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Regionalization and Globalization in Networks of Transnational Human Mobility, 1960–2010

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Abstract. The dramatic increases in transnational mobility and communication over recent decades give rise to the question of whether the world is globally integrating or whether regions are emerging as a new layer of societal integration beyond the nation-state. Yet, our knowledge in this regard is still limited, as researchers have thus far modeled regionalization and globalization as *either* independent from *or* dependent on each other and their conclusions are heavily contingent upon this decision. Furthermore, most past empirical studies on this issue have focused on economic and institutional ties, disregarding people's cross-border activity. This article aims to (a) clarify the relation between regionalization and globalization via a novel conceptualization that allows the modeling of the two processes as *both* complementary *and* competitive and thus to compare resulting outcomes, and (b) empirically trace regionalization and globalization in five types of transnational human mobility (asylum-seeking, migration, refuge-seeking, studying abroad and tourism) over time. Network analyses of flows between 38,220 country dyads reveal that while in absolute terms both regionalization and globalization occur, regional integration exceeds global integration. While this effect is found for all regions, it is strongest in Latin America and the Caribbean. These findings contradict basic assumptions of world-systems theory's core-periphery model, demanding a rethink regarding the structure of the transnational world, paying increased attention to the role of regions as a relevant layer of societal integration between the nation-state and world society.

Keywords. Transnationalism, globalization, regionalization, mobility, social networks.

INTRODUCTION

The amount of people and information that traverse nation-state borders have starkly increased over recent decades and for some types of transnational human activity, including cross-border phone calls and studying abroad, growth rates have been no less than exponential (Deutschmann 2016). If we accept Simmel's assumption that "[s]ociety exists where a number of individuals enter into interaction" (1971: 23), then these unprecedented quantities of transnational activity imply that the days of the nation-state society are over[1]. But what is it replaced with? Are we moving towards a "world of regions" (Katzenstein 1993), a constellation of insular continent

[1] Note that this does not necessarily imply that the nation-state *itself* loses its power or vanishes (cf. Pries 2008: 32-38).

societies in which people interact primarily within world regions, or rather towards one single world society with "intercourse in every direction, universal interdependence of nations" (Marx and Engels 1948[1848])? Is the world regionalizing or globalizing – or both?

The answer to this question will likely be of great importance in the 21st century. From Kant's 1795 *Perpetual Peace* to intergroup contact theory (Allport 1954) and transactionalist theory (Deutsch *et al.* 1957) scholars have argued that mobility and resulting exchange between people evoke sense of community, peaceful relations, and unity. Following these theories, integration will depend on individuals' transnational activity. But what if the reach of these flows is not all-encompassing and global but fragmented and regional? What if closure now simply occurs at a higher level (the regional instead of the national) and the world disintegrates into opposing blocks? Huntington's *Clash of Civilizations* (1996) is the most impactful variant of this sobering idea of new potential for conflict at the next scale. Even if we were to discard Huntington's work as overemphasizing cultural differences, the above-mentioned theories still imply that a globalized world is fundamentally different from a regionalized one – and that this difference may have serious implications for many fields, from identity formation and sentiments towards foreigners to global security and the popular acceptance of supranational institutions.

Despite its relevance, our knowledge regarding the issue of regionalization and globalization is still limited. To start with, the public and to some extent even scholarly debate is dominated by simplistic buzzwords, from McLuhan's "global village" (1962) to Cairncross's "death of distance" (1997) and Friedman's "flat world" (2007), leaving little doubt that we live in a globalized world in which *everything* is connected. The structural complexity of transnational activity networks too often remains hidden in the shadows of such facile catchphrases. What is more, even the more rigorous scientific output on the issue of regionalization and globalization is restricted in at least two ways. First, existing research is conceptually limited. Some theoretical reasoning on phenomena like globalization and transnationalization simply passes over the issue of regionalization, for instance Pries's (2005: 176) otherwise pertinent typology. But even where both regionalization and globalization *are* considered, it is usually not reflected upon what consequences the decision to define these two processes as either complementary or competitive has on the conclusions that are drawn. Kim and Shin for instance model the two as independent processes, find that both intraregional and global densities of trade increase over time, and conclude that "globalization and regionalization are not contradictory processes" (2002: 445). Contrariwise, Chase-Dunn *et al.* define globalization as "the increasing worldwide density of large-scale interaction networks *relative to the density of smaller networks*" (2000: 77, emphasis added). Given that intraregional ties constitute such smaller networks, regionalization and globalization are by definition competitive if this approach is followed. Whether the two processes co-exist simultaneously or offset each other is thus largely a matter of conceptualization, and this problem has not been reflected upon sufficiently to date. Thus, the first goal of this article is to clarify the relation between regionalization and globalization by offering a novel encompassing typology that contains *both* independent *and* relative definitions and thus allows to compare respective outcomes. This new classification also differentiates between *-ism* (as in regional*ism*) as a state, i.e. the degree of integration at a certain point in time, and *-ization* (as in regional*ization*) as the according process. Thus, it goes beyond existing classification systems in both scope and logical consistency, while also offering suggestions for operationalization via social network analysis (SNA) measures.

Second, there is an empirical gap, since most existing studies on the question of regionalization and globalization have focused on networks of economic flows (Kim and Shin 2002; Zhou 2011) and international institutional ties (Beckfield 2010; Nierop 1989) between countries, disregarding transnational human activity (i.e. cross-border mobility and communication of individuals). Where flows of people and their messages around the globe have been studied, the center-periphery-framework of world-systems theory has usually served as a theoretical frame (e.g., Barnett and Wu 1995), leaving the issue of regionalization untackled. The second goal of this study is thus to fill this empirical gap by analyzing processes of regionalization and globalization in five types of cross-border mobility (asylum-seekers, migrants, refugees, students, and tourists), considering 196 sending and receiving countries and time periods of up to five decades (1960 to 2010).

This article is structured as follows: after summarizing the state of research and highlighting its gaps in the next section, a new conceptual framework is developed. Then, the empirical data and methods are described. Thereafter, the results are presented and finally, the findings are summarized and discussed.

STATE OF RESEARCH

The existing research on regionalization and globalization can be grouped broadly into three areas: (a) eco-

nomic interdependence, (b) political and institutional ties, and (c) transnational human activity. The structure of *economic interdependence* is relatively well-studied. Apart from a long-standing theoretical debate about the pros and cons of regionalism (preferential trade agreements) and globalization (general free trade) in economics (Bhagwati 1992), there is a considerable amount of empirical research: Kim and Shin (2002) state that trade relations have globalized *and* regionalized, arguing that the two phenomena are complementary. Kastelle *et al.* state that regionalization in trade networks has remained remarkably stable since 1948, concluding that "the international economy is still strongly regional, rather than globalizing" (2006: 21). Bandelj and Mahutga (2013) examine the global network of bilateral investment treaties from 1959 to 2009 and find evidence for both globalization and regional homophily. Zhou (2011) shows that while belonging to the same civilization had a negative effect on trade in 1965, this effect reversed over time and from the 1980s onwards being part of the same civilization had a positive effect on trade. Hirata *et al.* state that "[b]oth global and regional economic linkages have strengthened substantially over the past quarter century" (2013: 1) but find that since the mid-1980s, the importance of regional factors in explaining business cycles has strongly increased. Using a novel latent space modeling approach, Howell (2013) also finds strong evidence for regional homophily in the world trade network. Other studies on trade networks have ignored the issue of regionalization and focused on the core-periphery axis of world-systems theory as the ideal model structure instead (e.g., Mahutga 2006; Mahutga & Smith 2011; Nemeth and Smith 1985; Smith and White 1992).

