oceania countries, as well as large areas of South America and East Asia, have scanty, if any, places included in the studies covered in this systematic review. A tabular overview of this spatial distribution of research sites according to the region is provided in Table 1.
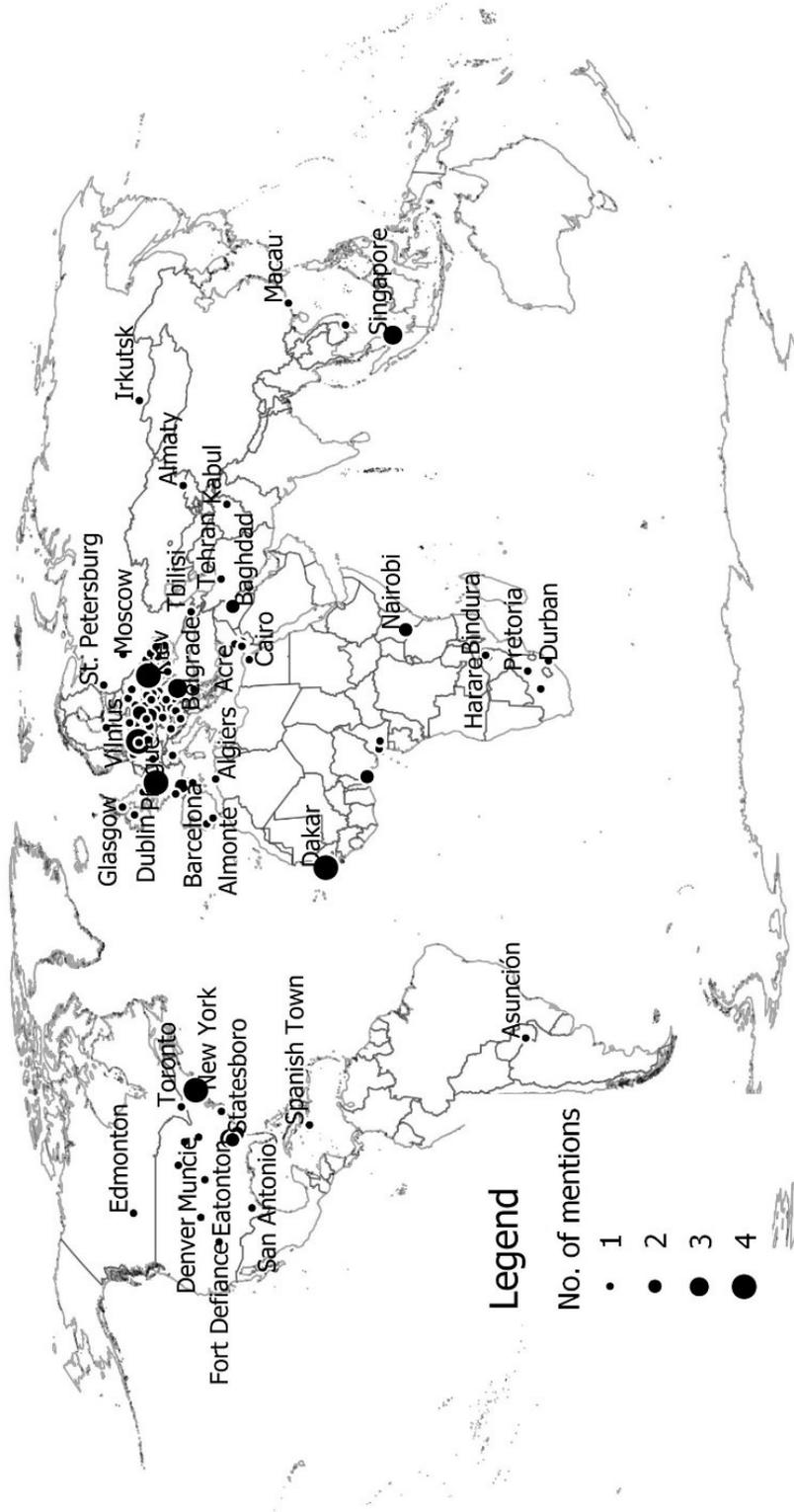
Figure 3: The worldwide spatial distribution of geographical hotspots in street names research

Table 1: Regional hotspots of toponymic research

Region	Single case-study	Comparative analysis	Total
CEE and the former Soviet Union	31	52	83
Middle East and North Africa	9	29	38
North America	13	8	21
Western Europe	11	6	17
Sub-Saharan Africa	8	9	17
Southeast Asia	4	1	5
Southeast Europe (the Balkans)	2	0	2
Latin America and the Caribbean	2	0	2
Total	80	105	185

What this visual and tabular data reveal is that toponymic research tends to be geographically focused on those areas characterised by political change and large-scale societal transformation (CEE and the former Soviet Union, post-apartheid South Africa). Another focal point falls on areas affected by various forms of conflict, either manifest as in the Israeli-Palestinian belligerent relations in the Middle East or latent as in the case of racial and indigenous struggles for political recognition and memorial reparation in the United States and Canada (North America). A detailed analysis of the geopolitical and historical contexts covered in these toponomastic studies is provided in the following section of this paper.

