Introduction

Defining a Global Geography

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The articles in this special issue provide a map for understanding the networks of transfers and relationships that make up the international web of globalization. Globalization involves a variety of links expanding and tightening a web of political, economic, and cultural interconnections. A variety of data indicate that we are undergoing a process of compression of international time and space and an intensification of international relations. Both popular accounts and more rigorous analyses tell us that international connections are increasing; an expanding variety of goods and services are being exchanged across boundaries; more and more people live their professional, family, and intellectual lives in more than one country; and cultural autarky is no longer possible.[1] Yet, individual data sources tell us little more than that. How fast are we integrating? What does the global web look like? Who is in the center and who is on the margins? How have these positions shifted over the past two decades? The following dozen studies explore these questions through systematic and historical data, delving into the underlying structure of the apparent integration.

GLOBALIZATION IN CONTEXT

WHAT IS GLOBALIZATION?

Defining globalization has become something of a cottage industry. Mauro Guillen (2001) has counted literally hundreds of citations using the term *globalization*, each often offering a new version of a definition. Common elements include the intensification of global compression, interdependence, and integration. Essentially, global inhabitants have much more to do with one another and interact more often than they once did.

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Definitional uncertainty aside, there is considerable debate regarding the significance of this phenomenon. Castells (1996, p. 92) contends that we are living through a dramatic transformation into a global economy distinct from the "world" economy born in the 16th century. Yet, other scholars offer evidence indicating that the current process of global interconnection is much less dramatic than what occurred in the late 19th and early 20th centuries (Hirst & Thompson, 1996). For some theorists, globalization has altered the economic chances of significant populations (Reich, 1991; Rodrik, 1997), but others argue that its effect has been exaggerated (Berger, 1996; Fligstein, 1998; Krugman, 1994).

Does globalization matter? We believe that much of the argument stems from collapsing two quite different elements of the issue at hand. The first is the process of globalization, the mechanics of international integration; the second is the product or consequences thereof. The latter has received more attention, and we turn to that first.

SIGNIFICANCE AND CONSEQUENCES OF GLOBALIZATION

Given the themes of this special issue, we obviously believe that globalization matters (or more accurately, might matter). The real question is how it will matter and for whom. We may begin by analyzing the limits of the effects of globalization to define the outer boundaries of the phenomenon. The naysayers do have a point in reminding us that the talk of globalization is often precisely that. The triumphalism (or panic) that often characterizes discussions of the topic neglects the many aspects of daily life that for all intents and purposes, remain relatively unaffected by international flows and transfers.

Perhaps the most obvious limit on these is the continued salience of territorial frontiers.[2] With very few exceptions, for example, one must be both a citizen and a resident to vote in a political election. Some countries obviously have an international element in their domestic politics, and ease of travel has complicated some electioneering strategies.[3] The opinions of major international players are courted and watched. Nevertheless, each arbitrarily drawn nation-state still formally determines the most significant aspects of its policies. Similarly, on which side of a border one is born often makes a very important economic difference. A child in Nuevo Laredo, Mexico, might have a harder time accessing the potential of the U.S. economy than one born across the border in Laredo, Texas; citizens of Greece and Hong Kong enjoy access to wider markets than those of Turkey and the People's Republic of China.

The significance of borders illustrates the different ways that globalization affects social groups. For example, borders are more significant for labor than for capital. The European Union may be a transnational labor market, but it is not officially open to all comers. Latin American immigrants working on the bottom rungs of the U.S. labor market have little protection. In much the same

way that exclusive neighborhoods increasingly separate themselves from the poverty that surrounds them, rich countries may build higher barriers as a response to their being increasingly "near" to poorer societies. One of the more interesting future developments in globalization will be the extent to which it either allows freer transborder labor flows or increasingly relies on the power of the nation-state to restrict it.

