## Diffusion Through Multiple Domains: The Spread of Romantic Nationalism Across Europe, 1770–1930<sup>1</sup>

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We examine an extraordinarily consequential case of ideational diffusion: how cultural nationalism spread across Europe from the French Revolution to the First World War, "awakening" nation after nation. Through which pathways did Romantic nationalism proliferate, and where did it fall on fertile ground? Using regression analysis with 2,300 cities as observational units and a large number of geocoded data sources, we show that Romantic nationalism resonated most in states ruled by dynasties of foreign origins, which contradicted nationalist ideals of self-rule. Other frame resonance mechanisms (such as the compatibility between old and new templates) do not seem to have been at play. Regarding pathways, we show that Romantic nationalism spread across linguistic, religious, and political boundaries and simultaneously through personal networks, cultural institutions, and within clusters of historically connected cities. The article advances the study of multiplex diffusion processes, introduces frame resonance mechanisms into diffusion research, and offers the first quantitative account of the rise of cultural nationalism across Europe.

#### INTRODUCTION

What Is Romantic Nationalism and Why Study It?

Romantic nationalism profoundly transformed the intellectual culture of the modern world. Similar to other well-studied cases of ideational diffusion,

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such as Protestantism (Becker et al. 2020), democratic ideals (Wejnert 2005), or more recently neoliberalism (Fourcade-Gourinchas and Babb 2002), Romantic nationalism was extraordinarily consequential for the political organization of modernity.

It prepared the ground for the nationalist political revolutions of the 19th and 20th centuries (Hroch [1968] 2000), which radically changed the political landscape of Europe and beyond: multiethnic empires (such as the Habsburg) and dynastic states (such as the Grand Duchy of Tuscany) were replaced by nation-states, each ruled in the name of a distinct people (such as Hungarians or Italians). Before political movements could "liberate" Hungarians from "foreign rule" or "unite" Italians under one political roof, nations had to be imagined: someone needed to describe the speakers of the various Hungarian and Italian dialects as specific and unique "nations" held together by shared history and common culture.

This is what Romantic nationalists achieved (Kedourie 1960; Kohn 1960; Hroch [1969] 2000; Smith 1986, chaps. 7 and 8). They wrote the history of their nation's golden age and its contemporary struggle for independence or unity, replacing the dynastic histories of before. They systematized vernacular languages, hitherto overlooked and despised as plebeian tongues, in grammar books and vocabularies and thus made them fit for poetry as well as languages of administration to replace Latin or Ottoman. They inventoried the folk tales, peasant customs, and popular music that expressed the "national culture" in its purest forms, uncontaminated by urbanization, industrialization, and the transnational civilization of the elite.

Romantic nationalism not only had massive political consequences but also durably shaped perceptions, both lay and scholarly, of the social world as well as our everyday behavior in it (often termed "banal nationalism," following Billig [1995]; see more recently Bonikowski [2016]). Furthermore, it provided the intellectual foundations of important strands of contemporary politics, including identity politics on the left (Taylor 1992) or populist nationalism on the right (Bonikowski 2017).

Famous examples of work from the early days of cultural nationalism include the orchestral piece "The Moldau," created by the Czech nationalist

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composer Smetana. The melody evokes the landscape around the Moldau River as it swells from a small brook in the Bohemian mountains to a mighty river majestically streaming past Prague. It is part of an orchestral suite tellingly named *Má Vlast (My Country)*, composed almost half a century before the country Czechoslovakia arose from the rubble of the Habsburg empire.

A canonical example of a written text is Fichte's *Address to the German Nation* of 1808, a series of lectures held in Berlin while it was occupied by Napoleon's troops. It was penned half a century before Bismarck hammered together a unified German nation-state. Fichte extended the Enlightenment concept of the social contract across generations, suggesting that the nation represents a transhistorical body beyond the experience of any individual life.

In the visual arts, we can point at paintings from the "national history" genre, such as Johann Peter Krafft's 1796 portrait of the legendary Swiss marksman William Tell, finished more than half a century before the Swiss city-states unified into a modern nation-state. Tell led the original three Swiss cantons toward independence from their Habsburg overlords in the late 13th century and became one of the linchpins of official Swiss nationalism from the middle of the 19th century onward.

#### Preview of the Argument, Data, and Findings

How do we sociologically understand and comparatively explain the spread of Romantic nationalism across Europe's long 19th century? Early scholarship weighed its positive (Smith 1986, chaps. 7 and 8) and negative (Kedourie 1960; Kohn 1960) political consequences or debated whether it merely reconfigured earlier narratives and symbols of collective identity or broke away from these entirely (see the summary by Ozkirimli [2000]). Here, we aim for a comparative explanation of the specific mechanisms behind this momentous, epoch-defining cultural transformation.

We study Romantic nationalism as a case of the diffusion of a new cultural frame, examining the channels through which it occurred and the social contexts in which it resonated more strongly. Regarding channels, we go beyond simpler, single-network approaches and extend existing studies of diffusion in multiplex networks (Gould 1991; Becker et al. 2020) by exploring a whole range of possible conduits through which Romantic nationalism may have proliferated. Introducing theories of frame resonance into the diffusion literature, we explore three distinct reasons for which Romantic nationalism may have fallen on more fertile grounds in certain parts of the Continent than in others.

To realize this twofold project empirically, we assembled a novel dataset from a wide variety of sources. The units of observations in most analyses are the roughly 2,300 cities and towns of Europe with more than 10,000 inhabitants (using the well-known database of Bosker, Buringh, and Van

Zanden [2013]), which we follow from 1770 to 1929 with decadal observations. The dependent variable is the number of Romantic nationalist works in the genres of writing, music, and the visual arts produced in a town, as recorded in the online version of the monumental *Encyclopedia of Romantic Nationalism in Europe (ERNiE*; Leerssen, van Baal, and Rock 2018). *ERNiE* was produced by around 350 humanities scholars specializing in specific writers or artists or particular Romantic nationalist movements. The three examples of Romantic nationalist works cited above are all taken from *ERNiE*. Our sample consists of 1,454 writings, 1,047 pieces of music, and 3,499 works of visual art produced between 1770 and 1929.

A considerable amount of data work was required to code the independent variables that allow us to assess where Romantic nationalism resonated and through which channels it diffused. To avoid looking at only those conduits through which diffusion actually occurred—a common problem in diffusion research—we explored a wide range of plausible possibilities. The resulting city-level dataset also helps to overcome the "methodological nationalism" (Wimmer and Glick Schiller 2002) of many existing studies that document the cultural "awakening" and eventual political mobilization of a nation in an internalist and teleological narrative, mostly using would-be nations as units of observation and analysis.

We find that Romantic nationalism flourished in cities ruled by foreign dynasties or that fell under the Napoleonic empire, both of which contradicted nationalist ideals of self-rule and lent nationalist claims more appeal (what we will call the "contradicting ideals" type of resonance). By contrast, we do not find that Romantic nationalism took root where it was "culturally compatible" with already established frames, such as the protonationalist communities imagined by Protestantism, or where it was "empirically credible," such as in areas of shared vernacular language that nationalists often saw as the empirical foundation of nationhood.

Through which channels did early nationalism diffuse? We show that it proliferated simultaneously through multiple pathways. Towns and artists/ writers who received letters from prominent Romantic nationalists were subsequently more likely to produce nationalist writings—thus confirming the importance of personal networks even for macrocultural change, as recently highlighted by Becker et al. (2020).<sup>2</sup> Romantic nationalism also spread in proximity to universities and newspapers located in towns that had already become "infected" with Romantic nationalism. Finally, it expanded within regions of dense communication and cultural similarity that had been established since late antiquity. These domains of connectivity are all specific to the production of intellectual products. More generic channels that are relevant for the circulation of other types of objects as well, such as those established

<sup>&</sup>lt;sup>2</sup> Similarly for macropolitical change, see Padgett and Ansell (1993) and Bearman (1993).

by shared statehood or networks of stagecoaches and railroads, did not seem to provide conduits through which nationalist work proliferated.

Overall, the viral spread of Romantic nationalism resembles how French sociologist Gabriel Tarde (1890) imagined, in the late 19th century, most large-scale cultural change to happen: as the result of the concatenation of multiple chains of imitation that proceed independently through different channels, moderated by how much the new ideas resonate in local cultural contexts (Katz 1999). In the concluding section, we discuss more specifically how our findings contribute to the literatures on diffusion, on nationalism, and on transformative cultural change more broadly.

#### THEORY

Modernist accounts see Romantic nationalism as a product of domestic, endogenous processes, as in the classical theories of nationalism, for example of Ernest Gellner (1983). For diffusionist scholars, by contrast, cultural frames such as nationalism travel independently of how far modernity has already advanced locally. This perspective was pioneered by Kedourie (1960), who deplored the spread of Romantic nationalism because it eventually brought an end to the relative peace that had prevailed in multiethnic empires. It was central to Anderson's account of the "modular" nature of nationalism, which is "capable of being transplanted . . . to a great variety of social terrains, to merge and be merged with a correspondingly wide variety of political and ideological constellations" (Anderson 1991, p. 4; see also chap. 7), leading from the early republican versions developed in the Americas, to the languagebased popular nationalisms of the Romantic era, to the top-down, imperial nationalisms of the late 19th century, all the way into the various Marxist or fascist blends of the 20th.3 Building on Anderson, Brubaker's (1996) constructivist approach sees nationalism as a flexible mode of social classification that can be adopted by different actors for varying political ends. Political scientist Timur Kuran (1998) models the spread of nationalism between individuals as a contagion process propelled forward by social influence mechanisms. In the humanities, cultural historian Joep Leerssen (e.g., 2006, 2013, 2020) has studied Romantic nationalism extensively, arguing that it spread through a complex network of personal connections that crisscrossed the political and linguistic communities of the 19th century.<sup>4</sup>

<sup>&</sup>lt;sup>3</sup> There is also related work on the global spread of the nation-state (see, e.g., Strang 1990, 1991; Wimmer and Feinstein 2010).

<sup>&</sup>lt;sup>4</sup> A good example is the diffusion of the "national epos," which was adopted from the original Icelandic model (the Edda) by French nationalists in the Chanson de Roland, Germans in the Nibelungenlied, Russians in the Lay of Prince Igor, the Dutch in the Caerle ende Eelegast, the English in the Beowulf, the Irish in the tale of Deirdre, and so on (Leerssen 2013, p. 22).

We further develop this diffusionist account theoretically and conceptually and for the first time use systematic empirical data to substantiate it. Theoretically, we rely on arguments about frame resonance from the social movement literature on the one hand and on recent advances in the study of multiplex diffusion networks on the other hand.<sup>5</sup>

#### Three Variants of Frame Resonance

Diffusion research examines the channels and networks through which new ideas spread. Obviously, not everyone who is exposed to a new idea through these channels will eventually adopt it. A crucial part of diffusion studies (Katz 1999) is therefore to identify those features of individuals or the local context that will increase the propensity to adopt the new way of thinking or acting. To conceptualize local receptivity, we go back to the concept of frame resonance, originally developed in social movement research (Snow et al. 1986; for a more general formulation, see McDonnell, Bail, and Tavory [2017]).

Frame resonance comes in three different variants (following McCammon 2013),<sup>7</sup> all of which could be relevant for understanding the spread of nationalism. While not mutually exclusive, they represent distinct mechanisms of how a new idea gains local traction. Only one of these is regularly considered in diffusion studies. The potential of the frame resonance perspective for our understanding of cultural diffusion processes has therefore yet to be fully harnessed (cf. Snow et al. 2014, p. 37).<sup>8</sup> We move in this direction by testing whether any of the three main resonance mechanisms are relevant for the case at hand.

<sup>&</sup>lt;sup>5</sup> Other equally interesting questions arising from the diffusion literature are not addressed here. Perhaps the most obvious ones are the origin of an innovation, the mechanisms of diffusion (such as competition or emulation), the role of network topology, or how an innovation changes during the process of diffusion.

<sup>&</sup>lt;sup>6</sup> The concept of frames bears a family resemblance with pragmatist cultural sociology, which uses terms such as "cultural repertoires" (Lamont and Thévenot 2000) or "tool kits" (Swidler 1986). In this pragmatist tradition, the emphasis lies on how individuals choose between different repertoires/tool kits or combine elements from various such repertoires/tool kits to pursue their own ends. In our context, we are less interested in these questions than we are in the more basic problem of understanding how new repertoires or tools enter the choice set, in line with movement research that studies how cultural movements can introduce and spread new ideas. We also prefer "frame" over "schema," borrowed from cognitive sciences (DiMaggio 1997), because the latter is associated with individual-level processes, rather than with the society-level emergence of new ideologies.