Concerning networks of international *political and institutional ties*, a similarly substantial amount of research exists. Katzenstein states that there is a "new political regionalism that expresses different norms, which, in the foreseeable future, are unlikely to be assimilated fully into one normative global order" (1993: 65). The English School of International Relations argues for increased regionalization (Hurrell 2007) and a whole new sub-discipline of political science – Comparative Regionalism – deals with institutional interrelations within world regions (Laursen 2010). Hennis (2001) intends to clarify the link between globalization and regional integration in Europe, focusing on the common agricultural policy of the EU. There are also several empirical network studies, usually operating within the neo-institutionalist paradigm and the idea of a world polity (Meyer *et al.* 1997): Nierop examines intergovernmental organizations (IGOs) and finds that "[r]egionalism prevails within the global institutional network and is getting stronger over time" (1989: 43). Beckfield (2010) also analyzes the network of supranational political institutions and comes to similar conclusions. Smith (2005) observes regionalization (by which she understands a growing North-South divide) in networks of transnational social movement organizations since the 1980s. Kim and Barnett (2000) study the network of overlapping membership in 69 international telecommunication organizations and find a center-periphery structure as well as regional clustering.

Network analyses of *transnational human activity*, i.e. individuals' cross-border mobility and communication, by contrast rarely address the question of regionalization or globalization. Reyes (2013) for instance only includes region as a control variable without discussing her finding that travel occurs more frequently within regions than between them further. Similarly, Ugander *et al.* (2011: 13) notice *en passant* that transnational Facebook friendships appear to be clustered into groups of countries that seem to be determined by geography and historic ties, but do not go deeper into this issue. Regionalization is also not the main focus of Shields' (2013) study on transnational student mobility; nevertheless, it reveals that intraregional mobility as a share of all mobility constantly increased between 1999 and 2008.

Interestingly, though, there is a clear shift in the studies of Barnett, probably the most eminent exponent of network studies on human cross-border activity. Most of his earlier studies frame transnational mobility and communication exclusively in terms of world-systems theory's core-periphery structure (Barnett and Wu 1995; Chen and Barnett 2000; Choi *et al.* 2006)[2]. However, Barnett *et al.* (1999) already discuss the regional clustering they observe over and above the center-periphery structure in transnational telecommunication and similar networks as being "somewhat at odds with world systems theory" (1999: 42). Later, Barnett (2001) re-examines the transnational telecommunication network and finds both a center-periphery structure *and* clustering within eight regional blocks, which he interprets as fitting Huntington's idea of civilizations. Finally, in one of his most recent papers, Barnett concedes that "a combination of theories is required to explain the complexities of international communication" (Barnett 2012: 4438) and emphasizes the importance of regionalization in stating that:

[2] Note that while early world-systems theory was rather agnostic about human mobility patterns, later research in this tradition argues that human mobility follows the core-periphery-structure of the world-system (cf. Gleditsch 1967, Galtung 1971, Massey et al. 1998).

> *[t]he observation of intra-regional communication, within East Asia, the Middle East, Latin America, Eastern Europe, and the former Soviet Union, leading to culturally homogeneous regional civilizations suggests that the globalization process has begun with regionalization. [...] Thus, in the near future, while individual identity will transcend local ethnic or national culture, it may stop far short of global convergence into a universal culture, which has been predicted for the long-term. It is likely that individuals will first develop regional cultures, i.e., pan-Islamic, European, Latin American or North American* (Ibid.: 4436).

These accounts suggest that regionalization is becoming more central a theoretical lens through which to observe transnational human activity. At the same time, however, proponents of the "death-of-distance hypothesis" have argued that due to technological, infrastructural, and socioeconomic advancements, human mobility and communication is less and less spatially restrained (see Deutschmann 2016 for an overview). Thus, according to this argument, intra-regional mobility should have *de*creased over the last decades – at least relative to global mobility. The contrariness of these assumptions and the possibility of type-specific peculiarities make it difficult to predict the overall development of regionalization and globalization in cross-border mobility *ex ante*. Accordingly, we abstain from formulating hypotheses at the outset and instead take a more explorative approach to conducting the first encompassing study of regionalization and globalization across different types of mobility over time.

The lack of knowledge regarding the potentially regionalized structure of transnational human mobility is also partly due to how related strands of research that do not necessarily rely on SNA as a method deal with human cross-border mobility. The field of *Transnational Migration Studies* has mostly concentrated on transnational communities as small-scale, "local" phenomena that often involve only a specific village in the sending country and a certain neighborhood in the receiving city (Levitt 2001). Accordingly, most research in this field focuses on specific cases that often involve no more than one receiver country (e.g., Whitehouse 2009; Lutz 2011; Adick *et al.* 2014). This emphasis on small-scale case studies hampers statements about entire world regions. On the other extreme, *International Relations* scholars have tended to simply equate "transnational" with "global" (e.g., Nye and Keohane 1971: 332), precluding that cross-border activity often spans short distances (for instance between neighboring countries) that have in fact nothing global about them. All this can be observed despite frequent lip service that transnational human activity must be thought of as involving multiple scales, including the world-regional one. Pries for instance argues that "various frames of reference – local, micro-regional, national, macro-regional and global – have to be combined, instead of replacing one frame (for example the national) with another (for example the global)" (2005: 174). However, as Brenner concedes, "[t]he task of deciphering the tangled scalar hierarchies, mosaics, and networks […] is still in its embryonic stages" (2011: 29). So far, most thinking about transnationalism remains caught in the binary logic of "the local and the global" (Kearney 1995), thereby overlooking the world-regional scale in this deciphering process. An exception to this rule is the *Sociology of Europe*, where cross-border mobility has been deployed as an indicator for "horizontal Europeanization", i.e., bottom-up regional integration in Europe (Delhey 2004; Mau and Mewes 2012). For other parts of the world, however, such analyses are still missing. Surprisingly so, however, because the theoretical arguments that have been put forward as to why transnational human mobility should cluster within regions are in principle universal, be they unifying effects of cultural similarity (Kant 1903[1795]), political unification projects (Deutsch *et al.* 1957), economic bonds (Clark and Merritt 1987), or geographic propinquity (Brams 1966). Whether they have *de facto* different agglomerating effects in different regions is an empirical question that can only be answered once the Eurocentrism and the *n*=1 problem that the exclusive focus on Europe entails is overcome, and "horizontal" regionalization is studied comparatively across regions. Early integration scholars such as Haas, Schmitter, and Etzioni recognized this necessity, treated (political) regionalism as a general process and conducted cross-regional comparisons. It is time to return to their universalist mindset and transfer it to networks of human cross-border mobility.

