

# American Sociological Review

<http://asr.sagepub.com>

---

## **The Global Rise of Democracy: A Network Account**

Magnus Thor Torfason and Paul Ingram

*American Sociological Review* 2010; 75; 355

DOI: 10.1177/0003122410372230

The online version of this article can be found at:

<http://asr.sagepub.com/cgi/content/abstract/75/3/355>

---

Published by:



<http://www.sagepublications.com>

On behalf of:



American Sociological Association

**Additional services and information for *American Sociological Review* can be found at:**

**Email Alerts:** <http://asr.sagepub.com/cgi/alerts>

**Subscriptions:** <http://asr.sagepub.com/subscriptions>

**Reprints:** <http://www.sagepub.com/journalsReprints.nav>

**Permissions:** <http://www.sagepub.com/journalsPermissions.nav>

# The Global Rise of Democracy: A Network Account

Magnus Thor Torfason<sup>a</sup> and Paul Ingram<sup>a</sup>

## Abstract

We examine the influence of an interstate network created by intergovernmental organizations (IGOs) on the global diffusion of democracy. We propose that IGOs facilitate democracy's diffusion by transmitting information between member states and by interpreting that information according to prevailing norms in the world society, where democracy is viewed as the legitimate form of government. We employ a network autocorrelation model to track changes in democracy among all of the world's countries from 1815 to 2000. We find that democracy does diffuse through the IGO network and that the influence of democratic countries is stronger than that of undemocratic countries. Evidence indicates that the IGO network serves as a basis for normative diffusion. This is an important contribution to sociological accounts of globalization, which tend to emphasize diffusion divorced from network structure or diffusion dependent on the coercive influence of a small set of international organizations.

## Keywords

networks, diffusion, isomorphism, democracy, international organizations

Institutionally oriented accounts of globalization offer two very different characterizations of the role of organizations. World polity arguments see globalization as a diffuse cultural phenomenon that is not particularly dependent on network structure. The organizations that matter most are nongovernmental organizations and others that contribute to and broadcast the model of what a state should look like and how it should behave. According to the theory's seminal statement, all states are subject to these diffuse cultural influences, even a new society discovered on a previously unknown island (Meyer et al. 1997). By contrast, coercive isomorphism arguments emphasize specific intergovernmental organizations as active agents that impose neoliberal policies on dependent states. Whereas world polity scholars are

motivated by the perception of cross-national convergence, the coercive isomorphism school begins with the question: "Why do countries differ so much in the extent to which they adopt neoliberal, market-oriented reform?" (Henisz, Zelner, and Guillén 2005:871).

We offer a network argument that navigates between the weak- and strong-form structural positions of the world-polity and coercive-isomorphism approaches. We focus

---

<sup>a</sup>Columbia Business School, Management Division

## Corresponding Author:

Magnus Thor Torfason, Columbia Business School, Uris Hall, 3022 Broadway, New York, NY 10027

E-mail: [mtt2108@columbia.edu](mailto:mtt2108@columbia.edu)

on normative rather than cultural or coercive mechanisms of influence. We use normative in Homans's (1950) sense of an "ought" rule that is embedded in a specific social structure. The structure we focus on is the network forged between states through their joint memberships in intergovernmental organizations, or IGOs. Our core argument is that this network has been fundamental to the diffusion of democracy, such that states that come into contact with more democratic states in the IGO network are themselves more likely to democratize. While our analyses yield evidence of coercive isomorphism outside of IGOs, within the IGO network the mechanism is normative. Contrary to accounts that see IGOs primarily as arenas for coercion, power differences between the states that meet in the IGO network are unimportant for convergence on democracy.

While our examination of the IGO network as the basis of normative diffusion differs in emphasis from world-polity and coercive-isomorphic accounts of globalization, we see it as firmly within the tradition of sociological neo-institutionalism. Indeed, we follow Henisz and colleagues (2005) by analyzing normative, coercive, and mimetic isomorphism—the three mechanisms of diffusion that define neo-institutionalism (DiMaggio and Powell 1983). Our point of departure with the leading theories is not in terms of grand institutional mechanisms but the specifics of the social structure through which they operate, particularly IGOs' role as the foundation of an interstate network. This network is administratively weak but normatively strong, a global parallel to the domestic normative capacity that Dobbin and Sutton (1998:441) label the "strength of a weak state."

World polity theorists recognize IGOs as interdependent with international nongovernmental organizations (INGOs), as "primarily instruments of shared modernity" (Meyer et al. 1997:164). They acknowledge that world stratification helps determine which models prevail, but overall, they treat these organizations'

influence as universal, emphasizing the contrast with rationalists' networked world. Regarding their fictitious, newly discovered island society, Meyer and colleagues (1997:165, emphasis added) predict that it "would quickly come under the scrutiny of *all* these organizations." Yet, recent work shows that despite the massive proliferation of IGOs and INGOs in the second half of the twentieth century, the binds of this associational system are still uneven (Beckfield 2003; Hafner-Burton and Montgomery 2009; Hughes et al. 2009).

By depicting the IGO network as channeling global normative influence, we do not reject world polity claims as to the origins of norms. Indeed, we agree with Boli and Thomas (1997) that INGOs promote "world citizenship," an individualistic, egalitarian construct that justifies democratic governance and delegitimizes autocracy. INGOs and IGOs' direct normative contributions to the legitimacy of democracy as a governmental form serve as a starting point for our analysis of diffusion through the IGO network. However, our emphasis on the pattern of IGO ties marks a departure from prior work, and our methodology makes explicit the distinction between general exposure to world culture and the potentially heterogeneous influence conveyed by structured interaction between states.

Compared to world polity theorists, scholars of coercive isomorphism have focused more on the role of IGOs. Indeed, two IGOs in particular, the World Bank and the IMF, are presented as key agents behind the coercive diffusion of neoliberal economic policies (Henisz et al. 2005; Polillo and Guillén 2005). To this position we add three ideas. First, IGOs' influence is not restricted to a select few. There are now more than 300 of these organizations; while they vary widely in terms of renown and power, even obscure and weak IGOs can affect important outcomes (Ingram, Robinson, and Busch 2005). Second, IGOs may exert influence through mechanisms other than coercion; many promote cross-cultural understanding and cooperation and may therefore serve as

foundations for normative influence. Third, the key influence is not from the IGO to its members, but from member to member, mediated by the interpretive structure the IGO provides. We thus examine the network of bilateral connections through joint IGO memberships, in contrast to others who look for the influence of IGOs on democratization by counting a country's memberships in various IGOs (Gleditsch and Ward 2006; Pevehouse 2005; Wejnert 2005).