 $<sup>^7</sup>$  For a more fine-grained typology, see Benford and Snow (2000, pp. 619–22); for a differently structured typology, see Wetts (2023).

<sup>&</sup>lt;sup>8</sup> Researchers who study diffusion of or between movements don't seem to rely on frame resonance mechanisms (see overview in Soule and Roggeband [2018]).

In both movement and diffusion research, many researchers have considered the role of cultural compatibility, that is, the overlap between new and old cultural frames. It should facilitate adoption, as argued by a range of authors, from early diffusion scholars (Rogers 1995, pp. 240–56) to more recent organizational sociologists (Czarniawska and Sevon 1996; Strang and Soule 1998, pp. 276–79; Love and Cebon 2008; Levitt and Merry 2009), international relations scholars (Cortell and Davis 2000, pp. 73–76), sociologists of science (Cheng et al. 2023), and adherents of world polity theory (Pope and Meyer 2016). To cite an example, the idea of gender equality may not sit well with cultural expectations that are widespread throughout the "patriarchal belt," which stretches from the Middle East to South Asia.

In the nationalism literature, many have argued that Protestantism prepared the ground for nationalism by introducing the concept of an egalitarian community to which individuals belong in an unmediated, direct way; by promoting vernacular languages as vehicles of shared faith; and by demanding that ruler and ruled belonged to the same creed (see the summary in Brubaker [2012, pp. 6–8]), thus preconfiguring core characteristics of the idea of the nation.

A second variant of frame resonance is that new discursive frames can be more or less empirically credible (Snow and Benford 1988; Benford and Snow 2000), a mechanism rarely considered in diffusion research. For example, a well-documented description of gender inequalities in pay should enhance the credibility of feminist frames. We derive a specific hypothesis from this argument: Romantic nationalism should become more plausible if nationalists have already empirically documented the existence of a nation's unique language, music, history, or folk culture. Most Romantic nationalists identified nations, following in the footsteps of philosopher Johann Gottfried Herder (1744–1803), on the basis of linguistic commonality (Leerssen 2013, pp. 12–14).

In some parts of Europe, nationalists used religion as a distinguishing feature of the nation as well, especially where this allowed them to further differentiate the nation from the culture of imperial elites, <sup>10</sup> as was the case in southeastern (e.g., in Greece) and Eastern Europe (notably in Poland) as well as in Ireland. <sup>11</sup> If empirical credibility was a major mechanism, Romantic

<sup>&</sup>lt;sup>9</sup> For studies of social movements that focus on the empirical credibility mechanism, see Zuo and Benford (1995); McVeigh, Welch, and Bjarnason (2003); and Williamson, Trump, and Einstein (2018).

<sup>&</sup>lt;sup>10</sup> Religious domains could also gain relevance through the associated organizational networks. Some nationalisms (e.g., in Slovenia, Serbia, and Ukraine) were propagated by the clergy, especially in the early phases (for a case study, see Himka [1979]). This would relate to a diffusion mechanism proper, however, rather than a frame resonance mechanism.

<sup>&</sup>lt;sup>11</sup> In northwestern continental Europe, by contrast, nationalists downplayed the historical divide between Catholics and Protestants and emphasized linguistic commonalities

nationalism should spread within linguistic or religious communities, with early nationalist work establishing that it is empirically plausible to think of this particular group of people as a culturally distinct nation, thus laying the ground for future nationalist work.<sup>12</sup>

A third variant of frame resonance is much less often studied (Maney, Woehrle, and Coy 2005; McCammon 2013; see also McDonnell et al. 2017). We call it the "contrasting ideals" mechanism, where a frame resonates because it offers the image of an ideal world, a utopia of sorts, that contrasts with the current state of social reality (see also the idea of "oppositional consciousness" developed by Mansbridge and Morris [2001]). For example, the ideal of equality before God that characterizes both Islam and Christianity appealed to those at the bottom of the ritual hierarchy of Hinduism, which explains a good deal of modern conversions to the two monotheistic faiths in India (Bauman 2008).

For the case at hand, we hypothesize that in areas where nationalist principles of legitimacy—the rule of like-over-like—are violated, Romantic nationalism should be more attractive to local intellectuals and artists compared to self-ruled, culturally homogenous states where nationalist calls for cultural autonomy and political self-determination seem less relevant.<sup>13</sup> More specifically, areas ruled by dynasties of recognizable foreign origin should provide the most fertile ground for the spread of romantic nationalism.

In the history of the 19th century, such foreign rule expanded across the continent with the conquests of Napoleon. It has been widely demonstrated that French military occupation and political domination stimulated nationalist resentment. It exposed formerly "self-ruled" peoples (e.g., in modernday Germany) to foreign rule and thus made them aware of the unique characteristics of their own culture, language, and history. Romanticism also opposed the rationalist, universalist principles embodied by the French

instead (e.g., in Germany or the Netherlands). In religiously homogenous (Catholic) southern and southwestern Europe, religion did not serve as a marker of national difference either

<sup>&</sup>lt;sup>12</sup> As argued by Strang and Meyer (1993, pp. 490–92), such similarity could also enhance diffusion through homophilious imitation as well as mutual orientation toward each other (see also McAdam and Rucht 1993).

<sup>&</sup>lt;sup>13</sup> This hypothesis is observationally compatible with a modernization account, as developed by Hechter (2000), according to which political centralization and the rise of modern bureaucracies made foreign rule more relevant for the everyday lives of individuals and thus spurred nationalist reactions. We lack systematic data on political centralization across the polities of Europe to disentangle the political modernization from a diffusionist frame resonance mechanism.

<sup>&</sup>lt;sup>14</sup> More generally on the role of resentment in generating nationalism, see Greenfeld (1992).

enlightenment, revolution, and empire, thus making it attractive as a counter model for the intellectual elites of subjugated peoples.

## Diffusion through Multiple Channels

The second strand of research that inspired our project is the study of multiple networks of diffusion. The possibility of multiple channels has recently attracted the attention of diffusion scholars from a variety of angles. In international relations, researchers have started to ask which ties between countries empirically channel diffusion processes (Zhukov and Stewart 2013). Scholars working in the tradition of world polity theory have recognized that global organizational networks are increasingly fragmented into regional clusters (Beckfield 2003). Similarly, Velasco (2023) has shown that the world polity is segmented into different networks of nongovernmental organizations through which different—even opposed—cultural frames diffuse. At a more theoretical level, Wimmer (2021) has suggested accounting for multiple and overlapping networks of influence to understand how different, often conflicting, cultural templates simultaneously spread around the world.

In sociological network studies, scholars have considered the multiplexity of networks, where the same actors are linked through different kinds of ties (Gould 1991; Becker et al. 2020). <sup>15</sup> Building on these studies, Hsiao and Pfaff (2022, p. 8) have called for the study of "multiplex networks" and "multiple diffusion processes" to understand the spread of radically new ideas. Similarly, an authoritative recent review of network and diffusion research concludes that "the unidimensional quality of many network studies to date, focusing on one type of tie, misses much of the richness present in social life. Reincorporating multiplicity provides . . . another way to balance depth and breadth to answer important comparative questions" (Rawlings et al. 2023, p. 412, echoing Wang and Soule 2012, p. 1715).

These various strands of inquiry lead to a question this article seeks to address empirically: through which of the various channels of connectivity are cultural templates more likely to diffuse? Distinguishing between different possible channels of influence and diffusion is also important to avoid confirmation bias: most research (with important exceptions such as Simmons and Elkins [2004]) simply focuses on those channels through which diffusion actually occurred. We thus cannot ask which networks are more likely to channel which kind of diffusion processes and why.

We adopt Wimmer's (2021) terminology and describe a network of individuals, institutions, or localities that are connected with each other through

<sup>&</sup>lt;sup>15</sup> Work in physics has started to mathematically model diffusion in such multiplex networks (Gomez et al. 2013; Battiston, Nicosia, and Latora 2014).

a particular type of tie as a "domain": a relatively bounded but overlapping area of connectivity within which diffusion processes are more likely to occur. For simplicity, we also use the term *domain* to describe areas where a frame should be more resonant, for the three reasons discussed above, and thus also more likely to be adopted by the local population.

We distinguish, as is common in the literature (e.g., Rogers 1995, chap. 5; Becker et al. 2020; Soule and Roggeband 2018), between personal networks—where influence travels through connections between individuals—and other channels of diffusion. For nonpersonal channels, we further distinguish between cultural, political, and economic domains of diffusion, thus covering a large range of plausible channels<sup>16</sup>—with the notable exception of professional networks (such as through membership in academies or Free Mason lodges), for which we lack empirical data. Further below, we will differentiate between domains that are more specific to intellectual production and those of a more generic nature relevant for other sectors of social life as well.<sup>17</sup>

For personal networks, we rely on letters written by the most prominent Romantic nationalists, following up on Becker et al.'s (2020) analysis of the role of Luther's letters in diffusing Protestantism. Ideally, we would have information on letters written by all intellectuals, whether or not they were Romantic nationalists. Alas, no such data are available. We hypothesize that writers and artists who received letters from prominent Romantic nationalists before they produced their first nationalist work were more likely and more quickly to subsequently do so. At the city level, cities that received such letters should produce more nationalist work in the future and more quickly.

For cultural channels, we gathered data on the spatial proximity to university or newspaper towns that had seen nationalist production already. Universities and newspapers were major centers of cultural innovation and dissemination in Europe's long 19th century. More specifically, universities were often hotbeds of Romantic nationalist activism (cf. Leerssen 2006, p. 597). Newspapers provided not only the discursive raw material for imagining a nation, as in Anderson's (1991) canonical account, but also disseminated nationalist content (or even propaganda) themselves. Not surprisingly, mass media are one of the most cited channels in diffusion research more generally, from Rogers's (1995, chap. 5) seminal work onward.

<sup>&</sup>lt;sup>16</sup> We note here that our literature search did not produce a systematic typology of diffusion channels. We integrate, however, the most prominent distinctions. We also note that the various channels we consider here provide examples of all types of network ties listed by Borgatti (2009).

<sup>&</sup>lt;sup>17</sup> Conceptually, this distinction maps onto those made by scholars of technology diffusion (where geographic proximity is opposed to more specific channels such as R&D foreign direct investment; Keller 2004) or the diffusion of policies (where sectoral ties are distinguished from more generic ties between countries; Jordana, Levi-Faur, and i Marín 2011).

But cultural frames could also have disseminated along more informal, less institutionalized cultural channels, such as the regions of long-standing connectivity and cultural commonality that emerged during Roman times and consolidated throughout the Middle Ages. As others have shown, the Roman road networks that dominated Europe's transportation system from late antiquity until the 18th century produced, over the centuries, regions of cultural similarity, as shown in contemporary survey data on normative preferences (Flückiger et al. 2022). Romantic nationalism may very well have diffused within these regions because mutual awareness of each other and cultural similarity enhance the borrowing of new ideas (Rogers 1995, pp. 305–8; Strang and Meyer 1993, pp. 490–92).

Romantic nationalism could also have spread within political domains, especially those formed by the polities that existed at various points throughout the 19th and early 20th centuries. States bundled and bounded networks of artists and writers, for example, in artistic or (proto-)political associations within which artists and writers got to know each other. Equally importantly, members of the same polity shared an orientation toward the state, its decisions, narratives, and symbols, and thus form an arena of mutual awareness within which diffusion processes can unfold (McAdam and Rucht 1993).

For economic and infrastructural domains of connectivity, we focus on the stagecoach networks that expanded across Europe from the late 17th century onward—replacing the medieval road system inherited from the Romans—as well as on the railroad networks that proliferated from the middle of the 19th century onward. An idea should be adopted more quickly if its origins lie 10 miles down the road than if it takes 5,000 miles of roads to get there. Indeed, previous research suggests that Christianity diffused along the Roman road network in antiquity (Fousek et al. 2018), that the establishment of railways in British India increased trade between regions (Donaldson 2018), and that scientific innovations traveled along the railway lines of 19th-century Germany as well (Chiopris 2024).

These infrastructural domains were obviously more general than most others discussed above, as they fostered, as these examples suggest, the spread of religion, the trade of material goods, and the exchange of scientific ideas. This leads us to distinguish between more specific and more generic domains, as mentioned above. Specific domains are those within which intellectual products (such as Romantic nationalism) are particularly likely to circulate, while other kinds of objects (say, sacks of coffee) are less likely to be transmitted. More generic domains are those within which many different things circulate—from goods and merchandise to individuals or ideas.