Frontiers place limits on other aspects of life. Although capital may face fewer restrictions than labor, states do sometimes try to control the price of their currencies, limit their flows, and prohibit certain transactions or interchanges. Despite the possible congruence in the definition of human rights (Keck & Sikkink, 1998; Meyer, Frank, Hironaka, Schofer, & Tuma, 1997), the opportunities available and support expected differ radically from one citizenry to another, even keeping all other factors constant. Certainly, political violence and the direction thereof is most often defined and constrained by international boundaries. Overall, as long as nation-states retain a monopoly over the means of destruction, globalization will operate under significant limitations.

Nor has globalization affected everyone. Perhaps the most obvious gulf is between societies internationally. No matter what indicator one may use (trade, communication, etc.), significant parts of the world are essentially outside the new global society. In some cases, whole countries are excluded for a variety of reasons; for example, North Korea is isolated ideologically, Sierra Leone economically. This is to say not that the global economy or political divisions do not affect what goes on in these countries but that the vast majority of citizens and institutions do not regularly interact with the rest of the world. Generally, we may speak of a core group of countries largely defined by the Organization for Economic Cooperation and Development (OECD), with some hangers-on where international exchanges are a regular part of life for large parts of the society. On the bottom, there is a group (much of Africa, for example) largely isolated from these trends.[4] In between are the most interesting countries, where significant groups of people and large parts of the economy have been transformed by international contacts but isolated regions and groups also exist in significant numbers.

What accounts for the different rates of participation? The obvious explanation is money. Richer countries have more to buy and sell in the global marketplace and more access to the means with which to do so.[5] Domestically, the same differences apply. The upper class and those living in major urban centers are, as a rule, much more likely to participate in the globalized world.[6]

What does it mean to be included or excluded? Much of the academic debate has dealt with the consequences for countries and their populations of finding themselves within the global web. The effect of globalization on income distribution, state authority, and culture has been amply studied and debated, but definitive conclusions elude us (Geertz, 1998; Meyer et al., 1997; Panitch, 1996; Sklair, 1991; Strange, 1996; see Guillen, 2001, for a fuller list).

Given that there is still little agreement about the possible consequences of being globalized, we know even less about what effects remaining marginalized from globalization might have. From the point of view of globalization boosters such as Thomas Friedman (1999), avoiding globalization is both practically impossible and potentially disastrous. Those not connected to the global economy will miss out on the next economic and social revolution and will be permanently relegated to the global trash bin, they believe. Although we may not share Friedman's vision of no alternatives to globalization or his enthusiasm for the changes it brings, he may be right in contending that efforts to avoid participation or the inability to participate will have dire consequences.

Even those who minimize the impact of globalization recognize that the increasing amount of international contact has, at the very least, transformed the context in which countries operate. It is impossible, for example, to analyze a modern economy without reference to trade or foreign investment. Labor may not flow freely, but the globalization of production has had significant effects on employment and wages in selected economic sectors. A society's cultural preferences cannot be studied in isolation; the international flow of images and ideas (or the protection against these) must be considered. But the manner in which globalization affects different aspects of social and economic life remains unclear. What are the channels through which international pressures make themselves felt? Does this happen in the same way that a uniform gas exerts identical pressure everywhere, or are there special zones where influence is greatest? What are the windows through which societies observe globalization and through which it penetrates their homes?

Arguably the most important (and most debated) consequence of globalization is the increasing concentration of power and wealth. For example, in practically every industry, a few transnational firms now claim huge market shares. How is globalization responsible? Globalization has been accompanied and supported by an intense process of international isomorphism on practically every level and in almost all aspects of life. We are seeing the universalization of a single set of criteria for judging the worth of projects, firms, and, yes, individuals. Where previously each region, country, or even city prized different things (or in the case of protection, forced many competitors out of markets), now we have a global standard for performance and, increasingly, a global standard for aesthetic preferences. Combined with the hegemony of the market, this produces a set of efficiency mechanisms that prize specific criteria, encourage the adoption of certain policies, and select a particular set of actors for survival. Although these mechanisms may not be operating at a definition of efficiency that we like, what matters is that what the global market says is good becomes good everywhere: There is no escape. This leads to concentration for several reasons. First, the criteria for success are not socially or geographically neutral but reflect the standards and preferences of leading powers. These criteria tend to favor certain players (e.g., Hollywood films, Web sites in English, Microsoft

products). Because competition on a global market allows for massive economies of scale, these increasingly large corporations can compete with anyone on price and force local competitors out. Their dominant positions create huge barriers to entry. In the end, the ubiquity of these products becomes part of their appeal. Homogeneity and monopoly reinforce each other.