The world polity and coercive isomorphism schools both recognize a role for international organizations and agree on the significance of a set of diffusion mechanisms. However, realist theories from political science directly and increasingly challenge these institutionally oriented accounts of globalization. For example, Mukherjee and Singer (2007) analyze neoliberal reform and conclude that extant sociological theories of global diffusion explain little of the process. Sociological world-systems theorists are more sympathetic to global mechanisms, but their realist emphasis is focused on formal agreements based on geopolitical power interests. When they do examine international networks, the focus is firmly on trade, war, and related power networks, rather than international organizational structures (e.g., Boswell and Chase-Dunn 2000). Faced with such stark alternatives, it is time for sociological institutionalists to brace the foundation of their place in the globalization debate by documenting the concrete and massive influence that diffusion through international organizations has on the most notable global developments. With this motivation, we turn to the IGO network and its influence on democracy.

## IGOS AND ISOMORPHIC PROCESSES

IGOs are operationally defined as organizations that meet regularly, are formed by treaty, and have three or more states as members (Pevehouse, Nordstrom, and Warnke 2004).

Around 500 IGOs have been founded since the early nineteenth century, some have subsequently failed. IGOs focus on issues as diverse as defense, education, trade, standardization, labor rights, and law enforcement. Underlying the operation of a given IGO are goals and expectations regarding how to align member states with regard to the relevant issues. When goals are contested, IGOs provide a forum where different expectations and norms are brought to light and conflicts get resolved. IGOs reduce the incidence of military disputes (Russett and Oneal 2001), and this effect is stronger for democratic IGOs (Pevehouse and Russett 2006). In addition to providing information about norms, IGOs provide the hands-on expertise required to establish structures of conformity with those norms (Finnemore 1993) and to evaluate compliance.

Some IGOs, such as the Central European Initiative (CEI), were founded explicitly to encourage reform and convergence. The CEI was founded in 1989 to “bring the countries of Central and Eastern Europe closer together and assist them in their preparation process for EU membership” and to “help transitioning countries in Central Europe come closer to the EU” (CEI 2004). To achieve these goals, the CEI hosts annual meetings of member states' heads of government and foreign affairs ministers, monthly meetings of a committee of national coordinators, and other events. It seems likely that this organization helps facilitate isomorphism among its members. Considering its stated goals of bringing countries both closer together and closer to the EU, a failure to do so would probably be seen as a nearly complete failure of the organization.

IGOs' official goals are seldom as explicitly isomorphic as those of the CEI, but even IGOs whose official purpose is much narrower possess the structure and operations required to facilitate such isomorphism. The mere existence of shared memberships in IGOs can establish states as referents, which in turn can create sociocultural links through which individuals in one state interpret and

emulate the behavior of their self-identified peers (Simmons, Dobbin, and Garrett 2006). Furthermore, IGOs' employees gain legitimacy in part through their professional interactions with other member states. These professionals, aided by accompanying institutional structures, can "influence governments to adopt new policies simply by making arguments for them" (Simmons et al. 2006:800) and thus facilitate a mediated mechanism of convergence.

IGOs also host regular meetings of ministers and other high-level state officials that further facilitate information exchange and mutual appreciation among national elites. These meetings likely increase understanding and isomorphism in a wide variety of domains. They also form a vital part of soft power (Nye 1991), which depends partly on the attraction of one's ideas, but also, crucially, on shaping others' preferences. As Dorussen and Ward (2005:8) succinctly summarize, "IGOs are places where information is exchanged and where people come to appreciate others' points of view."

For example, the European Central Bank's (ECB) goals are very specific: "The primary objective . . . shall be to maintain price stability" (ECB 2006). However, the ECB is authorized to support general economic policies and seems to interpret its objectives broadly. For instance, the bank holds annual Cultural Days to showcase a member state's cultural wealth through art exhibitions, concerts, and other events. The bank also publishes educational material intended to demonstrate to young Europeans the importance of price stability and the Eurosystem of European central banks.

As the case of the ECB suggests, actual IGOs differ from the narrow treaty texts on which they are based. Organizations assigned a specific purpose tend to initiate projects aimed at increasing understanding between different constituencies, if only to reduce friction in their operation (DiMaggio and Powell 1983; Meyer and Rowan 1977). As Selznick (1957:17) noted, organizational practices

then become "infused with value beyond the technical requirements of the task at hand."

While the above examples are European, their spirit is parallel to that of IGOs operating elsewhere, such as the Latin American Integration Association's interest in "*convergence* in the South-American countries, taking into account the present *asymmetries*" (ALADI 2006, emphasis added), or the Niger Basin Authority's objective to "*harmonize and coordinate* national policies" (NBA 2004, emphasis added). The vocabulary of isomorphism is evident in IGOs in all parts of the world.

Isomorphism is not unconditional, and the end result of the process, as well as the speed by which it progresses, depends on which behaviors are perceived as legitimate. As Rogers (2003:15) points out, an innovation that is "incompatible with the values and norms of a social system will not be adopted as rapidly as an innovation that is compatible." Lee and Strang (2006:883) also find that states imitate public-sector downsizing among their neighbors but not upsizing, an effect they ascribe to the "dominance of neoliberal and managerialist discourses that legitimate and theorize shrinking the public sector."

The information that IGOs communicate between their member states is not transferred verbatim—in fact, it is the interpretation of information that makes IGOs effective mediators. Information perceived as illegitimate in the international community of IGOs will be interpreted and propagated in a negative manner or not at all, while information perceived as legitimate will be interpreted to maximize the likelihood of it being evaluated positively by member states. To understand how democracy diffuses through the IGO network, one must consider its legitimacy in world society.

## LEGITIMACY, DEMOCRACY, AND IGOs

Democracy's status as the gold standard of governmental forms has evolved over time. Its modern ideological foundations stem

back to a search in the seventeenth and eighteenth centuries for a legitimate foundation for state sovereignty. In the West, secularists won the struggle between divine and secular justifications for sovereignty. Eventually, the dominant conclusion was that sovereignty came from “the people,” although the extent of sovereignty transferred from the people to government was contested. At one extreme, Hobbes believed people had permanently and irrevocably handed over sovereignty to an all-powerful monarch. Others, such as Locke and Rousseau, argued for limits on how sovereignty could be transferred to rulers. Locke proposed procedural limitations on rulers’ actions, while Rousseau focused on individuals’ inalienable sovereign rights. The Western conception of democracy became a dominant global ideology, a process driven in part by Western military and economic dominance, but also by Western influence on world culture through a privileged position in the world society of IGOs and INGOs (Beckfield 2003).