Figure 4 zooms in the perspective and focus it on Eurasia, where most of the articles covered in this analysis are geographically located. In the CEE region, Poland, Romania, and Ukraine stand out as geographical areas of particular toponomastic interest. While Polish cities were studied in several comparative analyses (Walkowiak 2018, 2019), the capital city of Romania – Bucharest – provided materials for some of the most influential papers in street renaming research (Light et al. 2002; Light 2004; Light & Young 2014). In the light of recent political and military developments, Ukraine has become the most investigated terrain in toponomastic scholarship. Here, large-scale comparative studies have been carried out on the patterns of street name changes made in the context of the War in Donbas that started in 2014 and the decommunization laws issued in 2015 (Gnatiuk 2018).
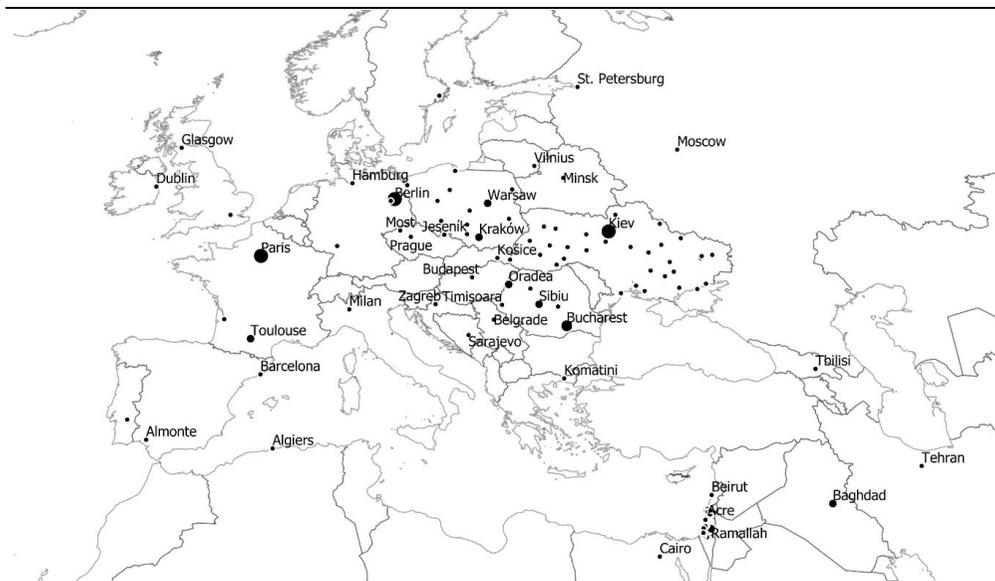
Figure 4: The spatial distribution of geographical hotspots in Eurasia and the Middle East

3.2. Geopolitical and historical contexts

Closely correlated with the geographical setting of these toponomastic studies is the geopolitical and historical context in which these research sites are placed. Four major macro-social processes were identified as providing the historical background of the studies covered in this analysis: (1) the political use of toponymy in the contexts of *imperialism and postcolonialism*, (2) the role of street names in *nationalism* and the political construction of national statehood, (3) street naming and renaming in the making of *totalitarian regimes* followed by their *transition to democracy*, and finally (4) the identity struggles and neoliberal commodification of toponymy in *multicultural, plural democracies* (Table 2).

Imperialism was explored in papers that examined how European states extended the reach of their power in colonial territories. These studies are historically situated in the 19th century and document the ways in which Western powers employed toponymy – together with city planning, house numbering, urban management, and other spatial practices – for twinned political purposes: firstly, to rationalise space and to render governable the colonial territory and secondly, to legitimise the colonial rule by inscribing the symbols of European powers into the urban landscape. Geographically, most scholarly attention has been devoted to Dakar, the capital city of Senegal in West Africa and a major site of French colonial activity (Bigon 2008; Njoh 2010; Njoh & Chie 2019).

Table 2: The geopolitical and historical contexts of toponomastic research

Geopolitical and historical context	N	%
Imperialism/Postcolonialism	20	17.39
Colonization	5	4.35
Decolonization	15	13.04
Nationalism and national statehood	13	11.30
Nation- and state-building	13	11.30
Totalitarianism/democratization	44	38.26
Sovietization	4	3.48
Decommunization	21	18.26
Fascistization	1	0.87
Defascistization	5	4.35
Islamization	1	0.87
Postapartheid	6	5.22
Postconflict	6	5.22
Pluralist democracies	38	33.04
Multiculturalism	32	27.83
Neoliberalism	6	5.22
Total	115	100

The other facet of imperialism – decolonisation occurred during the period of postcolonialism – is present in 15 toponomastic studies (13.04% of the total collection of articles). These papers documented how the emerging postcolonial states in geographical areas ranging from sub-Saharan Africa (Lagos, Dakar, Bindura, Harare, Nairobi) and the Middle East (Beirut, Baghdad) to Southeast Asia (Singapore) have grappled with the enduring legacies of colonialism in their bid to purge the urban landscape from the toponymic presence of the European imperial powers and to inscribe it with the symbols of nationhood.