To do that, we first need a systematic conceptualization that allows the modeling of regionalization and globalization (a) as *both* competitive *and* complementary, and (b) comparatively across world regions, mobility types, and over time. However, such a typology does not exist yet. Pries's (2005: 176) conceptualization for instance, probably the most comprehensive of its kind, does not contain the term "regionalization", lacks concrete SNA operationalizations, and does not differentiate between *-ism* as a state and *-ization* as a process[3]. Fur-

[3] Since we focus on *human* cross-border activity here, we in turn do not include "internationalization" and "supranationalization" that *are* part of Pries's typology but refer to relations between states/institutions. We also ignore his category "diaspora-building", which introduces an ethnic/religious component that we regard as a potential explanation for

thermore, regionalization and globalization have so far been modeled as *either* independent (Kim and Shin 2002) or interdependent (Chase-Dunn *et al.* 2000) by definition, without reflecting on the implications of this decision. This is surprising given the long-standing debate in *Integration Studies* about the question of whether absolute or relative approaches are more adequate for studying cross-border transactions. Deutsch (1956) and Russett (1970) took a stance for relative measures, whereas Inglehart (1967) and Nye (1968) pointed out that relative values alone can be misleading and that absolute measures have their justification as well. Similarly, Kick and Davis argued that "[t]he use of rates tends to mask the huge absolute differences found across world-system positions" (2001: 1570) and Puchala stated that the use of absolute volumes "may contribute insight to transaction analysis that is sometimes blurred by sophisticated data transformations. Where percentages, proportions, and relative acceptance scores standardize for size, such standardization is not always analytically desirable" (1970: 735). Nye (1968) therefore argued for using both absolute and relative measures comparatively. We share this view: the answer to a research question should not depend on the either/or choice between two constricted approaches, each of which alone can by necessity only capture part of the full picture. Therefore, we implement the option to study *both* absolute *and* relative measures as a central feature in our novel conceptualization.

CONCEPTUALIZATION

Here, *transnational* shall denote any form of activity that transgresses nation-state borders[4].

In line with classic integration theories (Deutsch *et al.* 1957; Gleditsch 1967; Nye 1987[1971]) we regard such transnational activity as an indicator of integration between the involved nation-states[5]. Such an integrative tie of transnational activity can be *regional*, if the sending and receiving nation-state are part of the same world region, or *global*, if they are not. For each of these terms, one can further discern between *-ism* as the state of the phenomenon at a specific point in time and *-ization* as the underlying process. In addition, we distinguish between *absolute* and *relative* forms of these states and processes to allow for modeling both the complementary and the competitive approaches that exist – thus far separately – in the literature[6]. From this 3×2×2-fold distinction, a set of twelve definitions emerges (Table 1). In this study, we focus on the physical mobility of individuals across nation-state borders – or transnational human mobility (THM) – as a specific form of transnational activity.

Transnationalism can then be defined (a) in absolute terms via the amount of THM that occurs and (b) in relative terms via the amount of THM relative to the amount of human mobility within nation-states. *Transnationalization* takes place (a) in absolute terms if the amount of THM increases over time, and (b) in relative terms if the amount of THM increases over time at a faster rate than the amount of human mobility within nation-states. Empirically, absolute transnationalism can be measured via the tie value x_{ij} that denotes the number of people that move between two countries i and j, whereas relative transnationalism can be captured by:

$$\frac{x_{ij}}{\frac{1}{2}\left(x_i + x_j\right)},$$

i.e., the amount of mobility between i and j relative to the mean amount of mobility within i and j. Absolute

why regionalism occurs, rather than an alternative to it.

[4] Note that this definition is less demanding than the one sometimes found in Transnational Migration Research, which sees *sustained* mobility, i.e., regular cross-border movements of the same individuals, as an elementary feature of transnationalism (Levitt 2001; Portes *et al.* 1999). For a discussion of the diversity of takes on transnationalism and related concepts that have emerged in this tradition (transnational practices, transnational social formations, etc.), see Vertovec (2009). For the purposes of this study, which is not interested in the life-worlds of individuals, but in a more abstract form of integration at the regional and global scale, it suffices to assume that THM occurs when individuals move between countries. Following the modus operandi of International Relations, we do not use the term "international" (inter = "between" in Latin), which is usually reserved for affairs between governments. "Transnational" is the fitting term here, since it is conventionally used to denote "movements of tangible or intangible items across state boundaries when at least one actor is not an agent of a government or international organization" (Nye and Keohane 1971: 25). This is also in line with how "transnational" is applied in contemporary sociological research on cross-border activities in Europe (e.g., Gerhards and Rössel 1999; Mau 2010; Kuhn 2011; Delhey *et al.* 2014).

[5] Here, "integration" refers to macro-level integration, i.e. the binding together of sets of countries via THM, not to the (cultural/social) integration of individual migrants into a host society.

[6] Note that "absolute" and "relative" as used here are not to be confused with "absolutist" and "relativist" conceptions of geographic and social space as discussed by Pries (2005). In this regard, we see our approach as situated in between the two ideal types: on the one hand, we treat regions as "containers" and allot geographic distance a generic structuring quality of its own, which speaks for an *absolutist* conception of space; on the other hand, the specific container labels we use ("Latin America", "Europe", etc.) are socially constructed and contested (e.g., "Is the Middle East a region of its own?"; "Is Mexico a Latin or a North American country?"), because of which we experiment with *various* definitions of region, which alludes to a *relativist* conception of space. Hence, we follow Pries's suggestion to "combine 'absolutist' and 'relativist' approaches in the study of space" (Ibid., 173) and approve of his idea of "relative containers" (Ibid.).

Table 1. Conceptualization.

Term	Form	Definition	Network measure
Transnationalism	absolute	The amount of THM.	x_{ij}
	relative	The amount of THM relative to the amount of human mobility within nation-states.	$\frac{x_{ij}}{\frac{1}{2}\left(x_i + x_j\right)}$
Transnationalization	absolute	The amount of THM increases over time.	$x_{ij}^{t2} > x_{ij}^{t1}$
	relative	The amount of THM increases over time at a faster rate than the amount of human mobility within nation-states.	$\frac{x_{ij}^{t2}}{\frac{1}{2}\left(x_i^{t2} + x_j^{t2}\right)} > \frac{x_{ij}^{t1}}{\frac{1}{2}\left(x_i^{t1} + x_j^{t1}\right)}$
Regionalism	absolute	The density of THM within world regions.	Δ_{intra}
	relative	The density of THM within world regions relative to the density of THM between world regions.	$\frac{\Delta_{intra}}{\Delta_{inter}}$
Regionalization	absolute	The density of THM within world regions increases over time.	$\Delta_{intra}^{t2} > \Delta_{intra}^{t1}$
	relative	The density of THM within world regions increases over time at a faster rate than the density of THM between world regions.	$\frac{\Delta_{intra}^{t2}}{\Delta_{inter}^{t2}} > \frac{\Delta_{intra}^{t1}}{\Delta_{inter}^{t1}}$
Globalism	absolute	The density of THM between world regions.	Δ_{inter}
	relative	The density of THM between world regions relative to the density of THM within world regions.	$\frac{\Delta_{inter}}{\Delta_{intra}}$
Globalization	absolute	The density of THM between world regions increases over time.	$\Delta_{inter}^{t2} > \Delta_{inter}^{t1}$
	relative	The density of THM between world regions increases over time at a faster rate than the density of THM within world regions.	$\frac{\Delta_{inter}^{t2}}{\Delta_{intra}^{t2}} > \frac{\Delta_{inter}^{t1}}{\Delta_{intra}^{t1}}$