Table 1 gives an overview of the various domains that are candidates for the diffusion of Romantic nationalism as well as the areas particularly receptive to the new creed according to the three frame resonance arguments.

TABLE 1 A Typology of Domains

Type of mechanism	Domain	Specificity
Frame resonance:		
Cultural compatibility	Protestant cities	
Empirical credibility	Language or religious communities	
Contrasting ideals	Foreign ruled territories	
	Napoleon's empire	
Connectivity/proximity:	•	
Diffusion through personal networks	Letters of nationalist writers	High
Diffusion through cultural channels	Proximity to towns with newspapers or universities with previous nationalist production	High
	Regions of long-established connectivity and cultural similarity	High
Diffusion through political channels	Polities	Low
Diffusion through infrastructural channels	Proximity to nationalist work via the stagecoach or railways networks	Low

We note which of these domains are more specific to intellectual life and which ones are of a more generic nature.

#### HYPOTHESES AND DATA ON INDEPENDENT VARIABLES

In contrast, for example, to the study of contemporary diffusion between countries, no data on these domains exist for 19th-century Europe. Most existing diffusion research on these and earlier periods is therefore limited to a single measurement of relationships between units. 18 Other research simply uses geographic distance between places as a measure of connectivity and assumes that diffusion must be at work if proximity between two locales predicts adoption (as criticized by Everton and Pfaff [2022]).

To empirically execute our multiple domains approach and to explore the various frame resonance mechanisms, considerable data work was therefore needed. We synthesized and geocoded nearly two dozen sources, from linguistic maps to information on which railroad line was opened in which

<sup>&</sup>lt;sup>18</sup> Wurpts, Corcoran, and Pfaff (2018) rely on trade relationships or membership in an alliance of cities. Fousek et al. (2018) use a road network. Gould (1991) produced two measurements, one for organizational ties and one for neighborhood coresidency, in his famed network study of the French insurrection of 1871. Becker et al. (2020) consider three types of personal ties to Luther in their study of the Reformation. Even research on contemporary diffusion often restricts the analysis to one or two indicators of network connectivity, such as, at the country level, membership in international government organizations or the presence of international nongovernmental organizations, as in much diffusion research inspired by world polity theory (e.g., Boli and Thomas 1997).

year across the Continent. They are listed in online appendix A, together with descriptive statistics.

In line with the spatial lag approach, which is now standard in much diffusion research, we define influence as proximity to prior nationalist work. However, we refine this approach by adding geographic specificity to the idea of proximity, measuring it as miles of distance in a spatially defined network (e.g., distance within a railway network) rather than as linear geographic distance (for which we control, however, in robustness models). Where we don't have spatially specified networks (as is the case with shared polities, for example) and to test some of the frame resonance mechanisms, we use a temporal lag and measure influence as the number of nationalist works produced in the previous decade within the same domain. A number of theoretically meaningful control variables are added, which we discuss further below.

Some other plausible arguments linking the rise of nationalism endogenously to political turmoil and conflict (such as the failed revolutions of 1848) or to memories of lost statehood (as in Poland) or to industrialization (à la Gellner 1983) will be briefly discussed in the section "Alternative Explanations and Robustness Checks," along with the corresponding measurements and data sources.

#### Language and Religion

Two of the three frame resonance arguments refer to the religious or linguistic characteristics of cities. According to the cultural compatibility argument, Protestant cities should produce more nationalist work than other cities (hypothesis 1 [H1]). The empirical credibility argument suggests that the more Romantic nationalist work has already been produced within an area of shared language or religion, the more it should encourage further such production in the future (H2).

We used two language maps covering 57 languages, which we also group into 16 language families for robustness, to code which vernacular language the majority of city inhabitants spoke during the 19th century: one published in a Rand McNally atlas (1897) for non-Russian countries and the Russian census language map of 1897 (based on Troinitskii 1905) for Russia. We georeferenced the two language maps to determine which linguistic "zone" a given city coordinate falls into. We adopt a similar approach to identify Protestant cities and religious groups more generally, using two different maps (Andrees 1887; *The Times* 1900) to code cities as majority Catholic, Protestant, Greek Orthodox, Armenian Orthodox, Muslim, or Buddhist. Some regions have overlapping religions (e.g., Muslims and Armenian Christians in central and eastern Turkey), in which case we counted nationalist artworks for both religions. For robustness purposes, we regrouped the Christian

religions into the two categories of Western and Eastern Christianity. Appendix B shows the robustness tests and offers additional details about the linguistic and religious data.<sup>19</sup>

## Foreign Rule

Cities situated in dynastic states whose rulers were of "foreign" origin should be more likely to embrace nationalism than other cities (H3). To test this frame resonance argument, we first coded the polity to which each city belonged in each decade according to Wimmer (2023), who uses the most fine-grained standardized regions (NUTS 3) of the European Social Survey as units of observation. We then added a dummy variable for "foreign rule," coded as 1 if the governing elites of a state were perceived by themselves and the population at large to be of different ethnic or religious origin from the majority of their subjects. Thus, Ottoman territories in Christian Europe are coded as 1 but as 0 in Turkey. The British or Romanov monarchy was not considered "foreign" (despite both dynasties' German origins), while Habsburg rule over Greece was.

There is a temporal and a spatial aspect to the Napoleonic occupation, and we thus formulate two distinct hypotheses. First, we expect that Romantic nationalist work appears most often in the decades during and immediately after Napoleonic rule (H4). Second, Romantic nationalism should emerge in towns that belonged to a state occupied by Napoleon (thus generating a nationalist backlash) but lying outside of direct control of the empire or one of its puppet states (H5). In these towns, writers and artists could produce nationalist, anti-Napoleonic work without being censored by the well-organized French imperial agencies. The history of the Free Masons in Belgium under Napoleonic rule illustrates their effectiveness: they transformed

<sup>19</sup> We unfortunately could not find comprehensive maps of the geographic distribution of religious and language groups in earlier decades. We believe, however, that linguistic and religious change was relatively minor over the long 19th century and should have changed the majority population in few of the 2,300 cities. According to Bade (2008), a major historian of European migration, the main flows during the long 19th century were rural-urban migrations of a usually short distance (almost always within language groups) as well as a massive emigration wave to the New World, which didn't affect the religious or linguistic majorities in European cities. The Napoleonic Wars were not associated with major population displacement, in contrast to the Balkan wars of 1912/13, which are situated at the very tail end of our time period, however. Other European wars in our time period (e.g., the German wars of unification or the German-French war) also didn't change the linguistic or religious population compositions at the local level. Furthermore, the cuius regio eius religio rule that was reaffirmed and codified in the peace of Westphalia in the 17th century largely froze the religious map of Europe and prohibited forced conversions. Finally, the language map we used is not at the level of granularity of dialects (e.g., of Italian or German). Language standardization during the late 19th century should therefore not represent a major issue for our analyses.

the lodges from protonationalist organizations into cults of the emperor (Arvelle 1995).

Data concerning the geographic extent and duration of Napoleonic occupation across Europe are provided by Acemoglu et al. (2011). We distinguish between cities outside of Napoleon's empire, cities that were not part of the empire but situated within countries that were conquered, and cities that were occupied and lay within countries that became part of the empire. If an occupation spans a decade boundary (e.g., Switzerland from 1798 to 1803), we code both decades as occupied.

#### Letters

As mentioned above, we lack data on letters between European artists and intellectuals more generally. However, the *ERNiE* documents which influential nationalist writers wrote letters to whom and when (similar to the data structure used in Becker et al. [2020]). This allows us to shift to a writer/artist level of analysis. We hypothesize that writers and artists who had not yet produced any nationalist work and who received letters from prominent nationalists were more likely to begin creating nationalist work themselves (H6). Since *ERNiE* only lists writers and artists who eventually produced at least one nationalist work, the analysis at the writer/artist level effectively asks if receiving letters from nationalists accelerates the creation of such work.

Shifting back to cities as units of analysis, this hypothesis would predict that receiving a letter would increase the likelihood that some inhabitants of that city will subsequently produce a Romantic nationalist piece of writing as well (H7). The effect of such letters could be stronger if the letters come from a hotbed of Romantic nationalism: the larger the total number of nationalist writings near the senders of a letter, the more likely a receiving city is to produce Romantic nationalist writings (H8).

The authors of *ERNiE* focused on the most prominent and prolific letter writers, as they had emerged from their qualitative study of hundreds of biographies of writers and artists across Europe. They chose the four most prominent German nationalists whose letters were already edited and digitized and complemented these with the hand coding of the letters of other prominent and prolific writers from Denmark, France, and Germany. The analysis thus includes the central nodes in the letter networks but omits some bridging nodes that emerged from their analysis later on.<sup>20</sup>

<sup>&</sup>lt;sup>20</sup> In personal correspondence, Professor Leerssen mentions nine Romantic nationalists who played an important role as bridging nodes, which are omitted from *ERNiE* and thus from our analysis.

The letters are not filtered by content, impact, or type of addressee and thus include Romantic nationalist as well as nonnationalist receivers (such as librarians or family members) in the city-level analysis, which should therefore produce conservative estimates of the letters' influence. A total of over 38,000 letters were included, which were directed at approximately 2,700 individuals. We focus on the production of nationalist writings as the outcome in this analysis because the overwhelming majority of correspondence was directed at writers.<sup>21</sup> We conduct extensive robustness checks, which we report below, to make sure our results are not biased by differential overall productivity of cities or individual writers/artists, their geographic move across cities, or the fact that letter writers themselves produced nationalist work that shows up in our dependent variable.

#### Universities and Newspapers

Regarding cultural institutions, we hypothesize that proximity to a university town in which Romantic nationalist work had already been produced should encourage the creation of such work (H9). We distinguish this diffusionist from a modernist argument about universities, according to which the exposure to modern, secular centers of learning and teaching should facilitate the emergence of nationalist imaginations. We will therefore test whether proximity to a university town *without* previous nationalist production increases the probability of future such production as well.

Data on universities—their foundation, years of operation, and locations—were collected from two volumes of the monumental *Geschichte der Universität in Europa* (Rüegg and Briggs 1996, 2004). We matched the university towns to our list of cities (with a success rate of over 90%). Distinguishing between university towns that already have been the site of nationalist productions and those that have not generated two different distance measures.

Newspapers present another possible channel of diffusion. While Anderson thought that newspapers generated Romantic nationalism endogenously, our diffusionist argument posits that newspapers were exogenous conduits for the dissemination of Romantic nationalism. If that were true, only proximity to a newspaper-producing town that was also the site of previous nationalist cultural production should encourage the further spread of nationalism

<sup>&</sup>lt;sup>21</sup> As a possible example of diffusion through letters, we point to the letters that Jakob Grimm, the famed German philologist and folklorist, sent to the historian Heinrich Schreiber, who did research on the local history of Freiburg and formed part of the late Enlightenment movement. Years after he corresponded with Grimm (Leitzmann, Gürtler, and Grimm 1923, pp. 125–26), he seems to have become a Romantic nationalist himself, publishing a collection of local folk tales and joining the German Catholic Church, a nationalist splinter organization that had seceded from Rome (which promptly excommunicated him).

(H10). By contrast, proximity to other newspapers should have no such effect.

Newspaper data were sourced from the comprehensive, pan-European catalogue of the *Zeitschriftendatenbank* (ZDB) of the German National Library.<sup>22</sup> We complemented this with data for Belarus, Armenia, Georgia, and Turkey from other sources. We again calculated two distance measures, one to newspaper towns that had already been sites of nationalist production and one to those that had not yet seen any such production.

#### Regions of Cultural Similarity

Europe is divided into zones of cultural similarity produced by the Roman road network that persisted for over a thousand years (e.g., Flückiger et al. 2022). It is reasonable to assume that these cultural areas continued to be relevant during the long 19th century. We hypothesize that the shorter the distance of a town on the Roman road network to another town where Romantic nationalism had already taken root, the likelier it should be the site of future nationalist production (H11). Note that the mechanism here is not spatial diffusion along the Roman road network, but diffusion through cultural similarity, proxied by spatial distance between two cities on the Roman road network.