We are particularly interested in how globalization will shape global inequality as measured between nations and societies.[7] There is no denying the interdependence that globalization brings about, but the asymmetries of that dependence, the consequences of the hierarchical flows, and the relative position within a set of relationships will help shape the nature of global power over the next decades. Research done on telephone communications indicates that international contact has increased, but so has the centrality of the United States in a global system (Louch, Hargittai, & Centeno, 1999). To what extent can this newfound power be explained by the exogenous effects of globalization itself, as opposed to the internal characteristics of the countries involved?

A DIFFERENT ROAD MAP

To answer this question, we must shift to the second half of a discussion on globalization: the process rather than the outcome. Analysts have been understandably concerned with the substantive areas linked to globalization: wages, trade balances, cultural diffusion, and so on. We have paid much less attention to the infrastructure network that actually makes up globalization.

The transformation of the technical and organizational infrastructure of international integration is obvious and needs to be considered in any analysis of globalization. The road—not only what is on it—has changed dramatically over the past several decades. Hirst and Thompson (1996) are correct, for example, in noting that other periods have also seen dramatic expansions in international commerce and that international flows have been freer or played a more significant role in social and economic dynamics. This is certainly true if we compare the relative importance of international trade within the total global economic product or if we emphasize facility of movement across frontiers. What is new is the vast range of connections, the speed at which they occur, and the complexity of their interactions. International transfers now include a much wider array of products and services across forms of technology unimagined a decade, much less a century, ago. More important, these transfers are much more tightly intertwined, producing what we call a truly global web. Figure 1 illustrates the dramatic decline in the cost of international transport and communication, which not only has facilitated (and been encouraged by) globalization but may be its most important legacy.

Recent progress in international communications is a good example of how today's information exchange happens in a truly global intertwined network. There is a tendency to exaggerate the novel aspect of the Internet and its