Note: THM=transnational human mobility, x=tie strength, Δ =density, intra=intraregional, inter=interregional, i=country i, j=country j, t_1=time point 1.

transnationalization is given if $x_{ij}^{t2} > x_{ij}^{t1}$, i.e., if the amount of mobility between i and j at time point t_2 exceeds the amount of mobility between i and j at a previous time point t_1. Relative transnationalization exists if:

$$\frac{x_{ij}^{t2}}{\frac{1}{2}\left(x_i^{t2} + x_j^{t2}\right)} > \frac{x_{ij}^{t1}}{\frac{1}{2}\left(x_i^{t1} + x_j^{t1}\right)},$$

i.e., if the growth in THM between i and j exceeds the mean growth of mobility within i and j.

Regionalism can be defined (a) in absolute terms via the density of THM within world regions, and (b) in relative terms via the density of THM within world regions relative to the density of THM between world regions[7]. *Regionalization* exists (a) in absolute terms if the density of THM within world regions increases over time, and (b) in relative terms if the density of THM within world regions increases over time at a faster rate than the density of THM between world regions. Density has been a central sociological concept for societal integration ever since Durkheim introduced *dynamic density* as a "drawing together and the active exchanges that result from it" (2013[1893]: 202). As an SNA measure, density Δ is defined as the number of actual ties in a network as a fraction of all possible ties. It is often interpreted as an indicator for the cohesion (Borgatti *et al.* 2013) or integration (Barnett and Salisbury 1996: 16) of a network. Density is commonly used to measure globalization (e.g., Chase-Dunn *et al.* 2000), but it can also be used to describe and compare subgroups of a graph, for instance the density within and between world regions (Bandelj and Mahutga 2013; Kim and Shin 2002). High density levels are harder to reach in larger networks than in smaller ones (Borgatti *et al.* 2013: 152). This characteristic implies that regions that consist of fewer countries (e.g., Latin America) have an advantage compared to larger regions (e.g., Africa). While this effect would usu-

[7] As intraregional mobility can be considered not only relative to interregional, but also relative to intranational mobility, a *twofold* relative definition is thinkable as a third alternative when defining regionalism and regionalization. This idea was first laid out systematically by Delhey *et al.* (2014) for the European case.

ally be considered a hindrance to comparing networks of different sizes, we argue that it captures a generic property of interest, namely the difficulties of larger groupings of countries to integrate compared to smaller ones. Values for regions consisting of very small numbers of countries (e.g., North America) must however be treated with care.

Absolute regionalism can be operationalized as the intraregional density Δ_{intra}, and relative regionalism as:

$$\frac{\Delta_{intra}}{\Delta_{inter}},$$

where Δ_{inter} is the mean interregional density, which for a specific region A is measured as the average density of flows between A and other regions B,C,…,n, weighting the region pairs AB, AC,…,An by the number of countries that B,C,…,n consist of. Absolute regionalization is given if $\Delta^{t2}_{intra} > \Delta^{t1}_{intra}$, whereas relative regionalization exists if:

$$\frac{\Delta^{t2}_{intra}}{\Delta^{t2}_{inter}} > \frac{\Delta^{t1}_{intra}}{\Delta^{t1}_{inter}}.$$

Globalism can be defined (a) in absolute terms via the density of THM between world regions, and (b) in relative terms via the density of THM between world regions relative to the density of THM within world regions. *Globalization* accordingly exists (a) in absolute terms if the density of THM between world regions increases over time, and (b) in relative terms if the density of THM between world regions increases over time at a faster rate than the density of THM within world regions. These *inter*regional-density-based definitions are in line with several scholars' positions, including Levitt, for whom "[g]lobalization refers to the political, economic, and social activities that have become *interregional* or *intercontinental*" (2001: 202); Nye, who defines globalism as "networks of connections that span *multicontinental* distances" (2002); and Held and McGrew, who state that "globalization denotes the expanding scale, growing magnitude, speeding up and deepening impact of *interregional* flows and patterns of social interaction" (2003: 4; emphases added in all three citations). They are however different from simpler definitions that regard any increase in transnational connectedness as globalization, *regardless of scale*. Giddens for instance describes globalization simply as "the intensification of worldwide social relations which link distant localities" (1990: 64), leaving unspecified how distant "distant" must be. The explanatory power of such plain definitions is limited, because they conceal that what they label as "globalization" may predominantly be increases in intraregional activity that run orthogonal to "worldwide" social relations.

Following the superior multi-scaling approach, absolute globalism can be operationalized in network-analytical terms via the interregional density Δ_{inter}. Absolute globalization would accordingly exist if $\Delta^{t2}_{inter} > \Delta^{t1}_{inter}$. Relative globalism and relative globalization are defined as the reversal of relative regionalism and relative regionalization, i.e., as:

$$\frac{\Delta_{inter}}{\Delta_{intra}}$$

and

$$\frac{\Delta^{t2}_{inter}}{\Delta^{t2}_{intra}} > \frac{\Delta^{t1}_{inter}}{\Delta^{t1}_{intra}}$$

respectively.

The main innovation of this new conceptualization is the differentiation between absolute and relative definitions: whereas the former allow for simultaneous regionalization and globalization, the latter imply that regionalization breeds de-globalization and, vice versa, that globalization spawns de-regionalization. Hence, both complementarity and competitiveness between regionalization and globalization can be modeled by choosing the according definition.