Geospatial data on the Roman road network come from McCormick et al. (2013). Many of the cities in our database were not situated on a Roman road during antiquity or had developed after the end of the Roman empire. We therefore constructed two distance variables: distance to the nearest point on a road and distance to the nearest nationalist production during the previous decade via the road, as long as that previous nationalist work was within five miles of a road. Using different thresholds for road proximity, such as 10 miles or 50 miles, produced substantively identical results (see online app. D). When no nationalist work is accessible through the road network, the distance to nationalism variable is treated as missing (N = 3,561). We also top-coded these observations to check for the robustness of results, which hold up (online app. D2).

Another, perhaps more intuitive, way to explore regional culture effects is to identify such regions using clustering techniques. If the Roman roads had created historically meaningful cultural regions within which Romantic nationalism diffused, then the number of nationalist works produced in a cluster during the previous decade should be associated with the number of nationalist works within that same cluster in the present (H12). Note that these regions often cross-cut language boundaries, for example, along the Rhine, or only comprise certain areas of a linguistic territory (see fig. 1). They are

<sup>&</sup>lt;sup>22</sup> https://zdb-katalog.de/imprint.xhtml#aboutus.

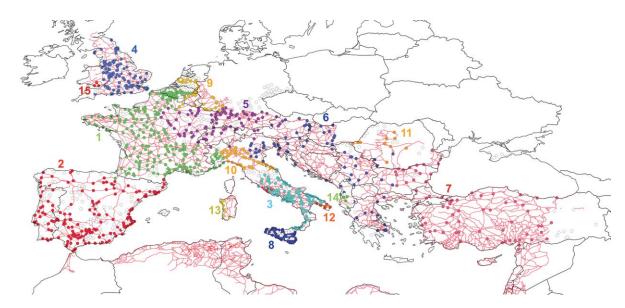


Fig. 1.—Clusters of cities in the Roman road network.

thus distinct from domains of shared language. We identify clusters using the greedy modularity maximization algorithm (Clauset, Newman, and Moore 2004). Using a Louvain community detection algorithm (CDA) or the Girvan and Newman CDA produced substantially identical results (online app. table D2).

#### Shared Statehood

Romantic nationalism could also have diffused within polities that bound networks of intellectual organizations and provided a shared focus for writers and artists. More Romantic nationalist pieces of work in the past decade should thus encourage even more such work within the same contemporary state (H13). To test this argument, we again determined to which polity each city belonged in each decade using data from Wimmer (2023) and coded a variable for the number of works produced in each city's polity during the previous decade.

#### Transportation Infrastructures

The final type of domain is constituted by the transportation infrastructure through which goods, ideas, and people travel. These networks changed dramatically during the long 19th century. The Roman/medieval road system mentioned above was expanded considerably from the 18th century onward. Postal services, with newly built stations, horse changing posts, restaurants, and hotels transformed the way Europeans moved around space. From the 1870s onward, and in the pioneering industrial countries even before that, railroads rapidly replaced stagecoaches. If stagecoaches and railways map onto general exchange networks, we would expect towns that are close, in terms of distance on stagecoach roads (H14) or railways tracks (H15), to towns where nationalist work has been recently produced to be more likely to create such work themselves.

We coded spatial lag variables for stagecoaches (the main mode of transport until ca. 1870) and for railways (which took over from the 1870s onward). All variables were logged to avoid skewedness. We use two detailed, continental stagecoach maps, created by Franz Güssefeld in 1793 and Auguste-Henri Dufour in 1848, both of which we acquired from the Bibliothèque Nationale de France. The former was used to map the stagecoach routes from 1770s to 1840s and the latter for the 1850s and afterward (see the maps in app. fig. A4). For each city, we created two variables, similar to how we coded the Roman road variables: distance from a city to the nearest stagecoach stop and distance to the nearest Romantic nationalist work of the previous decade on the stagecoach network. We again define all nationalist works that are within five miles from the next stagecoach route as being accessible

through the network (different thresholds produce similar results, as shown in app. table D3). When there is no nationalist work reachable through the network, the second variable was again coded as missing (N = 1,873; or topcoded in robustness models, shown in app. table D4).

We follow the same process for rail networks by measuring the distance from a city to the nearest railway station and the distance to the nearest nationalist work produced in the previous decade, measured along the rail network. But we now have time-varying data such that the railway network is coded differently for each decade (see the maps in app. figures A5). We use two sources for the rail data: Berkeley's Historical GIS of Europe database (generously provided by Martí-Henneberg [2013]) and the online database produced by Cima (1998–2008). A total of 2,219 city-decades have no nationalist work accessible through the railway and are coded as missing or were top-coded (the latter results are shown in app. table D4).

# UNITS OF OBSERVATION, DEPENDENT AND CONTROL VARIABLES, AND MODEL SPECIFICATION

Units of Observation and Dependent Variable

Cities from the Clio-Infra database (Bosker et al. 2013) are the most fine-grained units of observation for which some basic control variables are available. These cities are observed once every decade, generating city-decades as units of observation and analysis (e.g., Paris 1820s, Paris 1830s, etc.) from the 1770s to 1920s. We restricted the sample to cities in European countries (to match the coverage of ERNiE), including Turkey and the European parts of Russia. In total, 2,270 cities were included, yielding 36,320 city-decade observations. The locations of these cities are shown in figure 2.

The main dependent variable of interest is the number of Romantic nationalist works produced in a given city during a given decade, as cataloged in ERNiE (published in print as Leerssen et al. [2018]). We focus on the most complete lists, which are those of paintings, writings, and works of music. ERNiE provides not only information about content of the work but also the coordinates of the place where it was first published, exhibited, or performed as well as the year of production.<sup>23</sup>

 $<sup>^{23}</sup>$  We validated the location coding of ERNiE with a randomly chosen sample of 100 works, using resources available on the internet. In 80% of cases, we confirm the location assigned to the work by ERNiE. In the remaining 20%, almost all of which were attributed to capital cities, we do not know whether (1) ERNiE's researchers had additional (e.g., offline) resources available that indicated that the place of production was indeed the capital or whether (2) the location of the production/exhibition/performance was impossible to determine and the coders thus assigned the work to the capital, following ERNiE's coding rules. Overall, 67% of works were located in a capital city, a maximum

## Diffusion Through Multiple Domains



Fig. 2.—Cities included in the analyses (with contemporary state boundaries; N = 2,270).

There are 6,438 Romantic nationalist works in the database; 192 were dropped because either coordinates or year of publication was missing. We assigned each nationalist product to the nearest city if it originated within five miles of a city centroid; 98% of the nationalist products in the database were created within five miles from the coordinate of a city and fall within our time period between 1770 and 1920. Among these, we find 1,461 writings, 1,048 musical works, and 3,504 paintings.

#### Control Variables and Model Specification

We include a suite of control variables for each city-decade observation. We do not include network measures, such as the centrality of a city in the various transportation networks described above. This is because our goal is to understand how Romantic nationalism spread through networks that connected cities to nationalist artworks, rather than to other cities. Our approach thus adds specificity to the idea of diffusion by detailing the channels through which it operated, rather than by identifying the nodes most susceptible to influence. In robustness models (available upon request), we show that city centrality measures for the various transportation networks are

of one-fifth of which might be attributed to the capital due to the lack of more specific information (thus, between 0% and 13% of the overall location codings). To make sure that our analyses were not affected by this potential measurement error, we ran all our analyses without capital cities as well. As shown in app. table C1, the results don't differ substantially from the main findings. All analyses include a control for capital city, as discussed in the next section.

never associated in significant ways with nationalist production (in line with the results of Becker et al. [2020]), while including these measures does not change any of our results.

We include eight controls that are relevant for the production of nationalist work. These are as follows:

- A dummy variable for each decade to account for unmeasured historical specificities of each period.
- Logged city population (Bosker et al. 2013). The dataset provides population estimates for every 50 years; we interpolated via a simple exponential growth function to arrive at decadal data points. Cities should generate more nationalist works if these were randomly distributed over the population.
- A dummy variable indicating capital cities, which should increase the likelihood of nationalist production given that capitals are often centers of intellectual and political innovation.
- Dummy variables indicating whether the major religion of the city is Catholic and whether the city was the seat of a bishop; these were usually centers of intellectual life and the arts.
- Logged distance to the nearest river and logged distance to the nearest sea, based on shapefiles downloaded from the Global Runoff Data Centre and from Kelso and Patterson (2012), respectively. These control for other possible diffusion pathways through water routes. One wonders whether the emergence of universities and newspapers is endogenous to these two geographic variables, which means that including them would produce biased estimates. Models with or without these geographical controls (the latter are not shown) are substantially identical, however.
- Logged distance to the nearest artist/writer since cities without artists/ writers are less likely to be the site of Romantic nationalist production (see also the note on model specification further below).

To measure the distance to the nearest artist/writer, we first collected the list of artists/writers who were active during the 18th, 19th, and 20th centuries from Wikipedia, using the Wikipedia "subcategory" classification scheme as a guide. <sup>24</sup> We collected data on artists, painters, writers, novelists, poets, dramatists and playwrights, essayists, nonfiction writers, short story writers, memoirists, musicians, and composers (thus mirroring the scope of ERNiE), excluding those who died before 1770 and those who were born after 1900. This produced a list of 27,704 artists/writers. We then calculated the logged geodesic distance between

<sup>&</sup>lt;sup>24</sup> https://en.wikipedia.org/wiki/Category:Container\_categories.

each of the 2,270 cities and the locations of each artist/writer's birth, work life, and death, retaining the smallest value as a control. For robustness purposes, we also included the total number of writers and artists in each city as a control (app. table C2, col. 4).

#### Model Specification

We use zero-inflated negative binomial regression models for two reasons. First, there are excess zeros in the outcome variable. Most city-decades do not have any Romantic nationalist production. Only 185 out of 2,270 cities ever produced a nationalist work, and only 747 out of 36,320 city-decades have ever seen such work emerging. Second, the excess zeros result from a different mechanism than the one determining how many nationalist works a city produced. More specifically, many cities may not host any artists/writers at all and therefore cannot produce any nationalist work. In such circumstances, zero-inflated models are useful because they fit both excess zeros and the count of the event when the outcome is nonzero. Zero-inflated negative binomial models are preferred over zero-inflated Poisson models because the likelihood ratio tests for alpha are significantly positive in all models.

In the zero-inflation part of the model, we include logged distance to the nearest known artist/writer to proxy for the probability that the city contained *any* professional artists/writers. In the nonzero count part of the model, we include the main independent variables of interest to test our hypotheses, described in the section on "Hypotheses and Data on Independent Variables," as well as controls for the eight covariates described in the section on "Control Variables and Model Specification." For robustness purposes, we included the number of (instead of the distance to the nearest) writer/artists as a control, and we also ran logistic regressions without cities that did not house at least one known artist/writer. Results are substantially identical. The same goes for models with bootstrapped standard errors, for an event history specification, which only looks at the first nationalist production in each city, or for a two-way fixed-effects specification (with city and decade fixed effects), which controls for omitted variables in a difference-in-difference design.<sup>25</sup> All of these additional models are shown in app. table C1.

<sup>&</sup>lt;sup>25</sup> Two-way fixed-effects models, while ideal for purposes of causal identification, are problematic when applied to datasets such as ours where the outcome is staggered, where there is causal heterogeneity over time, and where treatments are continuous, which is why we prefer the zero-inflated negative binomial model specification overall. Most results hold up in a two-way fixed-effects specification, as shown in app. table C1.

#### RESULTS

Before discussing the regression results, a look at the aggregate temporal trend is illuminating. Figure 3 depicts the cumulative number of nationalist works per decade in all of Europe. It shows the characteristic *S* shape well-known from diffusion studies (Geroski 2000). It is generated by an acceleration of the adoption rate in the middle of the process and a slowing down toward the end. This offers preliminary evidence in support of a diffusionist interpretation of the rise of Romantic nationalism across Europe.

Obviously, the cumulative trend says nothing about the channels through which this diffusion process operated, nor about which cities were more receptive to Romantic nationalism and why. In the following, the regression results are presented in the same order as above, moving from frame resonance mechanisms to personal networks and to cultural, political, and infrastructural domains.

#### Frame Resonance

Table 2 summarizes the results regarding the various domains where, according to the three frame resonance hypotheses, Romantic nationalism could have fallen on more fertile ground. Model 1 shows that Protestant-majority cities are not more likely than others to produce Romantic nationalist work, in contrast to the cultural compatibility argument specified in H1. In model 2, we explore domains of shared language, and in model 3 of shared religion. In neither of these two domains does previous nationalist production stimulate further contemporary production in a city (in contrast to H2). Changing the lag from 10 years to the entire period before the focal decade did not change these findings, nor did grouping languages or religions into

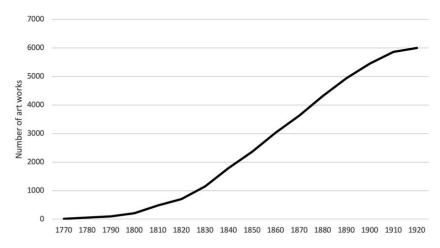


Fig. 3.—Cumulative number of nationalist works over time.