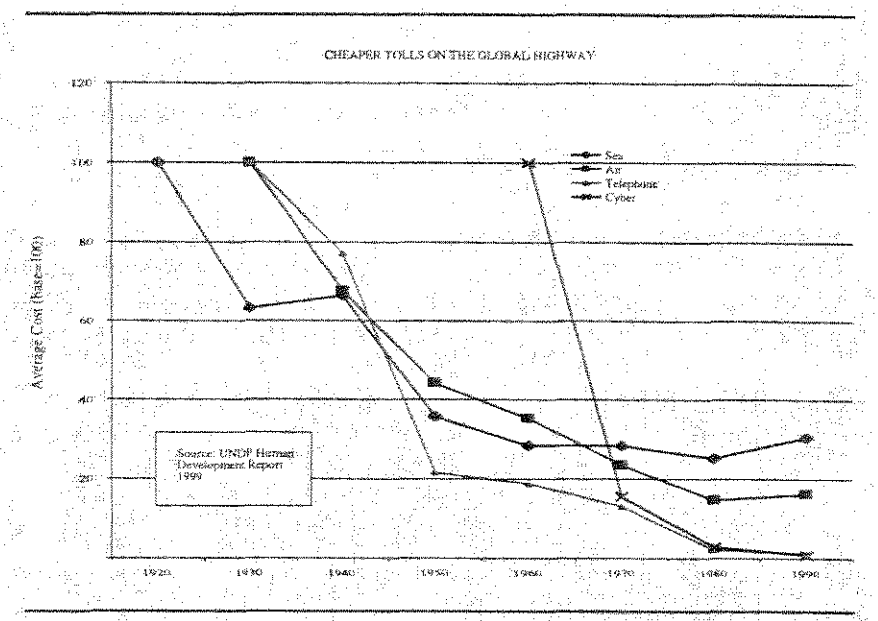

Figure 1: Cheaper Tolls on the Global Highway

capacity to cut across vast distances in no time. That facet is not what makes the Internet novel; the telegraph had already achieved that more than a century ago (Standage, 1998). Rather, the truly unique feature of the network is that it allows communication in a type of distributed web that spans the globe in an intertwined manner. It allows a user to send a message from one location to 50 others while also storing that message for subsequent access by yet others from yet different locations. This is how space, time, and contact nodes genuinely converge, thanks to the Internet. Moreover, one need not even send a message to a specific person for it to be read. A passive posting on a Web site will generate its own readership. If international communications used to represent thousands or even millions of dyads, the current situation involves billions or possibly trillions of overlapping and open-ended multiperson groups.[8]

Under the previous system of international contact, different parts of the world might be connected to relatively few others. Now, the number of paths between different people and locations has exploded. This implies that changes in the form and frequency of flows between two points may have reverberations in unexpected paths far removed from them. Whereas previously we might have spoken of a world on which a variety of lines were drawn, we now need to think of the globe as enmeshed in a web.[9] The new global geography has made relative position within the web simultaneously more difficult to define and much more important. The old references to continents or even to core/periphery refer to a two-dimensional perspective on the world, which has become increasingly

useless and deceptive in an *N*-dimensional reality (where *N* is the number of forms of international interactions).

Globalization, if it is a significant social phenomenon in its own right, involves much more than the intensification of a single form of exchange or even the cumulative effect of a series of transformations. It is the possibility of *interaction* between a variety of interchanges across the globe, the complexity of these interactions, and the density of the ties between previously distant societies that may be truly consequential. The potential significance of globalization can be appreciated only when analyzed as a whole. We believe the first step toward a better understanding of the phenomenon in question is to define a new global geography that takes into account not merely the physical environment in which societies operate but their relational environment—those with whom they work, speak, exchange, and fight. Where countries fit in an overlapping set of global relations will help determine the extent to which globalization will have an effect on them and the nature of that influence.

If we are to ascertain the specific effect of globalization, we need to define a standard measure not automatically correlated to one of the substantive issues being addressed. That is, we need an indicator that both serves as a representation of a society's position within a global web and is relatively independent of the phenomenon globalization is supposed to affect. Categorizations by income, regime types, or political blocks may miss the critical dynamics of global cliques. Coordinates within a new geography of globalization represent a much more promising alternative. These indicators would describe a country's position vis-à-vis other countries in a combination of various transactions. Centrality and reciprocity would be obvious indicators of where a society stood. Perhaps more useful would be comparisons of its position within the various subnets defined by specific transactions. The combination of these measures would then help explain (a) what forms of globalization affect a particular society and (b) the direction of the change.[10]

MEASURING GLOBALIZATION

NETWORKS AS MAPS

Except for the seminal but crude measures of world systems analysis, we know of little work that has taken the different countries' relational position in the process of integration itself as the key differentiation between them.[11] Only this form of formally structural approach allows us to begin to understand both the processes of global integration and different societies' and countries' position therein. The absence of structural analyses is especially surprising, given that the study of globalization seems tailor-made for that buzzword of contemporary social science: networks. We now live, or so we are told, in a "network society" (Castells, 1996; Wellman, 1988). Some have suggested that networks

represent a third major category of human interaction (after markets and hierarchies) and that increasingly, it is this form of connection that will determine our lives (Powell, 1990). Yet, network analysis has only begun to map the manner in which relational structures shape social action.

Network theory and methods offer an excellent means with which to understand globalization; they are ideally suited to defining the underlying pattern of the literally millions of sets of ties across the globe.[12] To begin with, networks represent the best metaphor for the new international society. Borrowing from Powell (1990), we can argue that global relationships cannot be understood entirely as either markets or hierarchies; rather, they involve a set of political, social, cultural, and economic links reinforcing, producing, and contradicting each other. Societies are connected through language, transportation, trade, families, tourism, and educational exchanges. The resulting relationships are not a product of any single one of these connections but of the manner in which these reinforce or contradict each other. Network analysis offers the best means with which to begin mapping these relationships in a coherent manner because it provides precise and concrete means with which to measure and compare them.