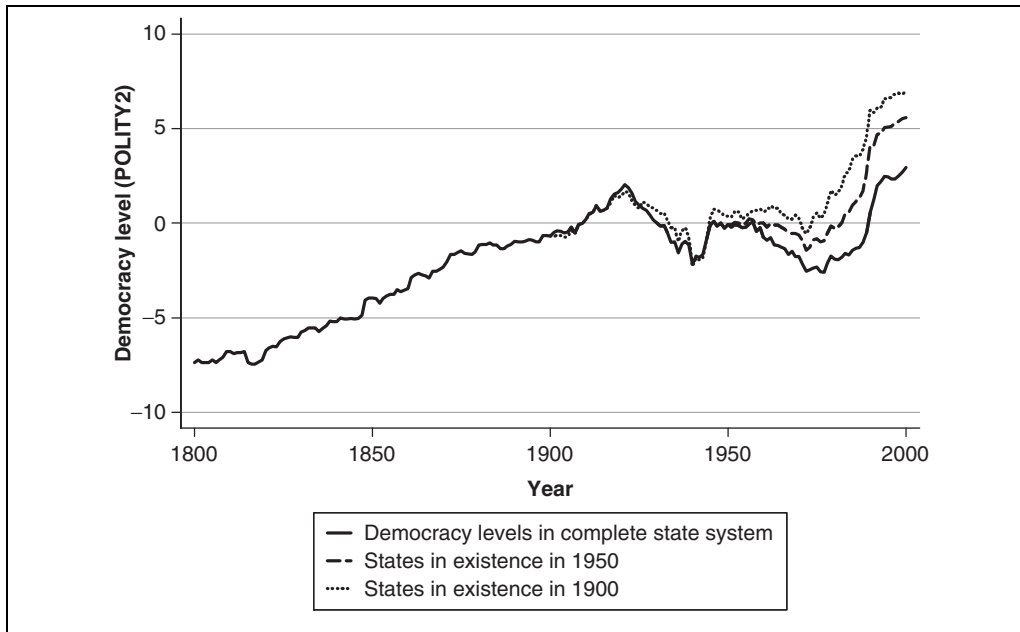
Concurrent with this debate, the world experienced a general trend toward democratization. In the process of democratization, reversals are not unusual at the level of individual states, because elites often withdraw their support from a new democracy before it has solidified (Tilly 2007). Nevertheless, the global trends were real and large, and democracies that materialized in the period, including the United States and France, derived their legitimacy from a social contract with the people as holders of the sovereign right. The resulting systems of elections, coupled with internal controls on government’s power, became the blueprints by which government was evaluated in world society. During the past 200 years, the level of democracy has increased considerably all over the world, and objective measures categorize well over one-half of states in the world as democracies (Mansfield and Pevehouse 2006).

On a global level, democracy’s rise coincides with a rise in the political and economic success of countries adhering to democratic ideologies. Even so, the average

level of democracy in the world declined in the “age of dictators” between the two world wars, and again during the Cold War, before rising sharply during the three decades often referred to as the third wave of democratization (Figure 1 shows this evolution in detail).

Even states that do not practice democracy recognize its legitimacy. For example, communist rhetoric celebrates democracy even though communist regimes are in many cases decisively undemocratic. Marx claimed that the communist revolution and the dictatorship of the proletariat were a temporary state of affairs, after which democracy should be restored. According to Marx ([1843] 1978:21), democracy is the true form of government and “all forms of state . . . are untrue insofar as they are not democracy.” This decoupling is consistent with other state practices that diverge from dominant global scripts, such as environmental policies (Schofer and Hironaka 2005) and human rights (Hafner-Burton and Tsutsui 2005). Further evidence of decoupling is the frequent use of the word “democratic” in the names of undemocratic states: according to the data used in this article, states whose official names include “democracy” are one standard deviation *below* the average in terms of the measure of actual democratic institutions in the system as a whole.

While democracy’s long-term rise around the world is not simply a consequence of IGOs, we argue that the channels of contact offered through IGOs provided important support for this process and hastened it. IGOs provide interpretation and interaction venues for elites, while also supporting a shared identity among the populace of member states; this increases the likelihood of change consistent with shared norms and decreases the likelihood of inconsistent change. Normative diffusion among rulers is important even when demands for change originate with the public (e.g., through a revolution or uprising) because international norms about democracy and acceptable use



**Figure 1.** Average Historical Democracy Levels from 1815 to 2000

*Note:* The figure shows the average level of democracy, as operationalized by the POLITY2 score (Marshall and Jaggers 2005). The solid line shows the level in the complete state system. The dashed and dotted lines include only states that were in existence in 1950 and 1900, respectively.

of force constrain rulers' violent repression of such publics.

We test two hypotheses about the effect of IGO networks on democratic change. Based on our arguments, interaction with others in a state's IGO network should result in a state becoming more similar to others over time. As each country attends to another, comes to understand it, and becomes subject to its normative influence, the counterpart's democracy level comes to seem more credible and desirable. Therefore, to the extent that countries have different levels of democracy, they will converge more quickly when they interact through more IGO connections.

*Hypothesis 1:* Another country's influence on the focal country's democracy level will be positively related to the product of the IGO connectedness between the two countries and the difference in democracy levels between them.

Hypothesis 1 describes the effects of a process through which all countries align themselves with their counterparts in the IGO network. However, we should not expect countries to simply imitate IGO counterparts unconditionally. Understanding and acceptance of different behavior are based on a positive evaluation of that behavior. This is facilitated by the IGO network but conditional on the behavior's legitimacy according to international norms (Meyer et al. 1997). Democracy is the form of government perceived to be legitimate in the world society in which IGOs operate, while autocracy has not had serious defenders in that realm since Hobbes in the seventeenth century. Diffusion of democracy through the IGO network should therefore be more successful than diffusion of autocracy.

*Hypothesis 2:* The democracy-enhancing influence of more democratic countries



through the IGO network will have a larger effect than the democracy-reducing influence of less democratic countries.