## Diffusion Through Multiple Domains

 ${\it TABLE~2}$  Frame Resonance and the Number of Nationalist Works (N = 36,320)

	Model 1	Model 2	Model 3	Model 4	Model 5
Negative binomial model: Controls for decades, population size, capital city, bishop seat,					
Catholic city, distance to a river, and distance to the sea	Yes	Yes	Yes	Yes	Yes
City is majority Protestant	.447 (.404)				
Logged number of previous nationalist productions in the	, ,				
same language group		.0212 (.0609)			
Logged number of previous nationalist productions in the same		, ,			
religious group			.0953 (.134)		
Country is foreign ruled				.964*** (.230)	
Country not occupied by Napoleon					Ref.
Country occupied; city not occupied					1.253***
Both country and city occupied					(.357) .634
French city					(.394) 772 (.480)
Zero-inflation model: distance to a renowned artist/writer	Yes	Yes	Yes	Yes	Yes

Note.—Standard errors are in parentheses.  $N=36,\!320.$ 

families (app. table B3). In other words, we don't find much evidence for an empirical plausibility mechanism.

However, interaction models with decades (app. table G1) show that nationalist production within a language group did inspire further such work during the first third of the time period under consideration—although these interaction terms fail to reach standard levels of significance except in 1800 and 1810. In supplementary analysis, we also find that shared language does provide a domain for the diffusion of written work—for which linguistic commonality plays an obvious role—while it doesn't do so for paintings (app. table B5; the models for music do not converge). We conclude that

<sup>\*</sup> P < .05.

<sup>\*\*</sup> *P* < .01.

<sup>\*\*\*</sup> P < .001.

<sup>&</sup>lt;sup>26</sup> Some other results from the within-genre analysis reported in app. table B5 diverge from the main findings (for details, see the comments to that table). The other substantially

language commonality is not a main driver in the diffusion of nationalist work beyond the early time period and the genre of writing.

In model 4, we find that cities under foreign rule produced more nationalist works, in line with H3 about the role of contrasting ideals in the process of diffusion, the third frame resonance mechanism. Model 5 addresses the specifics of Napoleon's empire as a special case of foreign rule. It shows that compared to cities in countries that had not been occupied by Napoleon, cities in occupied countries produced more nationalist works (confirming H5). However, only cities that remained outside of the direct control of the empire did so, while cities under imperial control did not produce any more nationalist art, likely because of the massive apparatus of censorship that the empire had rolled out, as the brief discussion of the case of Belgium suggested.

Figure 4 shifts to an aggregate time-series mode of analysis to further explore the effect of foreign rule by Napoleon's empire and to test H4. It visualizes the temporal increase and decrease of nationalist production in 19th-century Europe, using the predicted values generated by the decade dummies. The number of Romantic nationalist works begins to increase slowly in the late 18th century and then spikes after the Napoleonic Wars in the beginning of the 19th century, further supporting the argument about foreign rule.

#### Personal Ties

We now examine the various possible channels of diffusion. In contrast to the rest of the analyses, models 1 and 2 in table 3 use writers and artists as units of observation, rather than cities. A total of 2,059 individuals were considered and observed every decade (generating a total of 32,944 writers/artists-decades). Only writers/artists that have not yet produced any nationalist work were included, however, and we thus dropped 12,435 observations. Note that all letters are included in the analysis, whether or not they inspired the receiver to produce nationalist work during the following decade. The analysis leverages the fact that all artists and writers eventually produced nationalist work (the inclusion criteria in *ERNiE*), but not all writers and artists received a letter from a prominent nationalist.

Model 1 shows that the more letters a writer/artist received, the more nationalist work she or he created in the subsequent decade (supporting H6). We arrive at the same conclusion in model 2, which dichotomizes the incoming letter variable and thus compares writers/artists who had received at least one letter in the prior decade with those who had not received any

interesting divergence is that the number of previous writings within a polity influences the chances of subsequent nationalist writings, which is in line with the domain-specificity argument since some of these writings (such as Fichte's *Address to the German Nation* mentioned in the introduction) are explicitly political in nature.

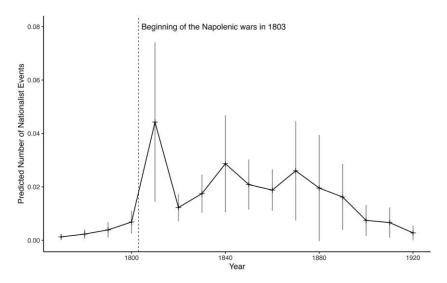


Fig. 4.—Temporal trend in the production of nationalist work. A zero-inflated negative binomial model was used to predict the number of nationalist works per decade. Covariates in the negative binomial part include decade dummies, logged population size, a capital dummy, a bishop city dummy, a Catholic city dummy, logged distance to the nearest river, and logged distance to the sea. Logged distance to any renowned artist/writer was controlled for in the zero-inflation part.

such letters (yet).<sup>27</sup> In appendix table E1, we respecify the model as an event history model, exploring whether receiving letters shortens the time span until the first nationalist work is produced (which will eventually happen in all cases; there are thus no censoring problems), as well as an OLS specification. The results of both are as expected.

The hypothesis is supported by city-level analyses as well, for which we consider all letters, whether or not they were directed at writers and artists who eventually produced nationalist work, thus producing more conservative estimates of the possible influence of letters. Models 3 and 4 in table 3 predict the number of nationalist writings in a city by the letters its residents received previously.<sup>28</sup> Model 3 shows that having received a letter from a nationalist outside of the city is significantly related to a greater amount

<sup>&</sup>lt;sup>27</sup> In app. table E2, we show that receiving letters does not stimulate nationalist paintings or music composition, indicating that influence is channeled through very specific networks of connectivity, in line with other findings we discuss below.

<sup>&</sup>lt;sup>28</sup> In contrast to the writer/artist-level analysis, the data don't tell us whether the writer who received a letter produced his or her first nationalist work subsequently or whether it was another writer from the same city who didn't receive a letter who did so. In this latter case, the mechanism could be a two-step influence: first, from the senders to the receivers of a letter, and second, from the receivers to other writers in the city.

 ${\bf TABLE~3}$  Personal Networks and the Number of Nationalist Writings

	Model 1, writer/artist-level, negative binomial	Model 2, writer/artist-level, negative binomial	Model 3, city-level, zero-inflated negative binomial	Model 4, city-level, zero-inflated negative binomial
Controls:				_
Decade dummies	Yes	Yes	Yes	Yes
Controls for population size, capital city, bishop seat, Catholic city, distance to a river, and distance to the sea	No	No	Yes	Yes
Writer/artist-level independent variables:				
Number of letters received during the last decade	.0720* (.0366)			
Received at least one letter during the last decade	, ,	2.125*** (.562)		
City-level independent variables:		, ,		
Received at least one letter			1.738***	
Logged number of nationalist writings near letter sender			(.269)	.387*** (.0557)
Zero-inflation model: distance to a renowned artist			Yes	Yes
N	20,509	20,509	36,320	36,320

Note.—In models 1 and 2, the unit of analysis is writer/artist-decade; 2,059 writers/artists were considered. Of the 32,944 writer/artist-decades, 12,435 were dropped because the writer/artist had already produced at least one nationalist work before receiving a letter. In models 3 and 4, the unit of analysis is the city-decade. There are 2,270 cities and 16 decades (N = 36,320). Standard errors are in parentheses. \* P < .05.

<sup>\*\*</sup> P < .01.

<sup>\*\*</sup> *P* < .01. \*\*\* *P* < .001.

of subsequent nationalist writings (in support of H7). In model 4, the independent variable is the number of nationalist writings that had previously appeared within five miles of the sender of the letters. It is significantly associated with the outcome, indicating that letters from hotbeds of nationalist activity are especially consequential (H8).

To exclude some obvious problems of identification, we checked (in app. table E3 as well as in app. table F1) whether receiving letters simply indicates an (unobserved) higher level of activity by the recipient. We added, in the artist/writer models, a control for the total number of received letters before the preceding decade. In a similar vein, we also controlled, at the city level, for the total number of letters *sent from* a city, the number of letters *sent from and received by* the same city, and the total number of artists within a city who had already produced nationalist work. This is to make sure the received letter variable doesn't capture some unobserved propensity of a city to be involved in letter correspondence or in the creation of nationalist work.

#### Cultural and Political Domains

The results from table 4 below show that Romantic nationalism spread within specific domains of cultural connectivity. Model 1 evaluates the role of universities. The shorter the distance between a city and the nearest university town that had already seen nationalist production, the more nationalist products emerged (in support of H9). But not all universities served as conduits for the diffusion of Romantic nationalism. Distance to universities that had not seen previous nationalist production had no effect, in contrast to a possible modernist account of the role of universities in the generation of Romantic nationalism. While indicative of a diffusion process, our research design and results cannot rule out the role of omitted variables that could be correlated with the proximity to nationalist production as well as to universities. But the results of a two-way fixed-effects model specification (shown in app. table C1), which should take care of this problem, supports the above interpretation.

Model 2 looks at newspapers as possible channels of diffusion. The results are similar to the ones we obtained for universities: the closer a city was to a newspaper town with previous nationalist production, the more likely nationalist writings or artwork will appear later on (in support of H10). But this is not due to a general effect of newspapers as such, as one reading of Anderson's work might suggest: proximity to newspaper towns that had not yet seen any nationalist production were not associated with nationalist production. It thus seems that Romantic nationalism diffused *through* newspapers but was not generated *by* them.

Next, we move away from institutionalized cultural domains to the informal ones established by cultural characteristics of the population at large. Results from models 3, 4, and 5 show that Romantic nationalism diffused

 ${\bf TABLE~4}$  Cultural and Political Channels and the Number of Nationalist Works

	Model 1	Model 2	Model 3	Model 4, only cities with a Roman past	Model 5, only cities in the Roman road network	Model 6
Negative binomial model: Controls for decades, population size, capital city, bishop seat, Catholic city, distance to a river, and distance to the sea	Yes	Yes	Yes	Yes	Yes	
Distance to the nearest university town with previous nationalist production  Distance to the nearest university town without previous nationalist production	412*** (.0580) 0872					
Distance to the nearest newspaper town with previous nationalist production	(.0798)	470*** (.0535)				
Distance to the nearest newspaper town without previous nationalist production		.0160 (.0480)				

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Distance to the next Roman road			.0666	.0809		
			(.046)	(.0738)		
Distance to the nearest previous nationalist production on the						
Roman road network			232*	353***		
			(.097)	(.105)		
Logged number of previous nationalist productions in the same						
Roman road cluster					.277***	
					(.0720)	
Logged number of previous nationalist productions in the						
same polity						.0336
						(.0842)
Zero-inflation model: distance to a renowned artist	Yes	Yes	Yes	Yes	Yes	Yes
N	34,050	36,320	33,271	22,749	18,240	36,320

Note.—In model 1, observations for the 1770s were dropped (N = 2,270) because there was no university town with nationalist production nearby. In model 3, 3,049 observations were dropped because there was no nationalist event accessible through the Roman road network. Standard errors are in parentheses.

<sup>\*</sup> P < .05.

<sup>\*\*</sup> *P* < .01.

<sup>\*\*\*</sup> *P* < .001.

within the regions of cultural similarity that had been generated through centuries of exchange and mutual influence via the Roman roads. We need to disentangle diffusion proper from the possible legacy effect of having been part of the Roman empire. In model 4, we thus exclude all cities from the sample that were never part of the Roman world. The results of models both with (model 3) and without (model 4) these cities support the hypothesis that when a nationalist work was produced in a culturally similar city (proxied by distance on the Roman roads), more nationalist works were produced in the focal city subsequently (H11).

Another way to evaluate the role of regions of cultural similarity is to generate clusters in the Roman road network. Figure 1 above represents the 15 clusters produced by the greedy modularity maximization algorithm (Clauset et al. 2004; see app. table D2, for alternative clustering algorithms). Model 5 of table 4 shows that the number of nationalist works that had been produced in the same cluster in the prior decade is associated with increased nationalist production in the present (in line with H12). This supports our interpretation of how the Roman road legacy operated: by having produced regions of cultural similarity that facilitated mutual orientation and observation and thus similar responses to cultural innovations.