Another major geopolitical context is represented by nationalism and the political construction of national statehood. Researchers who have analysed this aspect documented how street naming was a spatial practice of inscribing the namescape with the icons of national identity and the symbols of state power. Paradigmatic in this strand of research is Yeoh's (1996) study of street naming and nation-building, which examined the toponymic inscription of nationhood in post-independence Singapore. As this study illustrates, there is considerable overlapping between the research labelled as postcolonialism and that classified in the category of nationalism and state-building, since these two processes are usually intertwined. However, fully acknowledging this intricacy, in this paper research was categorised under one rubric or another based on the dominant topic.

The most comprehensive body of scholarship in toponomastic research approached the topic of street name processes in the geopolitical contexts of totalitarian regimes and their subsequent democratization. Toponymy's role in the construction of totalitarian rule was made evident in the case of Sovietization. Azaryahu's (1986) paper on the renaming of East Berlin in the aftermath of the Second World War and the consolidation of the socialist German Democratic Republic (GDR) set the ground for this type of analyses. The same process of toponymic cleansing followed by the imposition of Soviet symbols was documented in other CEE places, from Bucharest in Romania (Light et al. 2002) and Most in the Czech Republic (David 2018) to Vilnius in Lithuania (Mikailiene 2010).

Nevertheless, toponomastic scholars have shown greater interest in the contemporary period of decommunization in comparison to the historical process of Sovietization. Twenty-one papers representing 18.26 per cent of the total collection of articles included in this analysis are placed in the context of postsocialist transformations affecting the CEE region and the former Soviet republics. Azaryahu's (1997) article on the politics of street name changes in East Berlin enacted after the German reunification once again set the analytical agenda. Unsurprisingly, the first wave of scholarship on toponymic transformation during postsocialism was focused on capital cities. Influential research in this regard were Light's (2004) analysis of street renaming in postsocialist Bucharest, Romania, and Gill's (2005) similar take on Moscow, Russia. Eventually, scholars began charting the changes occurred outside of the capital cities, in a variety of secondary cities and regional urban centres (e.g., Sibiu in Romania – Rusu 2019 and Kraków in Poland – Drozdzewski 2014).

Fascism – communism's totalitarian twin – provided the context for a single study on the purging of Jewish street names in Hamburg after the National Socialism seized state power in Germany in 1933 (Weidenhöffer 2016). Similar to the asymmetrical relationship between Sovietization and decommunization, the process of defascistization is much more salient in the toponomastic scholarship. The problematic legacies of fascism in urban namescapes were examined in several German cities such as Berlin, Potsdam, and Mannheim (Azaryahu 2011, 2012), but also in Italian (Malone 2017; Tucci et al. 2011) and Spanish settings (González Faraco & Murphy 1997).

Another important political context of democratization is provided by post-apartheid South Africa. Several studies geographically located in this country (Kasanga 2015; Duminy 2014) have documented the contentious politics of coming to terms with the racial past as reflected in urban street nomenclatures and other visual and material artefacts put on display in the public space. Similarly entrapped in contentious struggles over (re)naming the landscape are places located in post-conflict societies such as the war-torn Kabul in Afghanistan (Karimi 2016) and the ethnically divided Sarajevo in Bosnia and Herzegovina (Ristic 2015).

Researchers have also taken stock of the contentious politics of toponomastic struggles over naming and renaming the landscape in pluralist societies and multicultural democracies. From a geographical perspective, this research strand is rooted predominantly, but not exclusively, in cities from the United States, Canada, and Western Europe. Scholarship anchored in this geopolitical context addresses the street names politics in two principal ways. First, street names are analysed as toponymic battlegrounds between various collective agents who confront each other in a context of multiculturalism and ethnic or racial pluralism over the right of expressing their identity through place (re)naming. For instance, in a series of papers Alderman (2002, 2003) has scrutinised the racial divergences over renaming streets after Martin Luther King, while other scholars have cast light on the ethnopolitics of street name changes (Erőss & Tátrai 2010; Rusu 2019).

Another line of inquiry explored street names as valuable toponymic commodities to be transacted on the liberal, capitalist market system. Whereas in the previous decades, street names were valued for their political capital as vectors of memory and toponymic means of legitimating power, in the current neoliberal socioeconomic context they are increasingly turned into market commodities. Observed at various scales, ranging from town names and neighbourhoods to public institutions and sports stadia, to public transport stations and street names, this neoliberal commodification of toponymy produces a "restless" urban landscape (Knox 1991), bound to transform as soon as the commercial interests that hold them in place change.

3.3. Conceptual framework

Toponomastic research on street naming processes embraced a broad variety of theoretical frameworks. These studies could be roughly divided into two main chronologically-sensitive categories: until the mid-1980s, as pointed out in an earlier section, scholars of odonyms restricted their approaches to descriptive analyses, most of these consisting of linguistic investigations on the etymology and meaning of street names. Nineteen of the papers covered in this systematic review (15.70%) published between 1940 and 1985, present this overly descriptive and atheoretical character.