Network analysis privileges relationships rather than individual attributes. Who you are may be irrelevant; it is whom you know (or do not know) that counts (Granovetter, 1974/1995). A society's relative wealth or even military power may be relevant only in terms of the network of political and economic relationships in which it is embedded. To understand A and B's relationship, their mutual links to C may be more important than the specific attributes they share or the nature of their conflict or cooperation. With this emphasis on social structure, network analysis is, thus, best positioned to provide an accurate portrait of the new global relationships without the encumbrance of a priori categorizations. It provides an alternative to overdeterministic explanations, whether materialist or culturalist.

Networks are particularly useful for the analysis of how globalization channels its influence. For example, the discussion of cultural convergence and organizational isomorphism (DiMaggio & Powell, 1983; Meyer et al., 1997) has never specified how cultural and organizational standards are actually transported across firm and national boundaries. Network analysis would provide the road map through which one could trace policy preferences or legitimization strategies. Based on a nation's position within the global web, we might then be able to predict the likelihood that it would adopt certain practices or engage in particular forms of learned behavior. In short, network methods would give the analysis of globalization predictive power and the capacity to test its hypotheses.

NETWORKS OF WHAT AND BETWEEN WHOM?

If networks represent the best lenses with which to understand globalization, what kind of data should we analyze with them? The possibilities are endless,

but we first need to be aware of areas left unexplored. That is, before discussing networks of visible interactions, we need to be cognizant of the invisible set of relationships helping to shape the external surface of our global map. One area of concern is transactions that are not adequately measured yet may play a significant role in the construction of international networks. Another issue is the unit of analysis that should be used or the level at which we theorize international transactions taking place.

With regard to the first, perhaps the most obvious missing data concern illegal transfers.[13] One estimate of the globalized black market suggests that it may represent $500 billion of transactions a year (Castells, 1998, Vol. 3, p. 169). In general, smuggling (writ large) may be the oldest form of globalization. It may also be the purest expression of the phenomenon, if we think of globalization as a global search for economic or social efficiency that explicitly seeks to evade formal state authority.

What are some of these data-less transfers? Although it is possible to make some calculations based on international financial balances, we obviously do not have a comprehensive idea of the undeclared or illegal flows of money to and from different countries. Money laundering may total the equivalent of 2% to 5% of global Gross Domestic Product (United Nations Development Program [UNDP], 1999, p. 5). Drugs may be one of the most important international commodities, with important consequences for capital flows, transport networks, and political complications. One estimate places this trade at $400 billion annually or 8% of world trade (UNDP, 1999, p. 5). Small arms may also represent an important international commodity whose flows are not well documented. Prostitution alone is said to be a $20 billion industry with an important international dimension ("Giving the Customer," 1998).[14]

Given that the movement of illegal migrants affects the most underprivileged groups of societies, lacking information in this domain prohibits us from gaining a clear understanding of how globalization and social stratification interact. Consider, for example, the likely importance of illegal transfers to the transnational communities that have received so much recent attention in the social sciences (Portes, 1997). Entry into such a community may begin with an illegal migration. Wage labor may be illegal or occur in marginalized or even prohibited industries; remittances may be unreported to both host and native countries. The ties that bind these communities across borders may thus elude us when defining our new geography yet represent one of its most important components.

We also possess few data on computer links, transfers, and relationships. This is particularly important, given that so much of globalization appears to be fueled by Internet connections and information transacted across fiber-optic cables. Unfortunately, several aspects of the technology make it inherently impossible to collect the type of relational data that would allow an analysis of the communication networks underlying this traffic.[15] Despite these difficulties,

some have attempted to quantify Internet traffic (OECD, 1998) by relying on the few clues we have of where data may be residing, but the accuracies of such data are highly questionable.