The final model in table 4 evaluates whether Romantic nationalism spread through political domains, as established by states, independent of whether these were foreign ruled or not. Model 6 shows that such generic political domains, operationalized as the number of previous nationalist works produced in the same polity, do not affect future nationalist production (in contrast to H13).<sup>29</sup>

#### Infrastructural Domains

Next, we turn to the infrastructural networks that linked cities through the flow of people, goods, and ideas. Models 1 and 2 in table 5 refer to stage-coach routes. Model 1 uses all decades from 1770 to 1920, and model 2 drops all observations after 1870, when railways had begun to replace stagecoaches. Model 3 refers to the railway network and is limited to decades after the 1860s, when railways became a major mode of transportation (models for the full time span are substantially identical and not shown here). None of the variables is significantly associated with the number of nationalist works

<sup>&</sup>lt;sup>29</sup> For robustness purposes, we constructed the polity variable in different ways for regions that were split between two or more polities, either averaging or adding the number of previous nationalist work produced in these polities. We also tested nonlogged counts or extended the time period to the entire span available, and the results are not different in either case. These additional tests are presented in app. table B4.

## Diffusion Through Multiple Domains

 ${\bf TABLE~5}$  Infrastructural Channels and the Number of Nationalist Works

	Model 1	Model 2, years before 1870	Model 3, years after 1870
	1,10001	10,0	
Negative binomial model:			
Controls for decades, population size,			
capital city, bishop seat, Catholic city,			
distance to a river, and distance to the sea	Yes	Yes	Yes
Distance to the nearest stagecoach station	0723	0964	
	(.0451)	(.0553)	
Distance to the nearest nationalist	, ,	` '	
production on the stagecoach network	.0886	.0309	
•	(.122)	(.0759)	
Distance to the nearest railway station	, ,	` '	0892
•			(.104)
Distance to the nearest nationalist			` ′
production on the railway network			.146
F			(.138)
Zero-inflation model: distance to a renowned			(/
artist/writer	Yes	Yes	Yes
<i>N</i>	34,447	21,937	11,401

Note.—Observations with no nationalist works accessible through the transportation network were dropped (N=1,873 in model 1, N=763 in model 2, and N=2,219 in model 3). Standard errors are in parentheses.

produced in a city, controlling for the distance to the next stagecoach or rail-way station. We do not find any evidence that the ties established by generic networks of transportation and communication contributed to the diffusion of Romantic nationalism (in contrast to H14 and H15).

#### Fully Specified Models

The previous analysis suggests that the diffusion process operated through a variety of specific domains. Did it work simultaneously through all of them, or did one of them dominate the overall process? One way to explore this question is to generate a fully specified model with all variables combined that were significantly associated with the outcome in previous models, as in table 6. Model 1 refers to the entire universe of cities, while model 2 is restricted to the former Roman world, for the same reasons as in some of the above models. All results hold up, and the size of most coefficients changes little, indicating that diffusion proceeded simultaneously through these various networks. We arrive at a similar conclusion in additional analyses, available upon request, where we explored whether the diffusion variables are mainly operating in

<sup>\*</sup> *P* < .05. \*\* *P* < .01.

<sup>\*\*\*</sup> P < .001.

TABLE 6 FULLY SPECIFIED MODELS

	Model 1	Model 2, only cities with a Roman past
Negative binomial model:		
Controls for decades, population size, capital city,		
bishop seat, Catholic city, distance to a river,		
and distance to the sea	Yes	Yes
Received at least one letter	1.027***	.989**
	(.282)	(.375)
Distance to nearest university town with previous	, ,	,
nationalist production	257***	236**
•	(.0740)	(.0856)
Distance to the nearest newspaper town with previous		
nationalist production	328***	209**
	(.0668)	(.0795)
Logged number of previous nationalist productions		
in the same Roman road cluster	.0164	.190**
	(.0525)	(.0689)
Napoleon:		
Country not occupied by Napoleon	Ref.	Ref.
Country occupied; city not occupied	.869**	1.424**
	(.296)	(.466)
Both country and city occupied	.279	1.004*
	(.301)	(.413)
French city	508	.0939
	(.444)	(.550)
Country is foreign ruled	1.097***	.679*
	(.227)	(.269)
Zero-inflation model: distance to a renowned artist	Yes	Yes
N	34,050	17,100

Note.—In both models 1 and 2, observations for the 1770s were dropped (N=2,270) because there was no university town with nationalist production nearby in the 1770s. In model 2, cities that were not part of the Roman road networks (five miles or further away from the road, N=16,950) are dropped. Standard errors are in parentheses.

foreign-ruled territories, which is not the case. Frame resonance and diffusion mechanisms seem to work independently from each other.

#### ALTERNATIVE EXPLANATIONS AND ROBUSTNESS CHECKS

## Some Alternative Explanations

The diffusionist account we have pursued so far is obviously not the only approach to understanding the spread of cultural nationalism. It could also have been generated endogenously and in parallel ways in each of the cities that became sites of nationalist production. First, Romantic nationalism could be

<sup>\*</sup> P < .05.

<sup>\*\*</sup> P < .01.

<sup>\*\*\*</sup> P < .001.

a side effect of political turmoil or war, such as during the bourgeois revolutions of the long 19th century. To test this possibility, we link our cities to the polities that existed in each decade and use the PolityIV dataset (Marshall, Gurr, and Jaggers 2017) to identify periods of political instability. We define these, following Fearon and Laitin (2003), as substantial changes in the combined democracy/autocracy score or periods of state breakdown or interregnum. To evaluate the possible impact of war at the local level, we use data from a massive encyclopedia of battlefield locations (geocoded by Wimmer [2023]) and measure the distance of our cities to these locations.

Second, memories of lost statehood could endogenously generate nationalist longing to regain cultural independence and political autonomy, as the Polish case suggests. From that same dataset, we create a dichotomous variable indicating whether a city was part of a state that had existed sometimes after 1500 but was no longer a political entity during the time period under consideration. None of these three variables shows a significant association with the outcome (results are available upon request).

Third, we check whether industrialization might endogenously propel nationalist production, as maintained by Gellner (1983) in his classic account of the emergence of nationalism, which supposedly provided the cultural uniformity that an industrialized economy with a flexible labor force needs. We use three variables to test this argument, even if in a preliminary way given the coarse temporal resolution of the available data. We measure the linear geographic distance from a city to the nearest center of coal or textile production or to the nearest area with industries that were based on mechanized production. The coal data come from Fernihough and O'Rourke (2021) and the textile data from the International Committee for the Conservation of the Industrial Heritage (2013). Information on industrializing regions is taken from two maps published by Pollard (1981), the leading historian of the Industrial Revolution at the regional level. They refer to 1815 and 1875, respectively. We assign decades up to 1840 to the 1815 map and the later ones to the 1875 map.<sup>30</sup> There is no evidence that any of these three measures of industrialization are associated with nationalist production (results are again available upon request).

#### Robustness Checks

The online appendices show the results of a series of robustness checks. Appendix B presents results when using different levels of aggregation to identify language and religious groups as well as different ways to code the shared

<sup>&</sup>lt;sup>30</sup> Changing these coding decisions (e.g., by relating the 1815 map to decades between 1810 and 1860 and the 1875 map to decades from 1870 onward) leads to substantially identical results (not shown).

polity variable. Appendix table B5 introduces disaggregated models that look at nationalist writings separately from paintings.

In appendix table C1, we replicate all the main models with different specifications (bootstrapped standard errors, logistic regression, an event history specification, two-way fixed effects) as well as with two additional covariates: the geodesic distance to the next nationalist work and a lagged dependent variable, that is, the number of nationalist productions in the previous decade. The first control puts the domains argument to a hard test, since it might very well be that simple geographic distance drives the imitation process, not distance as measured through various ties of connectivity that make up the different domains. The second control variable captures local imitation processes, that is, the propensity of nationalist works of art or writing to inspire more such work within the same town. Most results hold.

Appendix table C2 shows a variety of tests that explore possible identification problems (beyond those that could affect the letter analysis, which were summarized above in the results section titled "Personal Ties"). It could be that nationalist writers and artists moved from city to city producing nationalist work, that an unobserved variable leads to a higher or lower propensity of a city to produce nationalist work, that some cities are simply producing more work, both nationalist and nonnationalist, or that the especially productive decade of the 1810 drives all the results. The models reported in the table address these concerns with additional controls for the number of nationalist writers/artists in a city, or for the total number of writers/artists (nationalist or not) in a city, or by only looking at the first nationalist work produced by writers and artists (circumventing the traveling people problem) or by running a sample that excludes the 1810 decade.

Appendix D is dedicated to the coding of transportation networks. It explores different distance thresholds to determine whether a nationalist production could influence artists and writers, top-codes (rather than omits as missing) cities that cannot be accessed via a transportation network, and uses different clustering algorithms for identifying groups of cities connected through Roman roads.

Appendices E and F revisit the role of letters by prominent nationalists (in app. E at the writer/artist level and in app. F at the city level) by using different model specifications, disaggregating by genre, and adding additional controls to address identification problems.

Appendix G looks for linear and nonlinear temporal heterogeneity over the 150-year time span of our data. It shows models that include interactions with linear time as well as with decade dummies. The most noteworthy results have been mentioned above in the section titled "Frame Resonance."

It is worth discussing some reverse causality issues. One could imagine that nationalism *created* domains, rather than *diffusing through* them. For example, it could be that the flourishing of nationalism made nationalist writers/artists

send letters to each other, as much as the letter correspondence between the artists/writers served as the conduit to diffuse nationalism. Similarly, it is possible that nationalism created the demand for newspapers and universities, and so on. Our analyses mitigate some of these concerns in five ways.

First, all independent variables are temporally lagged. In the case of the Roman road networks, the lag is more than one millennium; universities and newspapers are lagged one decade. Second and for the letter analysis, we specified the model in a way that made sure the direction of causality is as predicted by only including prenationalist writers/artists in the analysis. Third, for some variables, reverse causation is empirically implausible: it is unlikely that Napoleon avoided conquering cities that housed nationalist artists or writers within countries that his troops overran. Similarly, it is unlikely that Romantic nationalists invited foreign rulers to conquer the states in which they lived. Fourth, the results are robust when we additionally control for the lagged outcome variable, as mentioned above. Fifth, most results (except for the Roman road and the Napoleon variables) hold up in a two-way fixed-effects specification (see app. C), a difference-in-difference design that minimizes endogeneity problems.

#### CONCLUSION AND OUTLOOK

This article explored the dynamics of large-scale and long-term cultural change, using the example of an exceptionally well-documented and important case: the spread of nationalist artistic and intellectual frames that highlighted the cultural uniqueness, the deep historical roots, and the distinct political destiny of particular peoples, usually defined as communities of shared vernacular languages or religion. This worldview proved to be extraordinarily consequential for the political future of the Continent and the world, as it constructed and identified the nations that political activists later demanded be the sovereign basis of independent statehood.

We make two contributions to the scholarship on diffusion. First, we analyzed the spread of Romantic nationalism as a "multiplex network and multiple diffusion process" thus heeding the call from others (Hsiao and Pfaff 2022, p. 8) to advance our understanding of ideational revolutions by adopting this analytical perspective. Implementing a multiplex network and multiple diffusion perspective demanded corresponding data. We found information about many different systems of connectivity along which Romantic nationalism could have spread. These rich data allowed asking which channels actually did transmit social influence and which ones did not, thus helping to overcome the endemic confirmation bias in the study of diffusion.

We find that diffusion operated simultaneously through multiple domains, rather than a single network of connectivity, as so often assumed in mainstream

research. These domains differ fundamentally from each other, confirming the utility of a multiplexity approach to the study of diffusion: from the communication networks between artists and writers to the grid of Roman roads that established regions of cultural similarity during the Middle Ages, from the webs of universities within which the new ideas circulated to the nets of newspapers that channeled nationalist messages. While made up of different ties, all channels through which Romantic nationalism diffused share a high level of specificity, that is, they are closely tied to intellectual life. The more general, multisectorial spheres of exchange established by shared membership in states or proximity in transportation networks do not seem to have served as conduits of diffusion.