DATA AND METHODS

To study regionalization and globalization empirically, we analyze five example types of physical cross-border mobility for which dyadic data is available for an encompassing set of countries at several points in time: asylum-seeking, migration, refuge-seeking, studying abroad, and tourism (see Table 2 for definitions and sources). The data was standardized to cover the same set of sending and receiving countries. In network-analytical terms, our data can be described as a multiplex, autoregressive network. It is *multiplex*, because we analyze multiple relations on the same set of nodes (Boccaletti *et al.* 2014: 6). Although the advantages of multiplex as opposed to uniplex approaches were recognized decades ago (Wassermann and Faust 1994), they have long remained "in the realm of speculation" (Monge and Contractor 2003: 296), mostly due to the technical complexity that multiplexity involves. Even recent studies in physics usually only combine binary, non-weighted

graphs (e.g., Cardillo *et al.* 2013a, 2013b). Yet, the multiplexity of human activity needs to be addressed as concentrating on single activity types alone may lead to biases (Stopczynski *et al.* 2014). Here, we study L=5 layers of human cross-border mobility. Each layer l is a graph $G^l=(N^l)$, consisting of the same set of $N^l=N$=196 nodes (i.e., countries) and $K^l=K$=196×195=38,220 valued ties (whose value is given by the number of humans x_{ij} moving between the sender country i and receiver country j). This multilayered network is *autoregressive*, because we study how it evolves over time t, with t ranging from 1960 to 2010 for studying abroad and migration, from 1995 to 2010 for tourism, and from 2000 to 2010 for asylum- and refuge-seeking. This time frame of up to half a century is quite encompassing given that other studies in this field often cover only a decade or less (e.g., Kick and Davis 2001; Park *et al.* 2011; Shields 2013). For each layer l, the graph is available for at least six points in time t (see Table 2). Overall, we study a set of G=50 graphs that encompasses, *inter alia*, 3.8 million asylum-seekers, 24.6 million students going abroad, and 6.7 billion tourist trips.

The analysis is based on dichotomized versions of the networks. This *dichotomization* is necessary to be able to compute densities, which are used to operationalize regionalization and globalization. Finding adequate cut-off points is not trivial: if we used the raw absolute numbers of mobile individuals x_{ij}, a threshold that is too high would make it unjustifiably hard for countries with small populations to be counted as engaged in cross-border flows. Yet, regarding *any* value greater than zero a transnational flow would put minor flows of a few individuals on a level with major flows of several million people. Moreover, it is difficult to use the same absolute threshold for all layers, because the overall quantities are much higher e.g., for tourists than for asylum-seekers. To solve these issues, we first adjust the absolute flow size x_{ij}^t by the size of the sender-country population in the respective year p_i^t:

$$\frac{x_{ij}^t}{p_i^t}$$

We then compute the rank-ordered cumulative distributions for all $x_{ij}>0$ in the 2010 matrices (Figure 1). As Figure 1 reveals, the cumulative distributions of all mobility types under study are astonishingly uniform in their structure: on a semi-log plot they all form similarly-shaped S-curves, despite the fact that there is considerable variance in both the maximum population-size-adjusted flow size (ranging between 9,577 asylum-seekers per million sender-country inhabitants and 43.3 million tourists per million sender-country inhabitants) and the fraction of all dyads K^l for which $x_{ij}>0$ (ranging between 10.1 percent for asylum-seeking and 29.0 percent for tourism). Building on this structural similarity, we use quantiles instead of absolute values as cut-off points. In specific, we use the 1st quintile (solid vertical line in Figure 1) in the 2010 distribution as the main cut-off point in our analyses. This means that we regard movements of *more than* .08 students, 1.0 migrants, .10 refugees, .21 students, 6.7 tourists, and 1.5 transnationally mobile persons per million sender-country inhabitants as transnational flows. In addition, we re-run the analysis with alternative quintiles as cut-off points to see whether and how results change. This approach ensures comparability across time, layers, and a range of plausible thresholds. Additionally, it has the advantage of controlling for population growth. Between 1960 and 2010, the population of the 196 countries under study grew from 3.0 billion to 6.9 billion. If we used the same absolute cut-off point (say 1,000 individuals) throughout, more connections between countries would come into existence over time just because the absolute amount of people increased, inadvertently biasing results.

To facilitate the computation of interregional densities, the networks were also *symmetrized*, i.e., they were transformed from sets of directed to undirected ties. For the overall THM indices, which are used for robustness checks, ties were only treated as existent in the symmetrized version if they occurred in both directions. This coding rule is based on transactionalist theory, which requires actual interdependence between i and j, not just dependence of i on j or vice versa: "transaction must be balanced, truly an exchange" (Russett 1970: 239; see also Deutsch *et al.* 1957: 55). This symmetrization rule was however not applied to the individual types of THM, again in line with transactionalist theory: "It is surely not necessary that every particular class of transactions be in balance, but only that some overall balance among all major transaction categories be achieved" (Russett 1970: 239). Accordingly, for the individual THM types, ties were already counted as existent in the symmetrized version if they were present in one direction.

For studying regionalism and regionalization, we need to define *regions*. Following the example of Beckfield (2010), we base our definition on the United Nations (UN) Geoscheme M.49, which divides the world into "macro geographical (continental) regions" (UN 2013). Seven such regions are considered: Africa, Asia, the Caribbean, Europe, Latin America, North America, and Oceania. North America is a challenging case as it consists of only three countries (Bermuda, Canada,