Then, with the articulation of the interdisciplinary field of critical place-names studies, scholars have drawn increasingly on social theory for construing the intricate intersections of language, power, identity, and space in street names. One such theoretical strand brought together cultural geography and semiotic studies and conceived of the urban street nomenclature as a "city-text." Reading the city as a text spelt out in its street names, a series of researchers led by Azaryahu articulated the "political semiotics" perspective in toponomastic scholarship. This perspective empowered researchers to read urban namescape as a textual discourse (Šakaja & Stanić 2011; Oto-Peralías 2018).

A closely connected conceptual metaphor sprang out of the "city-text" perspective is that of the urban streetscape as a palimpsest that recorded the history of inscribing, erasing, and rewriting the relations of power and structures of identity in the city's street nomenclature (Drozdzewski 2014). In general, researchers who embraced the theoretical tenets of political semiotics and conceptualised street names through the metaphoric prisms of city-text and/or palimpsestic textual artefact have documented the process of street renaming made in the aftermath of major political change. As such, there is an elective affinity between research done in this theoretical tradition and the geopolitical and historical contexts included in the totalitarianism/democratization rubric (see Table 2). As shown in Table 3, the largest proportion of toponomastic articles covered in this analysis employed a theoretical framework inspired by the "political semiotics" perspective of reading the urban namescape as a "city-text" (40.50%).

Table 3: Theoretical perspectives employed in toponomastic literature

Theoretical framework	N	%
Descriptive (non-theoretical)	19	15.70
Political semiotics (city-text)	49	40.50
Conflict theory (cultural arenas)	33	27.27
Governmentality (urban management)	7	5.79
Commodification (place branding)	8	6.61
Linguistic landscape (LL)	5	4.13
Total	121	100

A second major conceptual strand in odonymic studies is provided by "conflict theory." In a series of works focused on the contested projects of spatial memorialization of Martin Luther King in cities throughout the Southern United States (the so-called "Deep South"), Alderman (2002, 2003) advanced the proposal of theorising street names as "cultural arenas" where social struggles for racial recognition, historical reparation, and memorial justice are being fought out (Mitchelson et al. 2007; Alderman & Inwood 2013). This model was subsequently employed by other scholars in documenting the identity politics played out through naming the urban streetscape in places outside the United States, such as the multi-ethnic Oradea in Romania (Erőss & Tátrai 2010) and the border town of Komotini in northern Greece (Demetriou 2006). Just as there is an intimate relation between political semiotics (theoretical framework) and regime change (geopolitical context), conflict theory in toponomastic research has been predominantly employed to make sense of the politics of place naming in liberal democracies characterised by multiculturalism (racial and/or ethnic pluralism).

A third theoretical perspective used in odonymastic scholarship draws on Foucault's notion of "governmentality" (Foucault 2007). By this term, the

French social thinker referred to the regimes of power-knowledge developed by modern states to control through rational governance their political subjects. This conceptual framework articulated around the Foucauldian idea of governmentality was applied to understand street nomenclatures as part of broader apparatuses of urban governance put in place to achieve efficient management of space. As an integral part of the addressing system, together with the gridiron planning and house numbering, street naming is seen as a crucial technology of power employed in "the production of calculable space" (Rose-Redwood 2008; Rose-Redwood & Bigon 2018; Brocket 2019).

Related with the scholarly interest for unravelling the systematization of street nomenclature in the context of urban governance is the research attention focused on the commodification of toponymy in times of neoliberalism (Light & Young 2015). As the democratic regime changes of state socialisms in 1989–1991 are turned by the passing of time into historical events, scholars have become increasingly more attuned to contemporary developments. In the politics of spatial inscription, the neoliberal commodification of street names through place branding has been the major process. The toponomastic scholarship has documented how this ongoing market assetisation of urban toponymy has unfolded in places across the world – such as Douala and Yaounde in Cameroon (Njoh 2010), Dublin in Ireland (Wonneberger 2012), Acre in Israel (Shoval 2013), and the streets named after Martin Luther King in the United States (Mitchelson et al. 2007) – which highlights the global dimension of this neoliberal transformation of urban namescapes.

Lastly, street names and especially street signs as semiotic devices have been interpreted as constituting "linguistic landscapes" (LL). Articles working from this theoretical framework draw on Landry & Bourhis' (1997: 23) seminal paper, where the linguistic landscape is defined as referring to "the visibility and salience of languages on public and commercial signs in a given territory or region." On such conceptual grounds, toponomastic scholars have studied the ethnic struggles over nominal visibility in places ranging from Transylvania in the 19th century Austria-Hungarian Empire (Berecz 2020), to Pretoria in contemporary South Africa (Kasanga 2015) and Macau in China (Yan & Lee 2014). Other scholars have unearthed the "hidden hierarchies" of ethnic communities embedded in street sings in Toulouse, France (Amos 2017) or charted the new directions of research in toponomastics and linguistic landscapes (Puzey 2011).