Although it may be difficult to classify consumption as a network, we might also consider the level of globalization that occurs by that means. It is quite clear that McDonald's and the Gap are all over the globe and that the British Spice Girls and the Puerto Rican singer Ricky Martin have touched teenage music fans' hearts everywhere.[16] However, it is less transparent how the consumption of such products infiltrates into the rest of people's lives. Although there is an ongoing debate on how the diffusion of such cultural icons affects local cultures (Ritzer, 1996; Watson, 1997), we have no information on how many people are actually affected and what areas of their lives are influenced, both directly and indirectly, through the exposure to consumer items from other countries and cultures.

If much of the above is currently uncountable or untraceable, there is, nonetheless, enough information out there to define the basic shape of the global network. Thanks to the institutional fascination with data that have accompanied and supported globalization, practically every legal transaction across borders is counted and reported. Telephone calls, plane arrivals, shipments of goods, and receipts for services can all be used to trace the shape and dynamics of the new international order (or to determine the extent to which it is new). These measures are often imperfect and certainly not exhaustive, but they do provide an adequate first brush with the new global geography.

There are equally difficult challenges with units of analysis. International networks consist of millions and perhaps billions of individuals making decisions and establishing contacts. These operate within millions of organizations of an infinite variety. These, in turn, tend to be concentrated in particular cities and regions. Yet, much of the information available and certainly the majority of the analysis emphasizes relationships between national societies. This is partly a reflection of a nation-centric bias in much of social science. More important, it is a product of the very data-gathering techniques and protocols on which international analysis depends. This is particularly paradoxical given that a significant part of the globalization literature predicts the withering away of the relevance of the nation-state.

The new geography of globalization should begin to gather data at levels of aggregation smaller than the nation-state. Saskia Sassen (1991) has demonstrated the critical importance of global cities in maintaining the new international system. On a larger scale, specific regions within countries (e.g., Emilia-Romagna in Italy, Catalonia in Spain, the American coasts) are much more integrated into the global economy. Cross-border zones are very much a part of globalization and may account for a disproportionate share of relational links. The new geography should make every attempt to privilege these subunits, which are increasingly more relevant than our nation-centric analytical atlas.

IN THIS ISSUE

Having established a set of ambitious goals, we need to admit that this special issue is but a start. Given the constraints of global network data availability highlighted above, this special issue focuses on analyses of informational and commercial flows while leaving other areas for future exploration. The articles do not resolve all the issues discussed above. Some do not use formal network methods. Others continue to rely on national-level data. We believe, however, that the articles represent a beginning or an indication of the kind of work that will produce a more useful and insightful analysis of globalization. One clear bias deserves to be acknowledged. We have largely ignored the microfoundations on which these relationships are based. We speak of states, societies, and organizations' being linked, with only cursory attention paid to the individuals who actually make up the web (Koku, Nazer, & Wellman, 2001 [this issue] being a prominent exception). We can only hope that a parallel project will analyze the human relationships that underlie the global structures we have documented.

We begin with a section devoted to economic interactions, arguably the foundation for all other connections. Kick and Davis explore world-system structure across two periods, 1960 to 1965 and 1970 to 1975. The two authors assess the interplay between global and national domains of analyses. They also examine the national-level consequences of strong, weak, and intermediate ties for the non–core countries of the world. When taken together, the dynamics studied permit an examination of the central themes of world-system theory and network approaches in general and identify future agendas for sociological theorizing and research.

Sacks, Ventresca, and Uzzi continue assessing the effects of country position in the global social structure of international trade on economic performance. Their first finding is the relative insignificance of much-touted domestic factors such as savings rates or education. They demonstrate that relative position within a global trade network is a significant factor in determining economic success. The relationship is not simplistic, however. Actors within the world-trade network are differentially able to reap benefits based on their position, and unique social structural conditions provide different types of benefits to distinct kinds of actors.

Bergesen and Sonnett use *Fortune* magazine's Global 500 to analyze the structure of the world economy and to speculate about the rise and fall of hegemonic states. They show that about half the global firms are involved in basic production and the rest split between finance and service industries; these are about equally divided among Asia, Europe, and the United States. In terms of the number of firms and industries in which countries produce, the relative position of the United States shows a clear decline, that of Japan has improved, and Europe's has remained relatively stable.