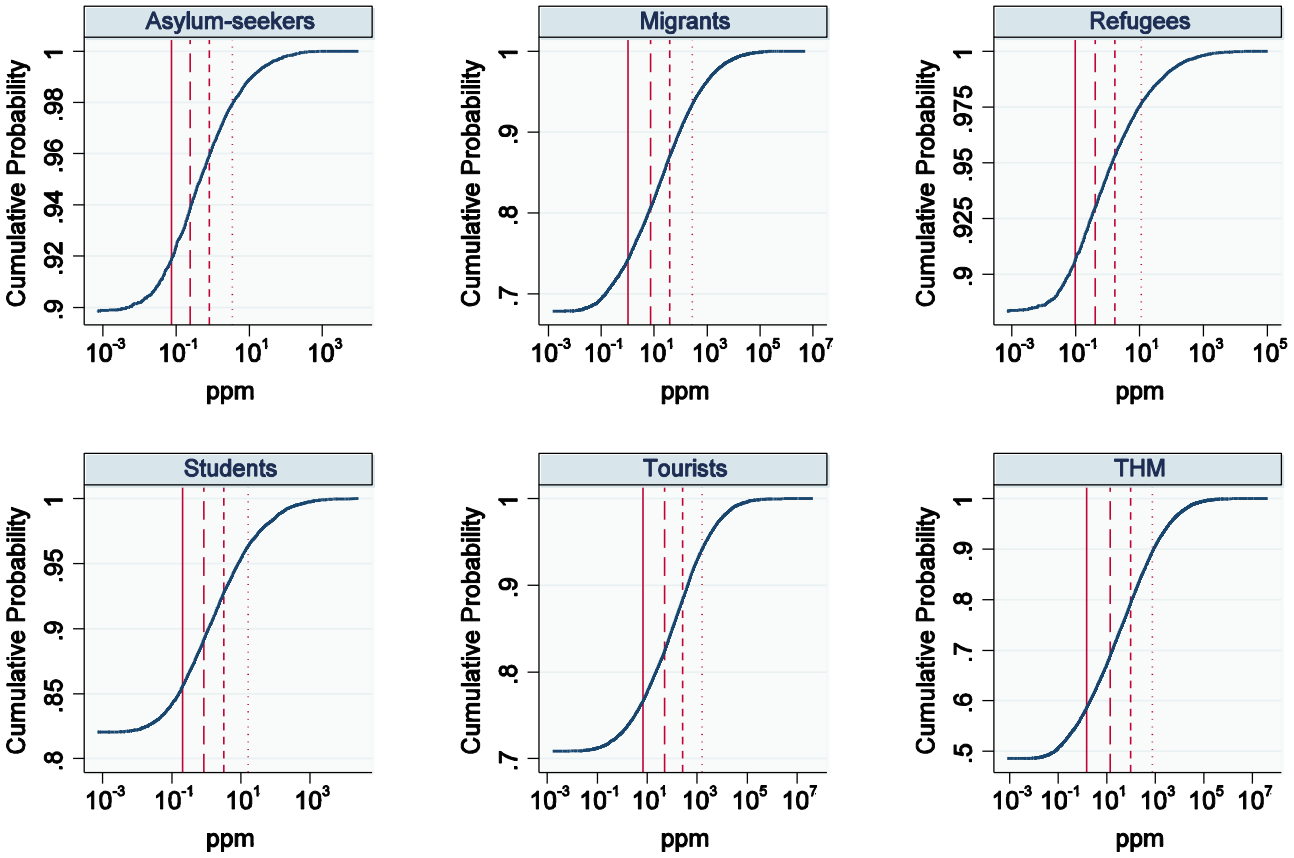

Figure 1. Cumulative distribution functions, 2010. *Note:* Solid vertical line=1st quintile; long-dashed line=2nd quintile; short-dashed line=3rd quintile; dotted line=4th quintile

United States), making it difficult to compare its density scores to those of other regions (see above). We decided against the rather artificial solution of Kim and Shin (2002) to "dissolve" North America by merging it with another region. Instead, we include North America severally in the calculations, but omit the rather incommensurable values for the region itself (which almost always exhibit the theoretical maximum of $\Delta_{intra}=1$) when presenting the results. As a robustness check, we also calculated the results for two additional definitions of regions; a *cultural* scheme based on Huntington's (1996) civilizations and a *political* scheme based on IGO membership. Furthermore, we ran cluster adequacy tests based on Newman and Girvan's *modularity Q-prime* (robustness checks available as supplementary material on the author's website and upon request).

All SNA measures were calculated in UCINET 6 (Borgatti *et al.* 2002). To suppress meaningless short-term fluctuations, results for all layers except migration – for which only decadal values are available – are presented using moving averages (via *tssmooth* in Stata). Migration data derives from two different sources (1960–2000: World Bank; 2000–2010: UN) which unfortunately lead to irreconcilable figures in 2000, despite the fact that the original source of both datasets is UN data (Özden *et al.* 2011: 12). These inconsistencies likely result from standardization and imputation measures taken in the former (Ibid.), but not in the latter dataset. In order to still show the full picture without confounding trends, the corresponding results are shown in separate subgraphs. Student data also derives from two different sources, but as over time trends match well, they are shown combined in one graph.

RESULTS

The absolute amount of cross-border mobility has risen starkly over recent decades: transnational migration increased by 123.6 percent and student mobility by 1,052.6 percent between 1960 and 2010; the worldwide number of tourists more than doubled (+115.8 percent)

Table 2. Types of transnational human mobility used.

Type	Weight (%)		Definition	
	2000	2010		
Asylum seekers	.1	.1	2000,'02,'04,'06,'08,'10 (n=6), UNHCR (2013)	"[A]n asylum-seeker is someone who says he or she is a refugee, but whose claim has not yet been definitively evaluated." (UNHCR 2014a)
Migrants	18.5	16.9	1960,'70,'80,'90,'00 (n=5), World Bank's Global Bilateral Migration Dataset (Özden *et al.* 2011); '00,'10 (n=2), UN (2012)	"In estimating the international migrant stock, international migrants have been equated with the foreign-born whenever possible. […] In most countries lacking data on place of birth, information on the country of citizenship was available and was thus used as the basis for the estimation of the migrant stock, effectively equating international migrants with foreign citizens" (UN 2012: 3). The world bank dataset is based on the same approach (Özden *et al.* 2011, 25).
Refugees	1.1	.8	2000,'02,'04,'06,'08,'10 (n=6), UNHCR (2013)	Any person who "owing to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it." (1951 Refugee Convention [as broadened by the 1967 Protocol], cited in UNHCR 2014b)
Students	.2	.2	1960,'64,'68,'72,'74,'76,'80,'82,'84, '86,'88,'90,'92,'94,'96,'98 (n=16), INA (2013); '00,'02,'04,'06,'08,'10 (n=6), UNESCO (2010)	"Students who have crossed a national or territorial border for the purpose of education and are now enrolled outside their country of origin." (UNESCO 2010: 264)
Tourists	80.1	82.0	1995,'96,'98,'00,'02,'04,'06, '08,'10 (n=9), UNWTO (2014)	"A visitor (domestic, inbound or outbound) is classified as a tourist (or overnight visitor) if his/her trip includes an overnight stay" (UNWTO 2008). We are interested in "arrivals of non-resident tourists at national borders, by country of residence". For a few countries, this category is unavailable in the UNWTO dataset. In order not to lose these countries, the category "arrivals of non-resident *visitors* at national borders" is used in these instances. In cases where both these categories are lacking, the category "arrivals of tourists *in all types of accommodation establishments*" was used instead.

between 1995 and 2010, and only the number of refugees (–1.9 percent) and asylum-seekers (–22.7 percent) decreased between 2000 and 2010. Yet, as the latter two groups taken together constitute less than one percent of all THM (Table 2), the overall picture is hardly affected: across all five mobility types, the total number of people crossing nation-state borders increased by 38.4 percent between 2000 and 2010. The overall density and connectedness of the multiplex network of THM also rose over time. In summary, there are a lot more cross-border connections today than half a century ago, giving rise to the question of how this new transnational world is structured.

ABSOLUTE REGIONALIZATION

Levels of *absolute regionalism* increased across almost all regions and types of THM over time, providing strong evidence for *absolute regionalization* as a quasi-universal process (Figure 2). As growth rates are by and large similar across regions, the rank order between regions also remains preponderantly consistent over time. In tourism, for instance, Latin America, the Caribbean, and Europe retain their top positions, Asia and Oceania stay in the middle, while Africa keeps its bottom position between 1995 and 2010. Yet, the rank order itself differs between mobility types: the Caribbean for example is among the most regionalized parts of the world when it comes to tourism and migration, but ranks lowest in asylum- and refuge-seeking. Africa, in turn, occupies bottom positions in migration, student exchange and tourism, but it features the highest regionalism in asylum- and refuge-seeking. These type-specific differences underline the utility of the comparative perspective adopted in this study.