3.4. Methodological underpinnings

3.4.1. Research strategy and analytical approach

The theoretical diversity detailed in the previous section is mirrored by the multiplicity of methodological designs employed in toponomastic research. These ranged in terms of both research strategy and analytical approach. Regarding the former, most articles have resorted to qualitative analyses of

street naming processes (92 out of a total of 117, representing 78.63%), in comparison to merely 25 papers drawing of quantitative methods (21.37%). This distribution of articles across the qualitative-quantitative divide indicates a strong methodological preference for approaches grounded on discourse analysis focused on a limited collection of street names that strive to make sense of the wider socio-cultural context in which street name politics are embedded (e.g., Meital 2007). In contrast, quantitative approaches employ statistical techniques of analysing the toponymic data in the quest for documenting the typological structure of street nomenclature (e.g., Basik & Rahautsou 2019) or the patterns of street name changes (e.g, Rusu 2019).

A similar disbalance is present in the analytical approach. In this regard, most papers consist of single case-study research focused on a particular place (80 of the 117 articles, representing 68.38%) (e.g., Gill 2005). Less frequently, scholars transgress this methodological particularism and engage in comparative analyses focused on multiple research sites (37 articles, representing 31.62%). When they go beyond the trappings of the single case-study design, toponomastic researchers tend to compare street naming processes in two (e.g., Augustins 2004) or three places (e.g., Rusu 2020). However, there are also cases when researchers examine numerous cases in a large-scale comparative framework (e.g., Walkowiak 2018).

Table 4: Methodological strategies used in toponomastic research

Analytical approach	Qualitative		Quantitative		Total	
	N	%	N	%	N	%
Comparative analysis	24	26.09	13	52.00	37	31.62
Single case-study	68	73.91	12	48.00	80	68.38
Total	92	100	25	100	117	100

Table 4 presents the crosstabulation between the research strategy (qualitative vs. quantitative) and analytical approach (single case-study vs. comparative analysis). It shows that the most frequent combination of methodological features is that between a qualitative strategy employed on a single case-study design. Secondly, it suggests that the quantitative strategy is closely associated with a comparative analysis approach. The chi-square test pointed out that this distribution is statistically significant ($\chi^2 = 10.697$, df = 3, $p < 0.05$), which suggests that there is a methodological affinity in the literature between the methodological strategies and the analytical approaches.

3.4.2. Historical scope and geographical scale

The final aspects that will be covered in this analysis are the historical scope and geographical scale of toponomastic research, as well as the relationship between these two distinct features. Attentive observers have noticed that most scholars writing on political toponymy and street names, in particular, do so in terms of "specific, local landscapes manifest[ing] broader

social and cultural processes" (Fyfe 1998: 1). To verify this assessment, this paper categorised toponomastic research of street naming along a geographical scale, ranging from local and regional to national and transnational. Indeed, the findings indicate that most studies were situated at the local level (78 articles, representing 69.03%).

In terms of the historical scope, toponomastic scholars approached their subject-matter either in synchronic fashion or in a diachronic perspective. While the former restricts the timeframe of the analysis to a limited historical interval such as, for instance, to documenting street renaming after a singular change in the political regime (e.g., Azaryahu 2011), the latter opens up broader temporal perspectives and examine the dynamics of street (re)naming processes longitudinally, in the *long durée* covering multiple political regimes (e.g., Chloupek 2019). Most articles in toponomastic research are synchronic (80 out of a total of 114, representing 70.18%), which indicates a shortness of historical breath as constituting the analytical norm in the scholarship.

Table 5: Geographical scale and historical scope of toponomastic research

Geographical scale	Diachronic		Synchronic		Total	
	N	%	N	%	N	%
Local	26	76.47	52	65.82	78	69.03
Regional	3	8.82	9	11.39	12	10.62
National	2	5.88	12	15.19	14	12.39
Transnational	3	8.82	6	7.59	9	7.96
Total	34	100	80	100	114	100

Table 5 presents the crosstabulation between geographical scale and historical scope of toponomastic research. The chi-square test returned a statistically non-significant value between geographical scape and historical scope (χ^2 = 6.169, df = 7, $p > 0.05$) that indicates that there is no meaningful association between the two variables. However, the distribution of articles across these categories suggests that both synchronic and diachronic approaches tend to be anchored in local places, as opposed to addressing questions of toponymy at higher geographical scales, such as the national and transnational levels.

4. Conclusions

Street names and the toponymic politics of spatial inscription have become a burgeoning field of research especially after the critical turn in place-name studies. Since the mid-1980s, the academic literature exploring the various facets of street naming processes experienced a genuine scholarly upsurge across the social sciences and the humanities. This review article took stock of the toponomastic scholarship focused on street names through

conducting a meta-analytical, systematic review of 121 relevant peer-reviewed articles identified in the Scopus database. These narrowly defined criteria of selection, established as pragmatic methodological conventions for retrieving the empirical material, are not without consequences.

The language criterion excluded from the analysis a valuable body of works on urban street names published in reputable non-English journals such as *Acta Onomastica* (Czech Republic), *Beiträge zur Namenforschung* (Germany), *Naamkunde* (The Netherlands), *Nouvelle revue d'onomastique* (France), *Onomastica* (Poland), *Onomastica slavo-germanica* (Germany), *Österreichische Namenforschung* (Austria), *Namn och bygd* (Sweden), *Namn og nemne* (Norway), *Rivista italiana di onomastica* (Italy), *Societat d'Onomastica* (Spain), or *Onomastica Uralica* (Hungary/Finland). In addition, the criterion regarding the publication type excluded valuable contributions to toponomastic research that were published in other formats than the peer-reviewed article published in academic journals.