## METHODS AND DATA

Our unit of analysis is the country-year, and we simultaneously consider state-level (i.e., monadic) variables that may influence a country toward democracy, interstate (i.e., dyadic) influence of other countries through the IGO network and other relationships, and system-level effects. Our statistical methodology is based on a network autoregression model, which estimates the extent to which adjacent nodes in a network are more similar than might be expected by chance. A purely static version of the model makes it hard to discern whether the similarity of neighbors is due to selection or influence. To aid us in establishing the causality of our mechanism, we use a dynamic variation of the model, where we estimate each variable’s impact on the subsequent change in level of democracy in the focal country. The ideas motivating this model are related to various other approaches used to estimate diffusion processes, and we compare these alternatives to our model in the online supplement (<http://asr.sagepub.com/supplemental>).

The form of the model we estimate is:

$$\Delta y_{i,t} = \gamma y_{i,t-1} + \beta X_{i,t-1} + \delta I_{i,t-1}^{igo} + \rho C_{i,t-1}^{igo} + \theta I_{i,t-1}^{ctl} + \phi C_{i,t-1}^{ctl} + F_t + u_{i,t} \tag{1}$$

where  $\gamma$ ,  $\beta$ ,  $\delta$ ,  $\rho$ ,  $\theta$  and  $\phi$  are the coefficients to be estimated,  $i$  represents the focal country,  $t$  represents time,  $y$  represents the time-varying level of democracy,  $F$  represents year fixed effects, and  $u$  is the error term.  $X$  is a vector of time-varying country-level variables,  $I^{igo}$  is the IGO network influence variable, and  $C^{igo}$  is network centrality<sup>1</sup> in the IGO network.  $I^{igo}$  is operationalized as the aggregation of

influence due to all states to which the focal country is connected, where the influence on state  $i$  due to each alter  $j$  is proportional to the multiplicative combination (or interaction) of the IGO tie strength and the difference in democracy levels:

$$I_{i,t-1}^{igo} = \sum_{j=1}^N \tau_{ij,t-1} (y_{j,t-1} - y_{i,t-1}) \tag{2}$$

Here  $\tau_{ij}$  is the strength of the time-varying IGO tie between states  $i$  and  $j$  in the network, and  $y_i$  and  $y_j$  are the time-varying levels of democracy in the two countries. We determine the presence of IGO network diffusion of democracy by examining whether the corresponding influence variable (labeled *IGO network diffusion*) significantly affects subsequent change in democracy. To account for influences beyond the IGO network (e.g., trade or colonial networks), we include a set of  $I^{ctr}$  influence terms and  $C^{ctr}$  centrality measures for each other network. We calculate these in the same way as the  $I^{igo}$  term but use tie strength from the control networks (e.g.,  $\tau_{ij}$  would be the level of trade in a year for the trade network).

Because our measure of democracy is discrete, we use an ordered-probit regression. To control for the impact of historical trends or systematic shocks that may exert a general influence on global democracy, such as technological advances, world wars, or the fall of the Berlin Wall, our models include fixed year effects. We report White standard errors, which are robust to heteroscedasticity (White 1980), and we cluster standard errors by country to account for the fact that observations within each country are not independent.

Our data come from several publicly available datasets. Our variables are time-varying and observed for each year. The definition of the population in question comes from the Correlates of War Project (COW 2008), which provides a widely used and comprehensive list of more than 200 states in existence since 1815.



For the dependent variable, we use data on the time-varying level of democracy and autocracy in 187 states, compiled by the Polity IV project (Marshall and Jaggers 2005). Levels of democracy and autocracy are coded according to the presence of specific institutions related to the competitiveness and openness of executive recruitment, constraints on executive power, and competitiveness of political participation in general, and then combined into a single score. Many democratization studies use the POLITY scores (e.g., Gleditsch and Ward 2006; Pevehouse 2005; Wejnert 2005).

The data on IGOs include all intergovernmental organizations in existence from the beginning of that organizational form in 1815 to the year 2000 (Pevehouse et al. 2004). This data was used to construct the network of shared IGO memberships, in which connectedness between a pair of countries is calculated as the total number of IGOs in which both countries are members in a given year (Ingram et al. 2005).

We include several other variables as controls. Most central to our theory are the influences of mimetic learning, coercion, social construction, and economic competition, because these combine with our own emphasis on normative diffusion to enumerate the different institutional influences identified by Simmons and colleagues (2006). We therefore examine individual country characteristics and a set of other networks that might provide a basis for the diffusion of democracy. Variables with a large number of missing observations are only included in auxiliary analyses (results are reported in the online supplement due to space considerations).

### Country Characteristics

A country's wealth is the most obviously relevant state-level factor. Wealthy nations likely experience a direct tendency to democratize and an indirect tendency that stems from increased internalization of global norms of individualism and human rights that are

closely related to democratization. We represent wealth with *GDP per capita*, available from the Penn World Tables for years since 1950 (Heston, Summers, and Aten 2006). For earlier periods, we use measures of energy consumption and iron/steel production, obtained from Singer, Bremer, and Stuckey (1972) as the best available proxies for wealth. We also include each country's *CINC score* (Composite Index of National Capabilities). The CINC score, originally compiled by Singer and colleagues (1972) and subsequently updated, is a composite measure intended to capture a state's capability to project military power.

Educational attainment might be expected to have a positive effect on democratization, and it has expanded greatly over the period in question (Schofer and Meyer 2006). We obtained data on *university enrollment per capita* for each country from Banks (2008).

### Other Diffusion Mechanisms: *Mimesis, Coercion, Constructivism, and Competition*

Democracies' and autocracies' perceived economic success may affect how receptive other countries are to emulating a given type of government; countries would rather imitate the behavior of richer countries than that of poorer ones, regardless of network structure. To examine this mimetic influence, we construct a variable equal to the logged ratio of GDP for the two countries (we assume no mimetic influence of poorer states on richer states). We interact this variable with the difference in democracy levels to account specifically for the mimetic influence of richer democracies and aggregate the influence on each country as the *influence of richer democracies*.

Coercion, explicit or implicit, is another potential systemwide driver of convergence (Fligstein and Stone Sweet 2002; Henisz et al. 2005). We constructed *influence of powerful democracies* to parallel *influence of richer*

*democracies*, but instead of logged GDP we use the CINC scores of the focal country and its counterparts.

To reflect the role of social construction as a driver of democratic convergence, we include a number of variables used in the world polity literature. *Global diffusion* reflects the possibility of a homogenous process in which countries converge to a global level of democracy. For each country, the variable is the sum of the differences between its democracy level and that of each other country. This is equivalent to calculating a network influence variable for the fully connected network. The resulting variable therefore captures global diffusion where each country influences all other countries to the same extent, regardless of structural position.