Gary Gereffi's article examines how the commodity-chains framework facilitates our understanding of the structure and dynamics of global industries, as

well as the development prospects for nations and firms within them. First, he introduces the seminal distinction between producer-driven and buyer-driven commodity chains. Second, he identifies the main types of lead firms in the automobile and apparel commodity chains. Third, he illustrates how this approach can be used to study multiple dimensions of development.

The second section of the special issue analyzes international communications infrastructures. George Barnett examines the international telecommunications network and how it has changed since the late 1970s. The network may be described as one large interconnected group of nations arrayed along a center-to-periphery dimension. Barnett then discusses the future of the international communication structure and the implications for the development of a universal culture.

David Smith and Michael Timberlake provide a parallel analysis of shifts in the global infrastructure through their study of airline traffic. They highlight the shift in the global hierarchy of cities reflecting many of the changes discussed in accompanying chapters.

The next three articles focus on the geography of the Internet. Matthew Zook uses a combination of domain names and user counts to provide an assessment of the global distribution of Internet content creation at the national and urban level and the structure of the supply and demand for this content at the national level. This article relies on the theories of export-based development to assess the strengths and weaknesses of countries' Internet presence and the ramifications of this for future development.

Anthony Townsend's article challenges assumptions regarding global city dominance of telecommunications networks. To illustrate global cities' role in the deployment of Internet networks, the author presents a comprehensive map of New York City's international linkages. By showing that the city is dependent on a broad group of other metropolitan areas for international backbone connections—the underlying infrastructure of the Internet—the author argues that the network is both driving and reflecting broader trends toward far more complex webs of interurban economic and communications flows than was experienced previously.

In their article, Stanley Brunn and Martin Dodge analyze the connections between nations, using data on the number of Web pages and hyperlinks gathered from a commercial search engine in 1998. They analyze and describe the geography of the hyperlinks between nearly 200 nations, revealing the most and least connected regions and nations, with a particular focus on African and Central Asian countries.

The final two pieces focus on exchanges between scholars. Thomas Schott's article is a review describing findings in previous studies of the global networks promoting and constraining the global circulation of knowledge. The cultivation of knowledge is institutionalized around the world in the three social institutions called education, science, and technology. The article summarizes what is

known about these global webs, specifies what is unknown, and proposes an agenda for mapping and analyzing these global webs.

Koku et al. (2001) consider how distance affects interpersonal communication within scholarly communities. The article serves as a possible challenge to those who might see in globalization all things made new again and reminds us of the importance of face-to-face communication. In a special issue devoted to globalization, this article serves to highlight both the promise and the limitations of this new geography.

CONCLUSION

So what does this bright new world look like? The articles in this special issue suggest that the new global geography will have two critical characteristics.

First, almost all the authors make note of the nonlinear complexity of the new global structure and how this helps determine economic, political, and social outcomes. Post-1980 globalization is not simply a form of the 19th-century world economy at faster speed and greater volume; it represents a substantive shift in the manner in which individuals, organizations, and societies are interconnected.

Second, it is clear that globalization does not involve a flattening of a global hierarchy. Some countries are richer, have better communications, and play a more central role. Moreover, there are clear benefits to be derived from this centrality. As globalization intensifies, these benefits might even increase, producing practically insurmountable (if invisible) walls around the new empires. More specifically, practically all the studies point to the dominant position of the United States in practically every international network. In many ways, globalization may be better understood as the Americanization of the world.

The combination of global scale and complexity of relationships may imply that models of international governance and domination borrowed from earlier eras may no longer be relevant. If this is true, then students of globalization will have to begin laying down the most essential foundation blocks of a new social scientific project.

NOTES

1. World exports are now $7 trillion a year or 21% of the global product; various forms of foreign investment total $2.5 trillion; foreign exchange activity is estimated at $1.5 trillion daily; workers' remittances now total $58 billion and represent an important part of the Latin American and Middle Eastern economies; and nearly 600 million international tourists travel each year (United Nations Development Program [UNDP], 1999, p. 25).