Future work may go beyond what we have achieved here by coding an even larger number of channels, by measuring their levels of specificity directly, and by including a range of different diffusion outcomes. This would allow to identify which domains are particularly susceptible to circulate what kind of objects, to further test the above findings about domain specificity, and to explore other domain characteristics and their possible consequences for diffusion processes, as suggested by Wimmer (2021). It would also allow us to model interactions between various channels of diffusion (cf. Gould 1991), their sequencing over time, or their intertwining into a single influence network (as modeled in physics, e.g., Gomez et al. 2013). In line with a recent call for future work (Rawlings et al. 2023, p. 412) and a recent case study (Velasco 2023), we thus see our study as a proof of concept: that it is worth exploring which domains enhance the diffusion of which kinds of objects.

Second, our study not only asked through which channels diffusion occurred but also whether these lead to fertile grounds where a new ideology can take root. Introducing key arguments from research on social movements into the diffusion literature, we identified and empirically specified three distinct frame resonance mechanisms: areas of high cultural compatibility between existing cultural frames and Romantic nationalism (specifically in Protestant towns); areas where the idea of a national community built on cultural commonality was empirically more credible (in towns that shared the same language or religion); and areas where nationalism represented an ideal that contradicted the reality of foreign rule. We found support for this third mechanism, again the one that is most specifically tied to the political substance of nationalist thought. While diffusion research has almost exclusively focused on the cultural compatibility mechanism, our study shows that it is worthwhile to also consider other variants of frame resonance that are discussed in the movement literature.

Two other contributions address the social science literature on nationalism. To begin, our study offers the first systematic, empirically detailed account of how nationalist frames spread across the Continent, preparing the ideological

ground for the subsequent political revolutions, thus substantiating the diffusionist perspective in the study of nationalism. In supplementary analysis (see "Some Alternative Explanations"), we showed that alternative explanations, such as classical modernist accounts that focus on internal processes of economic development, are not supported by the data. Rather than being propelled forward by parallel, local modernization processes, Romantic nationalism spread through various networks of connectivity in a process that resembles contagion in epidemiology. And as in epidemiology, fashion, or finance, these influence networks reached across linguistic and religious groups and across political borders, thus confirming an argument put forward in a series of qualitative studies by the cultural historian of Romantic nationalism Joop Leerssen (2006). Future work in this area could explore the precise link between cultural nationalism, with which we were concerned here, and political nationalism. For example, one could relate the rise of Romantic nationalism at the city level to nationalist political events unfolding in these cities, such as the upheavals during the revolutionary crises of 1848.

Second, this diffusionist account was made possible by our research design and data. Rather than taking national communities as units of observation and analysis and documenting the inevitable rise of national consciousness within them, as in all major accounts of cultural nationalism (e.g., Hroch [1969] 2000; Smith 1986, chaps. 7 and 8; Hutchinson 1987), we created a dataset with cities as observational units, independent of their membership in particular nations. This overcomes the methodological nationalism of traditional internalist accounts and allows documenting the spread of nationalist ideas across national communities. It is worth noting here that the authors of *ERNiE*, on which we relied for the empirical analysis, were also motivated by the goal of avoiding methodological nationalism when they designed their massive data project.

Improving on the city-level dataset we used here and on the selectivity of *ERNiE*, which our dataset mirrors, it would be worth constructing an individual-level dataset with all writers and artists in Europe's 19th century, whether they eventually produced nationalist work or not, and collect more information on the relationships between them, the organizations they belonged to, their political stances, the relationships to the states where they lived, and so on, a monumental task that we leave to future research perhaps using newer methods and sources of text analysis.

It would also be interesting to follow up on Anderson's notion of the "modularity" of nationalism and study the relationship between nationalism and other political frames that diffused concurrently, a challenge that has not been taken up consistently in diffusion studies, social movement research, or nationalism studies. Romantic nationalism was originally intertwined with liberalism and the idea of popular democracy (Nodia 1992): nationalism offered an answer to the moral and organizational boundary problem of

enlightened universalism by identifying, delineating, and legitimizing a community within which liberal and democratic rights should be guaranteed (Wimmer 2002).

Later in the century, ideas about civilizational and racial superiority, developed in the context of the expansion of colonial empires, intertwined with nationalist ideologies in Northwestern Europe, while anti-imperial nationalism spread in the Global South and in Eastern Europe in another example of the parallel diffusion of multiple ideological strands. Today, we witness the spread of concepts such as "structural racism" and "racial privilege" across the world, from the United States to Germany, Singapore, or South Africa (e.g., Milman et al. 2021), which in turn is intersecting with the parallel, oppositional rise of neonationalist populism, often with a majoritarian, chauvinist bent, which diffuses through different channels to similar places. The study of the complex, interlocking diffusion of multiple ideational frames goes well beyond what we aimed for in this article and remains a core task for the future.<sup>31</sup>

Finally, our case study of cultural nationalism also speaks to the sociology of macrocultural change in general and to the world polity tradition (Krücken and Drori 2009) in particular. According to this theory, local societies are more or less integrated into world culture, depending on how much their governments participate in international organizations and how many globally operating civil society organizations are locally present. World cultural models (such as the nation-state template analyzed by Meyer [1997]) diffuse through these organizational channels across the globe, driven by the mechanism of normative emulation. But how do certain models rather than others become part of this hegemonic world culture and how can this culture evolve over time? We answered this question by shifting the focus away from hierarchical ties between local societies and "world society," as embodied in international organizations, and toward the horizontal channels between local societies. This allowed us to show that cultural diffusion can operate through multiple, variegated, and overlapping domains in a bottom-up and rhizoid process. It can thus generate a new, globally hegemonic cultural script than then propels itself further across the globe through imitation, competition, and emulation.

#### REFERENCES

Acemoglu, Daron, Davide Cantoni, Simon Johnson, and James A. Robinson. 2011. "The Consequences of Radical Reform: The French Revolution." American Economic Review 101 (7): 3286–307.

 $<sup>^{31}</sup>$  For a recent example from the policy diffusion field, see Genovese, Kern, and Martin (2017).

- Anderson, Benedict. 1991. Imagined Communities: Reflections on the Origin and Spread of Nationalism. London: Verso.
- Andrees, Richard. 1887. Religionskarte der Erde. Leipzig: von Velhagen & Klasing.
- Arvelle, Joel. 1995. *Histoire de la franc maconnerie belge*. Braine-l'Alleud: J.-M. Collet. Bade, Klaus. 2008. *Migration in European History*. Oxford: Blackwell.
- Battiston, Federico, Vincenzo Nicosia, and Vito Latora. 2014. "Structural Measures for Multiplex Networks." *Physical Review E* 89 (3): 032804.
- Bauman, Chad M. 2008. Christian Identity and Dalit Religion in Hindu India, 1868–1947. Grand Rapids, MI: Wm. B. Eerdmans.
- Bearman, Peter. 1993. Relations into Rhetorics: Local Elite Social Structure in Norfolk, England, 1540–1640. New Brunswick, NJ: Rutgers University Press.
- Becker, Sascha O., Yuan Hsiao, Steven Pfaff, and Jared Rubin. 2020. "Multiplex Network Ties and the Spatial Diffusion of Radical Innovations: Martin Luther's Leadership in the Early Reformation." *American Sociological Review* 85 (5): 857–94.
- Beckfield, Jason. 2003. "Inequality in the World Polity: The Structure of International Organization." *American Sociological Review* 68 (3): 401–24.
- Benford, Robert D., and David A. Snow. 2000. "Framing Processes and Social Movements: An Overview and Assessment." *Annual Review of Sociology* 26 (1): 611–39.
- Billig, Michael. 1995. Banal Nationalism. London: Sage.
- Boli, John, and George M. Thomas. 1997. "World Culture in the World Polity: A Century of International Non-governmental Organization." *American Sociological Review* 62 (2): 171–90.
- Bonikowski, Bart. 2016. "Nationalism in Settled Times." *Annual Review of Sociology* 42 (1): 427–49.
- Bonikowski, Bart. 2017. "Ethno-nationalist Populism and the Mobilization of Collective Resentment." *British Journal of Sociology* 68:181–213.
- Borgatti, Stephen P., Ajay Mehra, Daniel J. Brass, and Giuseppe Labianca. 2009. "Network Analysis in the Social Sciences." *Science* 323 (5916): 892–95.
- Bosker, Maarten, Eltjo Buringh, and Jan Luiten Van Zanden. 2013. "From Baghdad to London: Unraveling Urban Development in Europe, the Middle East, and North Africa, 800–1800." Review of Economics and Statistics 95 (4): 1418–37.
- Brubaker, Rogers. 1996. Nationalism Reframed: Nationhood and the National Question in the New Europe. Cambridge: Cambridge University Press.
- Brubaker, Rogers. 2012. "Religion and Nationalism: Four Approaches." *Nations and Nationalism* 18 (1): 2–20.
- Cheng, Mengjie, Daniel Scott Smith, Xiang Ren, Hancheng Cao, Sanne Smith, and Daniel A. McFarland. 2023. "How New Ideas Diffuse in Science." American Sociological Review 88 (3): 522–61.
- Chiopris, Caterina. 2024. "Spatial Networks and the Diffusion of Ideas." PhD dissertation, Harvard University, Department of Government.
- Cima, Raymond. 1998–2008. "Histoire des chemins de fer européens." https://www.train.eryx.net/html\_trains/index\_nouveau.htm.
- Clauset, Aaron, Mark E. J. Newman, and Cristopher Moore. 2004. "Finding Community Structure in Very Large Networks." *Physical Review E* 70 (6): 066111.
- Cortell, Andrew P, and James W. Davis. 2000. "Understanding the Domestic Impact of International Norms: A Research Agenda." International Studies Review 2 (1): 65–87.
- Czarniawska, Barbara, and Guje Sevon. 1996. *Translating Organizational Change*. Berlin: Walter de Gruyter.
- DiMaggio, Paul. 1997. "Culture and Cognition." *Annual Review of Sociology* 23 (1): 263–87.
- Donaldson, Dave. 2018. "Railroads of the Raj: Estimating the Impact of Transportation Infrastructure." *American Economic Review* 108 (4–5): 899–934.
- Everton, Sean F., and Steven Pfaff. 2022. "Historical and Comparative Research on Social Diffusion: Mechanisms, Methods, and Data." *Social Science History* 46 (2): 431–72.

- Fearon, James D., and David D. Laitin. 2003. "Ethnicity, Insurgency, and Civil War." American Political Science Review 97 (1): 1–16.
- Fernihough, Alan, and Kevin Hjortshøj O'Rourke. 2021. "Coal and the European Industrial Revolution." *Economic Journal* 131 (635): 1135–49.
- Flückiger, Matthias, Erik Hornung, Mario Larch, Markus Ludwig, and Allard Mees. 2022. "Roman Transport Network Connectivity and Economic Integration." *Review of Economic Studies* 89 (2): 774–810.
- Fourcade-Gourinchas, Marion, and Sarah L. Babb. 2002. "The Rebirth of the Liberal Creed: Paths to Neoliberalism in Four Countries." *American Journal of Sociology* 108 (3): 533–79.
- Fousek, Jan, Vojtěch Kaše, Adam Mertel, Eva Výtvarová, and Aleš Chalupa. 2018. "Spatial Constraints on the Diffusion of Religious Innovations: The Case of Early Christianity in the Roman Empire." *PLOS One* 13 (12): e0208744.
- Gellner, Ernest. 1983. Nations and Nationalism. Ithaca, NY: Cornell University Press. Genovese, Federica, Florian G. Kern, and Christian Martin. 2017. "Policy Alteration: Rethinking Diffusion Processes When Policies Have Alternatives." International Studies Quarterly 61 (2): 236–52.
- Geroski, Paul A. 2000. "Models of Technology Diffusion." Research Policy 29 (4–5): 603–25.
   Gomez, Sergio, Albert Diaz-Guilera, Jesus Gomez-Gardenes, Conrad J. Perez-Vicente,
   Yamir Moreno, and Alex Arenas. 2013. "Diffusion Dynamics on Multiplex Networks."
   Physical Review Letters 110 (2): 028701.
- Gould, Roger V. 1991. "Multiple Networks and Mobilization in the Paris Commune, 1871." *American Sociological Review* 56 (6): 716–29.
- Greenfeld, Liah. 1992. Nationalism. Five Roads to Modernity. Cambridge, MA: Harvard University Press.
- Hechter, Michael. 2000. Containing Nationalism. Oxford: Oxford University Press.
- Himka, John-Paul. 1979. "Priests and Peasants: The Greek Catholic Pastor and the Ukrainian National Movement in Austria, 1867–1900." Canadian Slavonic Papers 21 (1): 1–14.
- Hroch, Miroslav. (1968) 2000. Social Preconditions of Patriotic Groups among the Smaller European Nations. New York: Columbia University Press.
- Hroch, Miroslav. (1969) 2000. Social Preconditions of Patriotic Groups among the Smaller European Nations. New York: Columbia University Press.
- Hsiao, Yuan, and Steven Pfaff. 2022. "Explaining the Diffusion of Radical ideas." Sociology Compass 16 (10): e13023.
- Hutchison, John. 1987. The Dynamics of Cultural Nationalism. London: Allen and Unwin. International Committee for the Conservation of the Industrial Hertitage. 2013. "The International Context for Textile Sites." https://ticcih.org/wp-content/uploads/2013/04/the\_international\_context\_for\_textile\_sites\_ticcih.pdf.
- Jordana, Jacint, David Levi-Faur, and Xavier Fernández i Marín. 2011. "The Global Diffusion of Regulatory Agencies: Channels of Transfer and Stages of Diffusion." Comparative Political Studies 44 (10): 1343–69.
- Katz, Elihu. 1999. "Theorizing Diffusion: Tarde and Sorokin Revisited." ANNALS of the American Academy of Political and Social Science 566 (1): 144–55.
- Kedourie, Elie. 1960. Nationalism. New York: Praeger.
- Keller, Wolfgang. 2004. "International Technology Diffusion." *Journal of Economic Literature* 42 (3): 752–82.
- Kelso, Nathanial V., and Tom Patterson. 2012. "World River and Lake Centerlines, 1:110 million." https://purl.stanford.edu/fb695ft1345.
- Kohn, Hans. 1960. "Romanticism and the Rise of German Nationalism." Review of Politics 12 (4): 443–70.
- Krücken, Georg, and Gili S. Drori. 2009. World Society: The Writings of John W. Meyer. Oxford: Oxford University Press.