Remarkably, there are little signs for European exceptionalism. Only in student exchange is Europe consistently far ahead of all other regions, keeping its prime position up through unparalleled longitudinal growth (from Δ_{intra}^{1960} =.22 to Δ_{intra}^{2010} =.83). For all other mobility types (i.e., 99.8 percent of all cross-border mobility

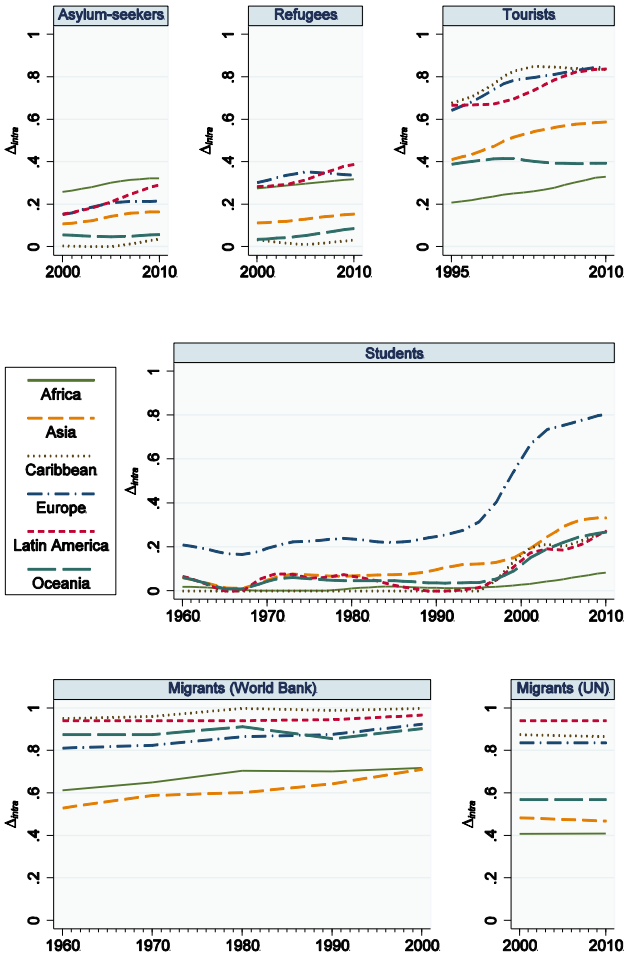

Figure 2. Absolute regionalization. *Note:* Δ_{intra} =intraregional density, cut-off point: 1st quintile.

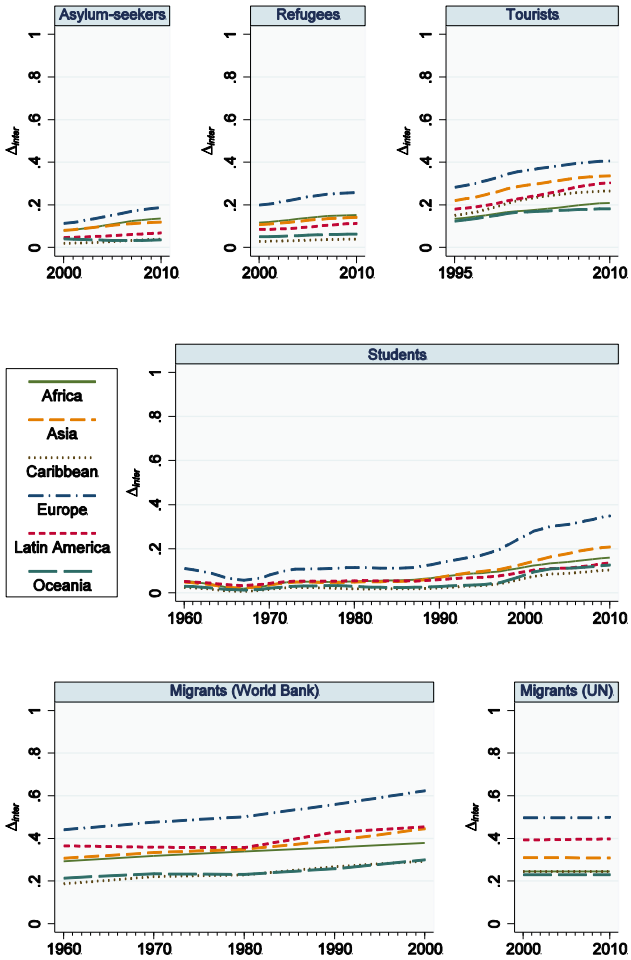

Figure 3. Absolute globalization. *Note:* Δ_{inter} =interregional density, cut-off point: 1st quintile.

under study), Latin America and the Caribbean rank at least as high as Europe. Thus, while intra-european student mobility may indeed be exceptional, European regionalism overall is not. It is also interesting to see that asylum- and refuge-seeking are regionalizing on almost all continents given that the absolute number of asylum-seekers and refugees has actually *decreased* over time. This divergence illustrates that transnationalization and regionalization are separate processes that need not necessarily go hand in hand. The analytical separation undertaken here allows their disentanglement.

ABSOLUTE GLOBALIZATION

All types of human mobility are also *globalizing in absolute terms* over time (Figure 3). Again, the upward trends for asylum- and refuge-seeking are particularly notable because asylum- and refuge-seeking de-transnationalized between 2000 and 2010. This proves that transnationalization cannot only diverge from regionalization but also from globalization. Moreover, in contrast with the findings for regionalism, Europe now does excel, constituting the most globalized region at all points in time throughout all five mobility types under study. Further comparisons between Figures 2 and 3 indicate that interregional densities appear generally lower than their intraregional counterparts. To get a precise picture of how the two phenomena relate to each other, we move on to examine relative regionalization.

RELATIVE REGIONALIZATION

With regards to *relative regionalism,* Figure 4 shows that nearly all data points lie above the threshold line of

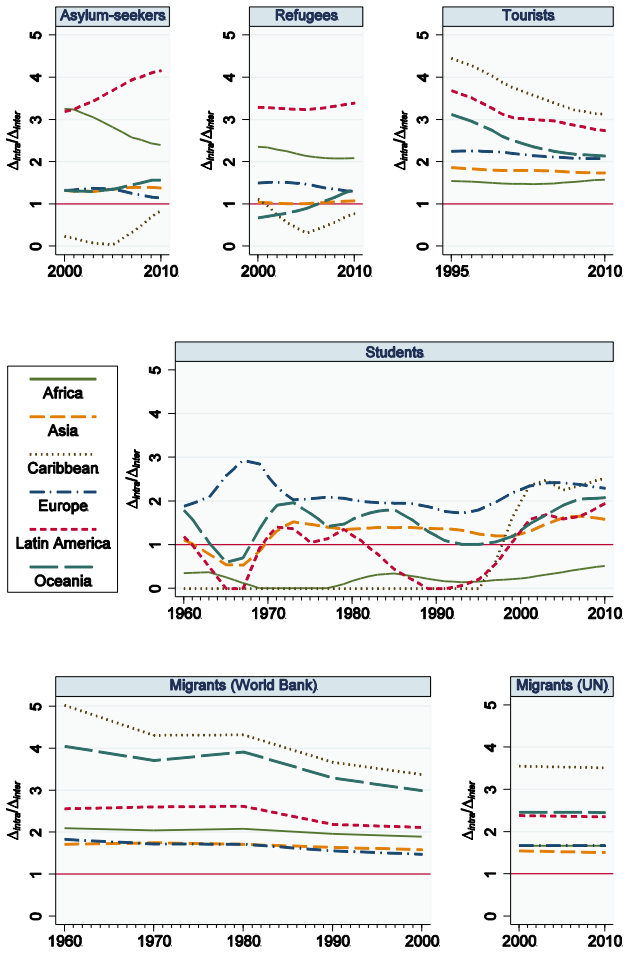

Figure 4. Relative regionalization. *Note:* Δ_{intra} =intraregional density, Δ_{inter} =interregional density, cut-off point: 1st quintile.