Within these limitative bounds, the statistical analyses carried out on these materials highlight the existence of four main clusters of toponomastic research in terms of the combination between historical context, geographical region, and theoretical framework. These elective affinities are detailed in Table 6.

Table 6: Clustering of toponomastic research

Historical context	Geographical region	Theoretical framework
Imperialism / postcolonialism	Sub-Saharan Africa, Southeast Asia	Political semiotics ("city-text")
Nationalism and state-building	Middle East, Southeast Asia	Political semiotics ("city-text"), Linguistic landscape (LL)
Regime change	CEE and the former Soviet Union, South Africa	Political semiotics ("city-text")
Pluralist societies	Western Europe and North America	Conflict theory, Commodification, Governmentality

These clusters suggest that there are several analytical models and paradigmatic approaches established in toponomastic research. Future work on street naming processes should aim for articulating a better integration that would bring together under a unified conceptual canopy all these various theoretical frameworks and methodological approaches developed for different historical contexts and particular geographical regions.

From a methodological perspective, the currently prevailing qualitative strategies and synchronic focuses indicate a clear disbalance that needs to be addressed by future work. What is required to expand the limits of this research model are more quantitative approaches that survey the historical dynamics of street nomenclatures. A greater degree of theoretical integration could be

achieved if these urban namescapes are conceived of as part of broader linguistic landscapes whose historical development is examined within longitudinal studies ideally located at higher geographical scales than the local and regional settings (that is, at the national and transnational level).

Acknowledgement

References

Alderman, Derek H. 2002. Street names as memorial arenas: The reputational politics of commemorating Martin Luther King Jr. in a Georgia County. *Historical Geography* 29, 99–120.

Alderman, Derek H. 2003. Street names and the scaling of memory: The politics of commemorating Martin Luther King, Jr. within the African American community. *Area* 35(2), 163–173.

Alderman, Derek H. & Inwood, Joshua. 2013. Street naming and the politics of belonging: Spatial injustices in the toponymic commemoration of Martin Luther King Jr. *Social and Cultural Geography* 14(2), 211–233.

Algeo, John. 1978. From classic to classy: Changing fashions in street names. *Names* 26(1), 80–95.

Amos, H. Williams. 2017. Regional language vitality in the linguistic landscape: Hidden hierarchies on street signs in Toulouse. *International Journal of Multilingualism* 14(2), 93–108.

Augustins, Georges. 2004. Naming, dedicating: Street names and tradition. *History and Anthropology* 15(3), 289–299.

Azaryahu, Maoz. 1986. Street names and political identity: The case of East Berlin. *Journal of Contemporary History* 21(4), 581–604.

Azaryahu, Maoz. 1997. German reunification and the politics of street names: the case of East Berlin. *Political Geography* 16(6), 479–493.

Azaryahu, Maoz. 2011. The critical turn and beyond: The case of commemorative street naming. *ACME: An International E-Journal for Critical Geographies* 10(1), 28–33.

Azaryahu, Maoz. 2012. Renaming the past in post-Nazi Germany: Insights into the politics of street naming in Mannheim and Potsdam. *Cultural Geographies* 19(3), 387–400.

Barnett, Clive. 2002. The cultural turn: Fashion or progress in human geography? *Antipode* 30(4), 379–394.

Basik, Sergei & Rahautsou, Dzmitry. 2019. Toponymic politics and the symbolic landscapes of Minsk, Belarus. *Geographia Cassoviensis* 13(2), 107–120.

Berecz, Ágoston. 2020. The language of street signs in Dualist Transylvania and the Banat. *Acta Universitatis Sapientiae, Philologica* 11(2), 23–36.

Berg, Lawrence D. & Vuolteenaho, Jani. (eds.). 2009. *Critical toponymies: The contested politics of place naming*. Farnham: Ashgate.

Bigon, Liora. 2018. Names, norms and forms: French and indigenous toponyms in early colonial Dakar, Senegal. *Planning Perspectives* 23(4), 479–501.

Borenstein, Michael & Hedges, Larry V. & Higgins, Julian P. T. & Rothstein, Hannah R. 2003. *Introduction to meta-analysis*. Hoboken, NJ: Wiley.

Brocket, Tom. 2019. Governmentality, counter-memory and the politics of street naming in Ramallah, Palestine. *Geopolitics*. DOI: doi:10.1080/14650045.2019.1590341

Chloupek, Brett R. 2019. Public memory and political street names in Košice: Slovakia's multiethnic second city. *Journal of Historical Geography* 64, 25–35.

Dabbs, Jack A. 1962a. Street names in Baghdad, Iraq: (Part I). *Names* 10(4), 243–259.

Dabbs, Jack A. 1962b. Street names in Baghdad, Iraq: (Part II). *Names* 10(3), 172–180.

David, Jaroslav. 2011. Commemorative place names – their specificity and problems. *Names* 59(4), 214–228.

David, Jaroslav. 2018. Toponymy in a relocated city: The city of Most, Czech Republic. *Voprosy Onomastiki* 15(2), 70–86.

Davidson, Levette J. 1954. Street-name patterns in Denver. *Names* 2(1), 46–50.