We also consider the role of international organizations as representing exposure to world culture, in contrast to our network argument that examines contact with specific other countries through those organizations. We therefore include *total IGO membership*, a count of how many IGOS to which a country belongs. *Logged total INGO membership* captures the number of memberships from a country's citizens in INGOs (Hafner-Burton and Tsutsui 2005); we log this variable because it is skewed, although our results are not sensitive to the transformation.

Military alliances could facilitate coercive diffusion through the threat of a powerful member withholding military support. Yet they could also facilitate normative diffusion, as evidenced by Tilly's (2007) suggestion that soldiers trained by the United States during Franco's reign may have been influenced by U.S. norms regarding acceptable use of military force, thus precluding a military coup as a viable option after Franco's death. We estimate *alliance network diffusion* by calculating bilateral tie strength as the number of military alliances between the members of a dyad, using data from Gibler and Sarkees (2004).

Because of ongoing attention and interaction between former colonies and colonizers,

colonial history may also matter. Additionally, states often maintain military bases in former colonies, sometimes long after independence. Colonial ties may thus provide a channel for either coercive or normative influence. We use data from the Correlates of War project (COW 2008) to estimate *colonial network diffusion*; two states are tied if one was ever a colony of the other.

Commercial integration associated with bilateral trade and foreign direct investment (FDI) may affect democratic convergence through interstate communication or competitive pressures for economic resources. For bilateral trade after 1950, we use data from Gleditsch (2002). We estimate *trade network diffusion* by calculating bilateral connectedness in the network as the log of dyadic trade between the two countries. For FDI, we use data from the United Nations Conference on Trade and Development (2008) on the *stock of inward FDI* and *stock of outward FDI*.

Finally, spatial proximity likely has a strong effect on the attention and interaction between states. To account for spatial diffusion, outside any organizational structure, we use direct line distance between each pair of countries, as well as classification by region and continent (UNSD 2006). We use these data to estimate *distance network diffusion*, *regional network diffusion*, and *continental network diffusion* by calculating tie strength as, respectively, the inverse of direct line distance, a dummy for pairs located in the same region, and a dummy for pairs located in the same continent.

We control for network centrality within each network we examine. There are two important reasons for including centrality measures separately in the model. First, because we calculate the network influence variable as an interaction between difference in democracy levels and strength of the dyadic tie, the variables are structurally related. The absolute value of the influence variable is correlated with network centrality ( $r = .86$  for the IGO network), so omitting centrality could bias the results, particularly if positive and

negative diffusion are not symmetric (as we hypothesize). Second, centrality is a variable of substantive interest and could plausibly affect democratization by itself, particularly with regard to the IGO network. That is, central states may be more inclined to democratize because of greater exposure to prevalent norms in international society, formal structures of the IGOs in which they are members, and world culture in general. A direct impact due to greater participation in world society is important in its own right, but it should not be confused with the diffusion of democracy through bilateral ties.

After performing all interactions, but before performing our regressions, we standardized network and influence variables to aid in interpreting coefficients. This standardization has no effect on significance levels or direction of effects. In the regression models, the coefficients of standardized variables can be interpreted as the impact of varying the independent variable by one standard deviation, as calculated from the observed sample.

Summary statistics, available in Table S1 in the online supplement, show that some influence variables are positively correlated with each other. While multicollinearity does not bias parameter estimates, it can increase standard errors and decrease the significance level of the analysis. Thus, the correlations between network variables suggest the tests of our hypotheses are conservative.

## RESULTS

Table 1 reports results of our main analysis, which is based on the whole dataset, with observations from the years 1816 through 2000.<sup>2</sup> Models 1 through 3 examine effects of baseline variables along with the IGO network, while Models 4 through 8 incorporate additional control variables and break down IGO network diffusion in several different ways. In all cases, the dependent variable is the change in democracy between time  $t-1$

and  $t$ , while the independent variables are lagged by one year and measured at  $t-1$ .

Model 1 serves as our baseline. It includes variables that reflect the global diffusion of democracy, as well as country-level controls. Model 2 examines the diffusion of democracy through the IGO network. The coefficient for *IGO network diffusion* is positive and highly significant, in accordance with Hypothesis 1. That is, states that share IGO membership with countries with different levels of democracy tend to become more similar to their co-members in terms of democracy levels. The coefficient for *democracy (lagged)* is negative: already democratic countries are less likely to experience positive change in democracy levels, as would be expected given that the Polity measure of democracy is bounded in range. The coefficient for *total IGO memberships* is positive, but the coefficient for *centrality in IGO network* is negative. These two variables measure the extent of participation in IGOs and are highly correlated (.92), but centrality captures the effect of large IGOs relative to small ones (joining a large IGO results in more new ties than joining a smaller IGO). Together, these coefficients suggest that states that are predominantly members of larger IGOs are less likely to experience positive democratic change than are states in the same number of smaller IGOs.<sup>3</sup> The coefficient for *global diffusion* is significant in Model 1, but it becomes insignificant when the IGO network effects are included. This indicates that while democracy diffuses through links created by shared IGO membership, the evidence for homogenous global diffusion is weak when IGO diffusion is accounted for.

Model 3 estimates separately the impact of positive and negative influence in the IGO network. In this model, positive influence on a focal country is equal to the basic influence if one's counterpart is more democratic, but zero otherwise; we construct negative influence in a parallel manner. If influence was symmetric, we would expect

**Table 1.** Ordered-Probit Network Autoregressive Models of Democratic Change

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Democracy (lagged)	-.003 (.006)	-.025** (.008)	-.024** (.008)	-.016* (.008)	-.015 (.008)	-.018* (.008)	-.017* (.008)	-.017* (.008)
Per capita iron/steel production	.290* (.132)	.286* (.128)	.279* (.129)	.161 (.150)	.153 (.152)	.159 (.151)	.188 (.153)	.154 (.153)
Per capita energy consumption	-.005 (.003)	-.004 (.003)	-.004 (.003)	-.004 (.003)	-.004 (.003)	-.004 (.003)	-.004 (.003)	-.004 (.003)
CINC score	.347 (.399)	.302 (.411)	.301 (.413)	.676 (.459)	.678 (.460)	.690 (.462)	.669 (.462)	1.022 (.663)
Total IGO membership	.008*** (.002)	.014*** (.004)	.014*** (.004)	.011** (.004)	.011** (.004)	.011** (.004)	.011** (.004)	.011** (.004)
Global diffusion	.202*** (.043)	-.170 (.101)	-.155 (.108)	-.220 (.119)	-.202 (.122)	-.255* (.126)	-.243* (.114)	-.566** (.181)
Centrality in IGO network		-.319* (.150)	-.345* (.157)	-.193 (.156)	-.222 (.164)	-.183 (.158)	-.193 (.156)	-.181 (.156)
IGO network diffusion		.250*** (.064)		.243*** (.068)				.252*** (.066)
IGO diffusion (positive)			.170*** (.050)		.168** (.053)			
IGO diffusion (negative)			-.132 (.081)		-.121 (.083)			
IGO diffusion (minimal structure)						.035 (.063)		
IGO diffusion (extensive structure)						.226* (.097)		
IGO diffusion (economic)							.252** (.094)	
IGO diffusion (social/cultural)							.002 (.091)	
Centrality in distance network				-.012 (.024)	-.011 (.024)	-.012 (.024)	-.011 (.025)	-.014 (.024)
Distance network diffusion				.016 (.044)	.016 (.043)	.018 (.043)	.017 (.043)	.011 (.045)