- Kuran, Timur. 1998. "Ethnic Norms and Their Transformation through Reputational Cascades." *Journal of Legal Studies* 27:623–59.
- Lamont, Michèle, and Laurent Thévenot. 2000. Rethinking Comparative Cultural Sociology. Repertoires of Evaluation in France and the United States. Cambridge: Cambridge University Press.
- Leerssen, Joep. 2006. "Nationalism and the Cultivation of Culture." Nations and Nationalism 12 (4): 559–78.
- Leerssen, Joep. 2013. "Notes toward a Definition of Romantic Nationalism." Romantik: Journal for the study of Romanticisms 2 (1): 9–35.
- Leerssen, Joep. 2020. National Thought in Europe: A Cultural History. Amsterdam: Amsterdam University Press.
- Leerssen, Joep, Anne Hilde van Baal, and Jan Rock. 2018. Encyclopedia of Romantic Nationalism in Europe. Amsterdam: Amsterdam University Press.
- Leitzmann, Albert, Hans Gürtler, and Wilhelm Grimm. 1923. *Briefe der Brüder Grimm*. Jena: Frommannsche Buchhandlung (Walter Biederman).
- Levitt, Peggy, and Sally Merry. 2009. "Vernacularization on the Ground: Local Uses of Global Women's Rights in Peru, China, India, and the United States." Global Networks 9 (4): 441–61.
- Love, E. Geoffrey, and Peter Cebon. 2008. "Meanings on Multiple Levels: The Influence of Field-Level and Organizational-Level Meaning Systems on Diffusion." *Journal of Management Studies* 45 (2): 239–67.
- Maney, Gregory M., Lynne M. Woehrle, and Patrick G. Coy. 2005. "Harnessing and Challenging Hegemony: The US Peace Movement after 9/11." Sociological Perspectives 48 (3): 357–81.
- Mansbridge, Jane J., and Aldon Morris. 2001. Oppositional Consciousness: The Subjective Roots of Social Protest. Chicago: University of Chicago Press.
- Marshall, Monty G., Ted Robert Gurr, and Keith Jaggers. 2017. "Polity IV Project: Political Regime Characteristics and Transitions, 1800–2016." Center for Systemic Peace. https://www.systemicpeace.org/polityproject.html.
- Martí-Henneberg, Jordi. 2013. "European Integration and National Models for Railway Networks (1840–2010)." *Journal of Transport Geography* 26:126–38.
- McAdam, Doug, and Dieter Rucht. 1993. "The Cross-National Diffusion of Movement Ideas." *Annals of the AAPSS* 528:56–74.
- McCammon, Holly. 2013. "Resonance, Frame." Pp. 1–4 in *The Wiley-Blackwell Encyclopedia of Social and Political Movements*, edited by David A. Snow, Sarah A. Soule, and Hanspeter Kriesi. Hoboken, NJ: Wiley.
- McCormick, Michael, Guoping Huang, Giovanni Zambotti, and Jessica Lavash. 2013. "Roman Road Network (version 2008)." Digital Atlas of Roman and Medieval Civilization. Harvard Dataverse. https://doi.org/10.7910/DVN/TI0KAU.
- McDonnell, Terence E., Christopher A. Bail, and Iddo Tavory. 2017. "A Theory of Resonance." Sociological Theory 35 (1): 1–14.
- McVeigh, Rory, Michael R. Welch, and Thoroddur Bjarnason. 2003. "Hate Crime Reporting as a Successful Social Movement Outcome." American Sociological Review 68 (6): 843–67.
- Meyer, John, John Boli, George M. Thomas, and Francisco O. Ramirez. 1997. "World Society and the Nation-State." *American Journal of Sociology* 103 (1): 144–81.
- Milman, Noa, Folashade Ajayi, Donatella Della Porta, Nicole Doerr, Piotr Kocyba, Anna Lavizzari, Herbert Reiter, Piotr Płucienniczak, Moritz Sommer, and Elias Steinhilper. 2021. "Black Lives Matter in Europe: Transnational Diffusion, Local Translation and Resonance of Anti-Racist Protest in Germany, Italy, Denmark and Poland." Report. In *Dezim Research Notes Nr. 6*. Berlin: Deutsches Zentrum für Integrationsund Migrationsforschung.
- Nodia, Ghia. 1992. "Nationalism and Democacy." Journal of Democracy 3 (4): 3-22.

- Ozkirimli, Umut. 2000. Theories of Nationalism: A Critical Introduction. Houndsmills, UK: Palgrave.
- Padgett, John F., and Christopher K. Ansell. 1993. "Robust Action and the Rise of the Medici, 1400–1434." American Journal of Sociology 98 (6): 1259–319.
- Pollard, Sidney. 1981. Peaceful Conquest: The Industrialization of Europe, 1760–1970: Oxford: Oxford University Press.
- Pope, Shawn, and John W. Meyer. 2016. "Local Variation in World Society: Six Characteristics of Global Diffusion." *European Journal of Cultural and Political Sociology* 3 (2–3): 280–305.
- Rawlings, Craig M., Jeffrey A. Smith, James Moody, and Daniel A. McFarland. 2023.

  Network Analysis: integrating Social Network Theory, Method, and Application with R. Cambridge: Cambridge University Press.
- Rogers, Everett M. 1995. Diffusion of Innovations, 5th ed. New York: Free Press.
- Rüegg, Walter, and Asa Briggs, eds. 1996. Geschichte der Universität in Europa, Bd. 2. Von der Reformation zur Französischen Revolution (1500–1800). Munich: Beck.
- Rüegg, Walter, and Asa Briggs, eds. 2004. Geschichte der Universität in Europa, Bd. 3: Vom 19 Jahrhundert zum Zweiten Weltkrieg (1800–1945). Munich: Beck.
- Simmons, Beth A., and Zachary Elkins. 2004. "The Globalization of Liberalization: Policy Diffusion in the International Political Economy." *American Political Science Review* 98 (1): 171–89.
- Smith, Anthony D. 1986. The Ethnic Origins of Nations. Oxford: Blackwell.
- Snow, David A., and Robert D. Benford. 1988. "Ideology, Frame Resonance, and Participant Mobilization." *International Social Movement Research* 1 (1): 197–217.
- Snow, David, Robert Benford, Holly McCammon, Lyndi Hewitt, and Scott Fitzgerald. 2014. "The Emergence, Development, and Future of the Framing Perspective: 25 + Years since 'Frame Alignment.'" *Mobilization: An International Quarterly* 19 (1): 23–46.
- Snow, David, E. Burke Rochford, Steven K. Worden, and Robert D. Benford. 1986. "Frame Alignment Processes, Micromobilization, and Movement Participation." American Sociological Review 51:464–81.
- Soule, Sarah A., and Conny Roggeband. 2018. "Diffusion Processes within and across Movements." Pp. 236–51 in *The Wiley Blackwell Companion to Social Movements*, edited by David A. Snow, Sarah A. Soule, and Hanspeter Kriesi. Hoboken, NJ: Wiley.
- Strang, David. 1990. "From Dependency to Sovereignty: An Event History Analysis of Decolonization 1879–1987." *American Sociological Review* 55:846–60.
- Strang, David. 1991. "Global Patterns of Decolonization, 1500–1987." International Studies Quarterly 35:429–54.
- Strang, David, and John W. Meyer. 1993. "Institutional Conditions for Diffusion." Theory and Society 22:487–511.
- Strang, David, and Sarah A. Soule. 1998. "Diffusion in Organizations and Social Movements: From Hybrid Corn to Poison Pills." *Annual Review of Sociology* 24 (1): 265–90.
- Swidler, Ann. 1986. "Culture in Action: Symbols and Strategies." American Sociological Review 51 (2): 273–86.
- Tarde, Gabriel. 1890. Les lois de l'imitation. Paris: Patterson Press.
- Taylor, Charles. 1992. The Ethics of Authenticity. Boston: Harvard University Press.
- The Times. 1900. The Times Atlas, new ed. London: The Times.
- Troinitskii, Nikolai A. 1905. *Pervaia vseobshchaia perepis' naseleniia Rossiiskoi Imperii,* 1897 g. St. Petersburg: Central Statistical Committee of the Ministry of Interior.
- Velasco, Kristofer. 2023. "Transnational Backlash and the Deinstitutionalization of Liberal Norms: LGBT+ Rights in a Contested World." *American Journal of Sociology* 128 (5): 1381–429.
- Wang, Dan J., and Sarah A. Soule. 2012. "Social Movement Organizational Collaboration: Networks of Learning and the Diffusion of Protest Tactics, 1960–1995." American Journal of Sociology 117 (6): 1674–722.

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- Wejnert, Barbara. 2005. "Diffusion, Development, and Democracy, 1800–1999." American Sociological Review 70 (1): 53–81.
- Wetts, Rachel. 2023. "Money and Meaning in the Climate Change Debate: Organizational Power, Cultural Resonance, and the Shaping of American Media Discourse." American Journal of Sociology 129 (2): 384–438.
- Williamson, Vanessa, Kris-Stella Trump, and Katherine Levine Einstein. 2018. "Black Lives Matter: Evidence That Police-Caused Deaths Predict Protest Activity." Perspectives on Politics 16 (2): 400–415.
- Wimmer, Andreas. 2002. Nationalist Exclusion and Ethnic Conflicts. Shadows of Modernity. Cambridge: Cambridge University Press.
- Wimmer, Andreas. 2021. "Domains of Diffusion: How Culture and Institutions Travel around the World and with What Consequences." American Journal of Sociology 126 (6): 1389–438.
- Wimmer, Andreas. 2023. "Layered Legacies: How Multiple Histories Did (or Did Not) Shape the Attitudes of Contemporary Europeans." *Sociological Science* 10:1–46.
- Wimmer, Andreas, and Yuval Feinstein. 2010. "The Rise of the Nation-State across the World, 1816 to 2001." *American Sociological Review* 75 (5): 764–90.
- Wimmer, Andreas, and Nina Glick Schiller. 2002. "Methodological Nationalism and Beyond: Nation State Formation, Migration and the Social Sciences." Global Networks 2 (4): 301–34.
- Wurpts, Bernd, Katie E. Corcoran, and Steven Pfaff. 2018. "The Diffusion of Protestantism in Northern Europe: Historical Embeddedness and Complex Contagions in the Adoption of the Reformation." *Social Science History* 42 (2): 213–44.
- Zhukov, Yuri M., and Brandon M. Stewart. 2013. "Choosing Your Neighbors: Networks of Diffusion in International Relations." *International Studies Quarterly* 57 (2): 271–87.
- Zuo, Jiping, and Robert D. Benford. 1995. "Mobilization Processes and the 1989 Chinese Democracy Movement." *Sociological Quarterly* 36 (1): 131–56.