Demetriou, Olga. 2006. Streets not named: Discursive dead ends and the politics of orientation in intercommunal spatial relations in Northern Greece. *Cultural Anthropology* 21(2), 295–321.

Drozdzewski, Danielle. 2014. Using history in the streetscape to affirm geopolitics of memory. *Political Geography* 42, 66–78.

Duminy, James. 2014. Street renaming, symbolic capital, and resistance in Durban, South Africa. *Environment and Planning D: Society and Space* 32(2), 310–328.

Dwyer, Owen J. & Alderman, Derek H. 2008. Memorial landscapes: analytic questions and metaphors. *GeoJournal* 73, 165–178.

Erőss, Ágnes & Tátrai, Patrik. 2010. Ethnic features of symbolic appropriation of public space in changing geopolitical frames: The case of Oradea/ Nagyvárad. *Hungarian Geographical Bulletin* 59(1), 51–68.

Foote, Kenneth E. & Azaryahu, Maoz. 2007. Toward a geography of memory: Geographical dimensions of public memory and commemoration. *Journal of Political and Military Sociology* 35(1), 125–144.

Foucault, Michel. 2007. *Security, territory, population: Lectures at the Collège de France, 1977–1978*. Basingstoke: Palgrave Macmillan.

Fyfe, Nicholas R. 1998. Introduction: reading the street. In Fyfe, Nicholas R. (ed.), *Images of the street: Planning, identity and control of public space*, 1–10 London and New York, NY: Routledge.

Gill, Graeme. 2005. Changing symbols: the renovation of Moscow place names. *The Russian Review* 64(3), 480–503.

Gilpin, George H. 1970. Street-names in San Antonio: Signposts to history. *Names* 18(3), 191–200.

Giraut, Frédéric & Houssay-Holzschuch, Myriam. 2016. Place naming as *dispositif*: toward a theoretical framework. *Geopolitics* 21(1), 1–21.

Gnatiuk, Oleksiy. 2018. The renaming of streets in post-revolutionary Ukraine: Regional strategies to construct a new national identity. *Acta Universitatis Carolinae, Geographica* 53(2), 119–136.

González Faraco, J. Carlos & Murphy, Michael D. 1997. Street names and political regimes in an Andalusian town. *Ethnology* 36(2), 123–148.

Hoelscher, Steven & Alderman, Derek H. 2014. Memory and place: geographies of a critical relationship. *Social & Cultural Geography* 5(3), 347–355.

Huntington, Samuel. 1991. *The third wave: Democratization in the late twentieth century*. Norman, OK: University of Oklahoma Press.

Jameson, Fredric. 1998. *The cultural turn: Selected writings on the postmodern, 1983–1998*. London: Verso.

Karimi, Ali. 2016. Street fights: The commodification of place names in post-Taliban Kabul city. *Annals of the American Association of Geographers* 106(3), 738–753.

Kasanga, Luanga A. 2015. Odonymic changes in central Pretoria: Representation, identity and textual construction of place. *International Journal of the Sociology of Language* 234, 27–45.

Knox, Paul L. 1991. *The restless urban landscape*. Upper Saddle River, NJ: Prentice-Hall.

Landry, Rodrigue & Bourhis, Richard Y. 1997. Linguistic landscape and ethnolinguistic vitality: an empirical study. *Journal of Language and Social Psychology* 16(1), 23–49.

Light, Duncan. 2004. Street names in Bucharest, 1990–1997: Exploring the modern historical geographies of post-socialist change. *Journal of Historical Geography* 30(1), 154–172.

Light, Duncan & Nicolae, Ion & Suditu, Bogdan. 2002. Toponymy and the communist city: street names in Bucharest, 1948–1965. *GeoJournal* 56, 135–144.

Light, Duncan & Young, Craig. 2014. Habit, memory, and the persistence of socialist-era street names in postsocialist Bucharest, Romania. *Annals of the Association of American Geographers* 104(3), 668–685.

Light, Duncan & Young, Craig. 2015. Toponymy as commodity: Exploring the economic dimensions of urban place names. *International Journal of Urban and Regional Research* 39(3), 435–450.

Malone, Hannah. 2017. Legacies of fascism: Architecture, heritage and memory in contemporary Italy. *Modern Italy* 22(4), 445–470.

McCarthy, Kevin M. 1975. Street names in Beirut, Lebanon. *Names* 23(2), 74–88.

Meikle, James. 1940. Old Glasgow place-names and others. *Scottish Geographical Magazine* 56(3), 112–115.

Meital, Yoram. 2007. Central Cairo: Street naming and the struggle over historical representation. *Middle Eastern Studies* 43(6), 857–878.

Mikailiene, Živilė. 2010. Soviet Vilnius: Ideology and the formation of identity. *Lithuanian Historical Studies* 15, 171–189.

Mitchelson, Matthew L. & Alderman, Derek H. & Popke, E. Jeffrey. 2007. Branded: The economic geographies of streets named in honor of Reverend Dr. Martin Luther King, Jr. *Social Science Quarterly* 88(1), 120–145.