(continued)

Table 1. (continued)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Centrality in continental network				-.057 (.044)	-.055 (.044)	-.057 (.044)	-.058 (.044)	-.055 (.044)
Continental network diffusion				-.022 (.051)	-.023 (.051)	-.016 (.054)	-.019 (.051)	-.013 (.053)
Centrality in regional network				.011 (.028)	.011 (.028)	.009 (.028)	.011 (.028)	.008 (.028)
Regional network diffusion				.119** (.037)	.119** (.037)	.114** (.038)	.120** (.037)	.114** (.038)
Centrality in alliance network				-.028 (.026)	-.027 (.026)	-.028 (.026)	-.025 (.026)	-.032 (.027)
Alliance network diffusion				.067** (.023)	.068** (.023)	.068** (.023)	.070** (.023)	.067** (.024)
Centrality in colonial network				.038 (.023)	.039 (.023)	.039 (.023)	.041 (.022)	.035 (.023)
Colonial network diffusion				.049* (.023)	.051* (.023)	.051* (.024)	.050* (.022)	.046* (.023)
Influence of more powerful states								.225 (.161)
Influence of more powerful democracies								.325* (.165)
Observations	11,086	11,086	11,086	10,633	10,633	10,633	10,633	10,633

Note: Dependent variable is democratic change. Independent variables lagged one year. Interaction variables are standardized. Robust, clustered, standard errors shown in parentheses.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$  (two-tailed tests).

the coefficients to be equally large but of opposite signs. The coefficient for *IGO diffusion (positive)* is positive and significant ( $p < .01$ ). The coefficient for *IGO diffusion (negative)* is indeed negative, but it is smaller than the positive coefficient and not significant. This outcome is predicted by Hypothesis 2, which states that the IGO network facilitates diffusion of behaviors perceived to be legitimate in world society. Democracy diffuses through this normative mechanism, autocracy does not.

Models 4 and 5 add variables that allow for diffusion through other international networks. The coefficients for *alliance network diffusion* and *colonial network diffusion* are significant, suggesting that IGOs are not the only institutions providing structures that facilitate democratic diffusion. We find some evidence for spatial diffusion: the coefficient for *regional network diffusion* is significant, but coefficients for the other spatial networks are not. Other coefficients are similar to those in Models 2 and 3, and the estimate for *IGO network diffusion* is practically the same. We report the estimated values for the fixed year effects in the online supplement (Figure S1). Those results show that relative to recent years, the world experienced significantly less democratization during the interwar and Cold War periods, even after controlling for the other effects in our models.

Models 6 and 7 further explore our key results by examining diffusion through IGOs that differ in their bureaucratic structure and their mandated function, based on descriptions of IGOs in the Yearbook of International Organization. We use Boehmer, Gartzke, and Nordstrom's (2004) coding scheme to distinguish IGOs that were minimally structured from those with more extensive bureaucracies. We use Ingram and colleagues' (2005) coding scheme to distinguish IGOs whose function is economic in nature from those whose function is social or cultural. Model 6 shows that while *IGO diffusion (extensive structure)* is

significant, *IGO diffusion (minimal structure)* is not. This is consistent with the view that efficient diffusion of democracy relies on permanent structures to maintain and interpret information. It also reinforces our core claim that organized structures are fundamental to the process of globalization. In Model 7, we find significant results for *IGO diffusion (economic)*, but *IGO diffusion (social/cultural)*, while positive, is not statistically significant. The high correlation between these two measures (.98) makes us hesitant to over-interpret this apparent difference, but to the extent that it exists, it is consistent with arguments that democracy has advanced hand-in-hand with global capitalism (Mandelbaum 2007). Such a result could stem from the promotion of personal freedom concurrently with economic freedom, or from a greater emphasis on standardization of behavior and governance by economic IGOs, compared with social/cultural IGO's greater acceptance of diversity. The former may thus be more germane for normative convergence than the latter. In these two models, the coefficient for global diffusion turns significantly negative. Considering the high correlations with other variables in the model, we cannot rule out collinearity as a cause for this result.<sup>4</sup>

Model 8 examines the influence of states more powerful than the focal state. The model does not show a statistically significant *influence of more powerful states* in general, but the specific *influence of more powerful democracies* is positive and significant, and *IGO network diffusion* maintains its size and significance level. This model provides some evidence that, in addition to the normative effects of IGOs, coercive processes have facilitated the spread of democracy. The effects are on the global level rather than through a specific network; this is plausible because the institutional complexity of coercive processes is lower than that of normative processes.

In Table 2, we turn to a more contextual analysis and examine two starkly contrasting

**Table 2.** Ordered-Probit Dynamic Network Autoregressive Models of Democratic Change: Secondary Analysis and Robustness Checks