y=1, where $\Delta_{intra} = \Delta_{inter}$, demonstrating that cross-border mobility does indeed cluster within world regions while occurring rather scarcely between them. While this effect holds almost universally, it is particularly strong for migration and tourism in Latin America and the Caribbean, with intraregional densities up to five times the size of interregional densities. Hence, these two regions are internally well-connected while remaining relatively disconnected from the outside world (see their low absolute globalization values in Figure 3). Europe by contrast now occupies rather low ranks in most mobility types, resulting from the fact that although this continent features a highly interconnected internal structure of cross-border mobility (Figure 2), it is also comparatively well-integrated into the global mobility network (Figure 3), diminishing its regionalism in relative terms. This discrepancy illustrates the added value of looking at regionalism from both an absolute and a relative perspective.

Longitudinal change, i.e., *relative regionalization*, is not as pronounced in relative as in absolute regionalism. However, for the two major forms of mobility, migration and tourism, which make up for more than 98 percent of all cross-border mobility, a clear pattern is discernible: regionalism decreases in regions with high initial levels of regionalism and remains constant in regions with low initial levels of regionalism, resulting in an overall convergence in regionalism around the world towards a level where intraregional mobility is roughly twice as likely as interregional mobility. Thus, the regionalized structure of THM appears to be stabilizing rather than dissolving.

Once more, type-specific patterns can be observed. In Africa for instance, relative regionalism is high but declining in asylum- and refuge-seeking and low but stable in migration and tourism. The Caribbean in turn retains the lead in migration and tourism, while remaining the least regionalized part of the world with regards to asylum- and refuge-seeking. The rank order between regions is again generally stable, except for student exchange, which sees major fluctuations over time that may partially result from low overall numbers of transnationally mobile students in earlier decades. In 2010, the Caribbean outmatches Europe's top position, becoming the world's most regionalized student exchange area in relative terms. Hence, again, there are no signs for "European exceptionalism". Overall, Latin America and the Caribbean maintain their prime positions, while the other regions also remain well above the threshold of y=1. The transnational world remains a regional world.

RELATIVE GLOBALIZATION

Relative globalization was defined as the inversion of relative regionalization. Accordingly, the results from Figure 4 can simply be interpreted reversely. The only cases where globalism trumps regionalism consistently are asylum- and refuge-seeking in the Caribbean and student exchange in Africa. Overall, mobility at the global scale remains scarce and little suggests that the gaps between world regions will be closing anytime soon. For the major mobility types, migration and tourism, the regions that were initially least globalized in relative terms (i.e., Latin America, the Caribbean, and Oceania) approached the levels of the more globally integrated regions over time, but all regions remain more regionalized than globalized. Hence, there is no breakthrough of globalism. Regionalism persists.

SUMMARY AND DISCUSSION

The innovation of this article is twofold: first, a novel conceptualization was developed, which allows the modeling of regionalization and globalization as absolute *and* relative processes – and thus to compare resulting outcomes. Second, this new conceptualization was applied empirically to networks of human cross-border mobility. To highlight some central findings:

a) **Regionalization.** As an independent process, regionalization can be observed almost universally across mobility types and in all parts of the world. Overall, Latin America, the Caribbean, and Europe continuously feature the highest levels of absolute regionalism.
b) **Globalization.** When considered in absolute terms, globalization is also a quasi-universal phenomenon. Europe features the highest levels of absolute globalism at all points in time and across all mobility types.
c) **Regionalization vs. Globalization.** When regionalization and globalization are treated as competing processes, regionalism consistently trumps globalism. Levels of relative regionalism converge over time, but human cross-border mobility continues to be regionally structured. Overall, relative regionalism is strongest in Latin America and the Caribbean.

The strong evidence found here for regionalism in human cross-border mobility shows that – contrary to what catchy slogans like "global village" and "flat world" suggest – Granovetter's classic observation that the social world is organized in strongly linked groups that are connected via weak ties seems to find its equivalent in the transnational sphere: world regions with densely connected internal structures being linked to each other via relatively scarce interregional ties. This structuration by region not only exists, but also persists over time. This has implications for several social-scientific, public, and policy debates.

First, if transactionalist theory holds, a world in which cross-border mobility is regionally structured is likely a world in which sense of community is also regionalized. Thus, regionalism in THM may have implications – and explanatory power – for identity-formation and potential social conflicts, for instance regarding the acceptance of extra-regional refugees and migrants or public support for institutionalized political and economic integration projects that often tends to be low in intra-regional cases (e.g., European Union) but may meet almost insurmountable popular resistance in interregional ones (e.g., CETA).

Second, several such institutionalized regional integration projects, from the European Union and UNASUR to the African Union and ASEAN have declared fostering intraregional mobility of their citizens a policy goal. By allowing for comparisons over time and across regions, our analysis allows to see where a specific region stands in this regard. Such a benchmark for success is much needed, since past analyses, particularly in the Sociology of Europe, have looked at one region only, providing no reference point (n=1 problem). Here, we found – contrary to the oft-stated idea of "European exceptionalism" – that Europe rarely features exceedingly high degrees of absolute regionalism and that Latin America and the Caribbean tend to be far more regionalized in relative terms than Europe. Our comparative analysis thus constitutes an important step towards "provincializing Europe", to use Chakrabarty's (2009) much-cited term. The added value of looking comparatively at absolute *and* relative regionalism to get the overall picture can also be seen exemplarily in the European case: while Europe is densely connected internally, it is also well-connected to the outside world, suggesting that the region is a case of low "external closure" (Delhey *et al*. 2014), which mitigates its relative regionalism.

Third, this study also increases our understanding of the term "transnational". It shows that treating transnational mobility as a mere "small-scale" phenomenon taking place in specific locales (as commonly done in Transnational Migration Studies) or as synonymous with "global" activity (as practiced in International Relations) misses important aspects of the matter, namely its agglomeration at the world-regional scale. Fourth, this regionalized structure also contradicts basic assumptions of world-systems theory's core-periphery model, especially about mobility occurring only between center and periphery, but not within the periphery (an assumption that holds at least for later versions of the theory that incorporate human mobility, cf. Barnett 1998; Galtung 1971). Thus, we need to rethink the structure of the transnational world, paying increased attention to regions as a relevant layer of societal integration between the nation-state and world society.

Future research could tie in with these findings and try to sort out *why* the levels of regionalism and the velocity of regionalization vary by region. What roles do differences in factors like cultural similarity, state of political integration efforts, economic cohesion, or geographic size play? Also, what explains the remainder, the rarer cases of long-distance mobility? Do former colonial ties matter? How do global wealth inequalities come

into play? We hope that the analyses conducted in this study may serve as a valuable starting point for future inquiries regarding these questions.

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