2. See Held, McGrew, Goldblatt, and Perraton (1999) for a summary of positions of the continuing relevance of states.

3. The election flights to Israel are but one example. Candidates for national office in Santo Domingo campaign in New York. As elections become cleaner in Mexico and as citizenship rights are redefined, the U.S.-based vote may become decisive.

4. Even here, however, globalization (broadly understood) plays a role. While Sierra Leone may be a perfect example of the global underclass removed from the transnational arena, the existence of an international diamond market has fueled that country's civil war.

5. For example, Germany exports 20 times more than Brazil per capita and 85 times more than Kenya while importing 15 times more than Brazil and 55 times more than Kenya (again, per capita). Germany also has 6 times more telephones per capita than Brazil and 42 times more than Kenya (No Limits Ventures Ltd., 1999).

6. But there may be significant and important exceptions. For labor-exporting countries, the working class may be as international as the elite.

7. As we will explain later, due to limitations in the way data are collected, most current analyses are restricted to investigations at the national level.

8. The unequal international distribution of access to the Internet also serves as an excellent indication of how the shape of the infrastructure of globalization may determine the outcomes it produces (Hargittai, 1998, 1999; International Telecommunication Union, 1997). The United States, for example, has more computers than the rest of the world's countries combined; it accounts for a large percentage of the creation and distribution of Web content (Organization for Economic Cooperation and Development, 1997); 80% of World Wide Web content is in English. The typical Internet user is a member of a very elite minority (UNDP, 1999, Press Kit, pp. 1-2).

9. An illustrative tale follows: The typical international transaction of 1900 was essentially linear. The port of Buenos Aires might include a ship loaded with wheat and meat destined for London, another holding locomotive parts from Liverpool, and a third immigrants from Naples. The lines between origins and final destinations were straight, and the contents only interacted in the sense that one helped pay for the other. Today, a plane landing from London at Ezeiza Airport might include executives planning an investment in Argentina for export to Brazil, a shipment of computer boards that a local IBM subsidiary will transform prior to re-export to Peru, a German student hoping that her improved Spanish will help her find work in international banking, a Boston couple on their round-the-world honeymoon, and a Bolivian doctor hoping to immigrate. Moreover and most important, equivalent transactions and movements will be occurring over a wider variety of media (other airlines, cars, ships, phones, the Internet, etc.)

10. This would allow, for example, a much more precise articulation of a country's position within a global system. Core countries might be characterized both by their centrality and by the consistency of their relational position within a variety of transactional subwebs. Peripheral societies would share this consistency but remain on the margins of the system. Semiperipheries would be characterized by relatively high centrality on some measures (e.g., commercial trade) but low centrality on others (e.g., cultural exports).

11. The theoretical model closest to this enterprise is the work of Breiger (1981) on international interdependence.

12. It is important to clarify that we are using the term *networks* in the "soft" sense of the word. Networks are not necessarily self-aware or even cohesive and exclusive. We cannot speak of networks for themselves or even in themselves. Networks are, in many ways, artificial groupings placed in a myriad of relationships by an external observer. The real point is not to discover hidden agents in the formation of a new global order but to accurately reflect social relations and patterns of power and influence.

13. Some legal transfers may also not be properly analyzed. Intracompany transactions may represent a hidden world of globalization. Similarly, we need to be aware of what we might call intranetwork transfers involving informal markets in bonds, currency, and futures. Data on capital/communication flows may err on the conservative side, given that such transfers often happen through internal networks that often do not show up in official national aggregate statistics.

14. Although there are popular accounts of the most common supplier nations, it is less clear where these people end up; in general, no precise data exist on such flows because some of the people are transported officially through various visas whereas others are smuggled across borders.

15. Internet data can get from Point A to Point B through various channels. This is precisely what made it so attractive for military needs when it was being developed in the 1960s (Hafner & Lyon, 1996). Unfortunately, information about the physical location of Points A and B is often difficult to learn from electronic identification data. An e-mail address such as name@server.com often implies no information about the physical location of the user.

16. The first result of a Web search for Ricky Martin's picture on a popular American search engine yields a link to a Hungarian teenager's Web site (Lycos 1999 Web search, http://www.lycos.com/picturethis/).

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