	Model 9 Cold War	Model 10 Post-CW	Model 11 Cold War	Model 12 Post-CW	Model 13 Cold War	Model 14 Post-CW	Model 15 1816 to 2000 Robust Network	Model 16 1816 to 2000 Arrellano Bond
Democracy (lagged)	-.012 (.027)	-.245* (.112)	.006 (.029)	.018 (.152)	-.019 (.028)	-.182 (.119)	-.007 (.006)	.120*** (.010)
CINC score	1.958 (1.083)	-2.247 (1.929)	1.724 (1.080)	-1.323 (2.132)	-3.974 (2.864)	-80.265** (30.805)	.781 (.454)	1.086*** (.059)
Logged per capita GDP	.041 (.048)	-.048 (.058)	.023 (.048)	.009 (.057)	-.035 (.079)	-.174 (.153)		
Total IGO membership	.006 (.007)	-.005 (.008)	.007 (.007)	-.005 (.008)	.012 (.008)	-.002 (.008)	.008*** (.002)	.003*** (.000)
Global diffusion	-.387 (.229)	-1.612** (.613)	-.253 (.254)	-.260 (.806)	-1.465*** (.354)	-2.112** (.770)	-.046 (.076)	-.022 (.018)
Centrality in IGO network	.038 (.265)	.137 (.305)	-.263 (.386)	.559 (.332)	-.150 (.273)	.055 (.310)	-.009 (.051)	.092*** (.012)
IGO network diffusion	.245* (.113)	.518*** (.137)			.136 (.127)	.426** (.148)	.107*** (.026)	.100*** (.011)
IGO diffusion (positive)			.361* (.183)	.021 (.128)				
IGO diffusion (negative)			.035 (.178)	-.801*** (.168)				
Centrality in distance network	-.094*** (.024)	-.011 (.024)	-.096*** (.025)	-.012 (.023)	-.090*** (.023)	-.001 (.026)	-.015 (.024)	-.027*** (.004)
Distance network diffusion	-.048 (.056)	-.026 (.061)	-.057 (.055)	-.012 (.060)	-.042 (.053)	-.034 (.058)	-.033 (.041)	.009 (.013)
Centrality in continental network	.142 (.079)	.095 (.089)	.142 (.081)	.090 (.080)	.097 (.081)	.075 (.088)	-.049 (.046)	-.080*** (.007)
Continental network diffusion	.318*** (.093)	.035 (.091)	.317*** (.093)	.032 (.087)	.204* (.099)	-.034 (.099)	-.005 (.053)	.079*** (.011)
Centrality in regional network	-.043 (.046)	-.039 (.049)	-.038 (.046)	-.037 (.048)	-.045 (.045)	-.034 (.053)	.001 (.028)	.005 (.004)
Regional network diffusion	-.064 (.057)	.096 (.066)	-.060 (.057)	.077 (.067)	-.066 (.057)	.101 (.064)	.108** (.036)	.098*** (.007)
Centrality in alliance network	.002 (.037)	-.032 (.032)	-.041 (.038)	-.041 (.032)	.004 (.040)	-.033 (.036)	-.034 (.026)	-.039*** (.006)
Alliance network diffusion	.098** (.032)	.141** (.048)	.094** (.031)	.150** (.047)	.118*** (.033)	.139** (.047)	.076*** (.023)	.082*** (.005)

*(continued)*



**Table 2. (continued)**

	Model 9		Model 10		Model 11		Model 12		Model 13		Model 14		Model 15		Model 16		
	Cold War	Post-CW	Post-CW	Post-CW	Cold War	Cold War	Post-CW	Post-CW	Cold War	Cold War	Post-CW	Post-CW	Robust Network	Robust Network	Arrellano Bond	Arrellano Bond	
Centrality in colonial network	.017 (.029)	.041 (.043)	.019 (.029)	.036 (.042)	.032 (.029)	.028 (.045)	.043 (.025)	.034*** (.004)									
Colonial network diffusion	.004 (.029)	.083 (.060)	.005 (.030)	.072 (.059)	.005 (.027)	.047 (.063)	.052* (.025)	.039*** (.005)									
Centrality in trade network	.051 (.081)	-.016 (.068)	.049 (.083)	-.025 (.071)	.036 (.088)	-.038 (.064)											
Trade network diffusion	.055 (.058)	-.283*** (.066)	.053 (.059)	-.279*** (.062)	.250** (.080)	-.134 (.100)											
Influence of richer states					-.270* (.130)	-.217 (.133)											
Influence of richer democracies					.333*** (.084)	.207** (.070)											
Influence of more powerful states					-.873 (.634)	-9.516* (3.741)											
Influence of more powerful democracies					.992** (.346)	.774 (.471)											
Centrality in IGO network (10 year delay)																	
IGO network diffusion (10 year delay)																	
Observations	3,651	1,705	3,651	1,705	3,651	1,705	10,633	10,281									

*Note:* Dependent variable is democratic change. Independent variables lagged one year. Interaction variables are standardized. Robust, clustered, standard errors shown in parentheses.  
 \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$  (two-tailed tests).

periods in the evolution of political systems: the Cold War and post-Cold War periods. These analyses use data from 1950 to 2000, using the fall of the Berlin Wall in 1989 to denote the end of the Cold War. Limiting the analysis to the post-1950 period enables us to include measures of GDP and bilateral trade.<sup>5</sup>

Model 9 estimates diffusion of democracy through the IGO network during the Cold War, while Model 10 examines the post-Cold War period. The coefficient for *IGO network diffusion* is positive and significant in both cases, and slightly larger than in the full sample analysis reported in Table 1. We find evidence for spatial diffusion on a continental level and for diffusion through the alliance network. Diffusion through the trade network is not stable across specifications. This is notable, given popular arguments that economic interdependence promotes convergence between countries, but this instability represents absence of evidence, rather than evidence of absence.

Models 11 and 12 examine the positive and negative IGO diffusion effects separately for each of the two periods. The coefficients in Model 11, for the Cold War period, are similar to coefficients in the main analysis: *IGO diffusion (positive)* is significant but *IGO diffusion (negative)* is not. However, the coefficients in Model 12 for the post-Cold War period are different. Diffusion through the IGO network is still present, but positive influence is unimportant in this period, while negative influence is now highly significant. Our post-Cold War data cover only 11 years, from 1989 to 2000, which is short compared with the periods for which we find positive diffusion through IGOs. Our data do not allow us to discern exactly why we find different results for this period, but they suggest the possibility of a real change in the way democratic diffusion operates. While the level of democracy has risen since the Soviet Union's demise, the world has also become much more unipolar. Future research should examine this intriguing result.

Models 13 and 14 examine the possibility of mimetic and coercive isomorphism. This

analysis extends Model 8 by examining the influence of wealthier democracies, a likely target for mimesis. Evidence for this influence is present in the Cold War and post-Cold War periods; the coefficient for *influence of richer democracies* is positive and significant in Models 13 and 14. Evidence of coercive isomorphism, estimated through *influence of more powerful democracies*, is apparent in the Cold War period but not the post-Cold War period.