Moher, David & Liberati, Alessandro & Tetzlaff, Jennifer & Altman, Douglas G. & The PRISMA Group. 2009. Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *PLoS Med* 6(7), e1000097. DOI: https://doi.org/10.1371/journal.pmed.1000097

Neethling, Bertie. 2016. Street names: A changing urban landscape. In Hough, Carole (ed.), *The Oxford handbook of names and naming*, 158–166. Oxford: Oxford University Press.

Njoh, Ambe J. 2010. Toponymic inscription, physical addressing and the challenge of urban management in an era of globalization in Cameroon. *Habitat International* 34(4), 427–435.

Njoh, Ambe J. & Chie, Esther P. 2019. Vocabularies of spatiality in French colonial urbanism: some covert rationales of street names in colonial Dakar, West Africa and Saigon, Indochina. *Journal of Asian and African Studies* 54(8), 1109–1127.

Oto-Peralías, Daniel. 2018. What do street names tell us? The "city-text" as socio-cultural data. *Journal of Economic Geography* 18(1), 197–211.

Palonen, Emilia. 2008. The city-text in post-communist Budapest: street names, memorials, and the politics of commemoration. *GeoJournal* 73, 219–230.

Paterson, Barbara L. & Thorne, Sally E. & Canam, Connie & Jillings, Carol. 2001. *Meta-study of qualitative health research: A practical guide to meta-analysis and meta-synthesis*. Thousand Oaks, CA: Sage.

Pillsbury, Richard. 1969. The street name systems of Pennsylvania before 1820. *Names* 17(3), 214–222.

Puzey, Guy. 2011. New research directions in toponomastics and linguistic landscapes. *Onoma* 46, 211–226.

Ristic, Mirjana. 2015. Intangible borders: Everyday spatialities of ethnic division in postwar Sarajevo. *Fabrications* 25(3), 322–343.

Rose-Redwood, Reuben. 2008. "Sixth Avenue is now a memory": Regimes of spatial inscription and the performative limits of the official city-text. *Political Geography* 27(8), 875–894.

Rose-Redwood, Reuben. 2011. Rethinking the agenda of political toponymy. *ACME: An International E-Journal for Critical Geographies* 10(1), 34–41.

Rose-Redwood, Reuben & Alderman, Derek H. & Azaryahu, Maoz. 2011. Geographies of toponymic inscription: new directions in critical place-name studies. *Progress in Human Geography* 34(4), 453–470.

Rose-Redwood, Reuben & Bigon, Liora (eds.). 2018. *Gridded worlds: An urban anthology*. Cham: Springer.

Rusu, Mihai S. 2019. Shifting urban namescapes: Street name politics and toponymic change in a Romanian(ised) city. *Journal of Historical Geography* 65, 48–58.

Rusu, Mihai S. 2020. Political patterning of urban namescapes and post-socialist toponymic change: A quantitative analysis of three Romanian cities. *Cities* 103, 102773.

Šakaja, Laura & Stanić, Jelena. 2011. Other(ing), self(portraying), negotiating: The spatial codification of values in Zagreb's city-text. *Cultural Geographies* 18(4), 495–516.

Sandelowski, Margarete & Barroso, Julie. 2003. Creating metasummaries of qualitative findings. *Nursing Research* 52, 226–233.

Shoval, Noam. 2013. Street-naming, tourism development and cultural conflict: The case of the Old City of Acre/Akko/Akka. *Transactions of the Institute of British Geographers* 38(4), 612–626.

Tucci, Michelle & Ronza, Rocco W. & Giordano, Alberto. 2011. Fragments from many pasts: Layering the toponymic tapestry of Milan. *Journal of Historical Geography* 37(3), 370–384.

Vuolteenaho, Jani & Berg, Lawrence D. 2009. Towards critical toponymies. In Berg, Lawrence D. & Vuolteenaho, Jani (eds.), *Critical toponymies: The contested politics of place naming*, 1–18. Farnham: Ashgate.

Walkowiak, Justyna B. 2018. Female street namesakes in selected Polish cities. *Mitteilungen der Osterreichischen Geographischen Gesellschaft* 160, 331–350.

Walkowiak, Justina B. 2019. Jména jako skryté potvrzení identity: K propagandistickým urbanonymům poválečného západopolského pohraničí [Names as covert affirmation of identity: On some propagandistic urbanonyms of the post-war western borderlands in Poland]. *Acta Onomastica* 60(1), 138–149.

Weidenhöffer, Jessica. 2016. Jüdische straßennamen in Hamburg untersuchung zur ideologisierung von straßenbenennungen [Jewish street names in Hamburg. Investigation on the ideologization of the naming of streets]. *Muttersprache* 126(2), 105–128.

Wonneberger, Astrid. 2012. Diving bells, Viking street names and campshires: The meaning of locality amidst waterfront renewal in Dublin. *Sociologus* 62(2), 143–170.

Yan, Libo & Lee, Maria Younghee. 2014. Tourist perceptions of the multi-linguistic landscape in Macau. *Journal of China Tourism Research* 10(4), 432–447.

Yeoh, Brenda S.A. 1996. Street-naming and nation-building: Toponymic inscriptions of nationhood in Singapore. *Area* 28(3), 298–307.