## CAUSALITY AND ROBUSTNESS CHECKS

A key reason we opt for a dynamic autoregressive model rather than the static version is that a dynamic model is much less open to alternative accounts of causality. In the dynamic model, the dependent variable is change in level of democracy, rather than the absolute level. Thus, a homophily process in which states tend to create ties with similar others will not confound the models because there is no subsequent change in democracy levels. A pattern of tie creation between jointly democratizing states will not result in a measured effect either, because a movement in the predicted direction by the less democratic state will be offset by a movement against the predicted direction by the more democratic state. Using lagged measures in the estimation model also guards against any reverse causal paths that are temporally sequential (i.e., cause precedes effect in time). Nevertheless, causality is always an important issue in nonexperimental studies, so it deserves specific attention.

In particular, Mansfield and Pevehouse (2006) suggest that states in the process of democratizing are especially likely to join IGOs; these states may even join IGOs *before* they become more democratic. If such states were to seek out IGO ties with democracies rather than autocracies, this could result in a similar pattern to the one we observe. To ensure that our main findings

are not dependent on the process of strategic IGO joining, we exclude recently joined IGOs from the calculation of network influence, relying only on longstanding IGO memberships (presumably forged prior to any current democratization movement). Model 15 presents estimation results using this alternative method of network construction, reflecting only memberships that lasted 10 or more years, and shows that the diffusion of democracy is still highly significant.<sup>6</sup> Our evidence of diffusion of democracy through the IGO network is clearly not simply due to states deciding to democratize and then joining certain IGOs to speed them on the process. In addition to ruling out a reverse causality argument, Model 15 provides evidence that the effect of IGO ties continues to work for a considerable time after the tie is formed. This result provides some reassurance that the effect is not due to a third variable influencing both IGO membership and democracy.

Propensity score matching is a useful tool in causal inference because it performs a hypothetical matching between observations that experience a “treatment” and those that do not. This allows one to interpret an observational study similarly to an experiment. While this is not a panacea for the problem of unobserved variables, it relaxes various assumptions about how variables affect the selection into treatment. We thus replicated Model 4 using propensity score matching. The method assumes a discrete treatment, so we categorize observations where a state experiences positive democratization influence through the IGO network that is more than one standard deviation above the mean as having received the treatment, and others as the control group. We use the other variables from Model 4 to match observations from the treatment and control groups. Even after matching, states in the treatment group experience, on average, double the positive change in democracy levels as their counterparts in the control group ( $p < .015$ ).<sup>7</sup> A true experiment (natural

or controlled) remains the ideal in establishing causality. However, the robustness of the effect in a propensity score matching estimation, together with the fact that the effect is still operating for IGOs joined 10 years earlier, makes constructing alternative causal mechanisms considerably more difficult.

To account for the possibility of serial autocorrelation influencing the results, we estimated our model using the Arellano-Bond GMM estimator utilized by Lee and Strang (2006). Model 16 shows that diffusion through the IGO network remains significant when the model is estimated using Arellano-Bond; thus, serial autocorrelation does not seem to be driving our results.<sup>8</sup> The Arellano-Bond estimator also accounts for time invariant effects particular to specific countries, providing added confidence that our results are not driven by such unobserved effects.

In auxiliary analyses (see the online supplement), we examined a number of control variables we excluded in the main analysis because of a high number of missing observations. Most notably, these results show that democratization is greater for countries with more university graduates and those more engaged in INGOs, but a state’s stock of inward and outward FDI does not affect democratization. The online supplement also reports results of using state-level fixed effects, as well as several different regional and period effects specifications. Finally, we examined the use of different methods for error clustering, as well as bootstrap estimates of standard errors to account for the correlations of variables. Our results are materially identical under these different conditions.

## DISCUSSION

Guillén (2001) argues that globalization is an organizational phenomenon. Yet, even organization-centered sociological accounts of globalization do not fully acknowledge the role of organizations in this process. World polity theories see organizations as

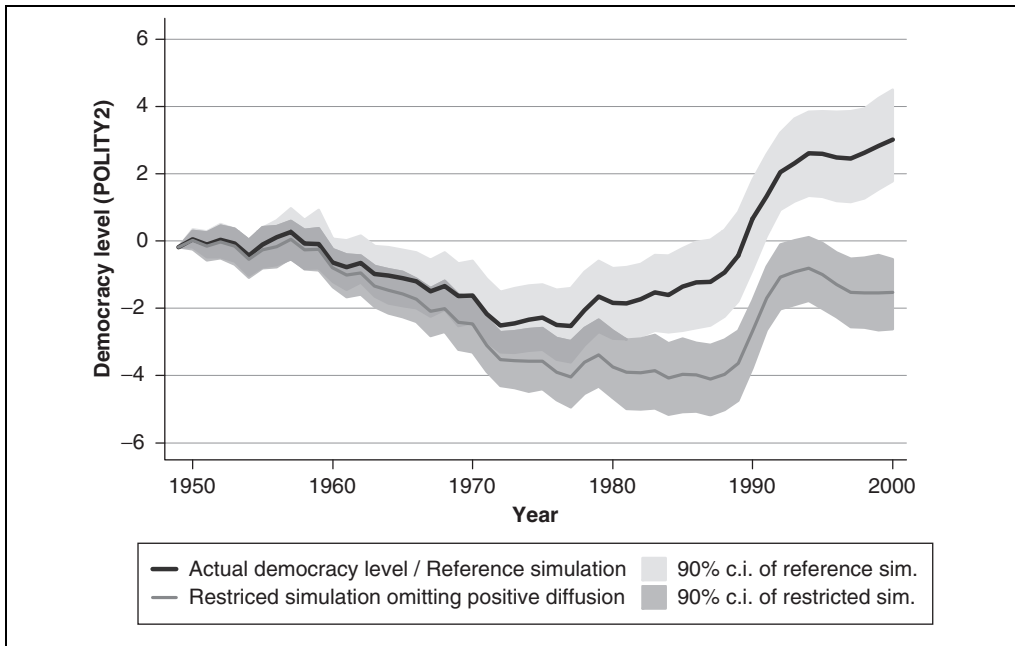
the source of ideals of globalization but do not emphasize organizations' concrete role in creating the network through which these ideals diffuse. Scholars of coercive isomorphism highlight the role of a small yet important set of international organizations but do not examine the many other organizations that promote globalization through non-coercive means. This article bridges the gap between these two literatures. We provide an account of the role of intergovernmental organizations in shaping, interpreting, and diffusing democracy, emphasizing that their impact is strong, but it is dependent on the full structure of the network.

To world polity theory, we add attention to the network structure that connects states as a moderator of normative influence. Many scholars do assume that the strength of ties to the world polity impacts states' receptiveness to these models; we refine these assumptions by focusing not only on the strength of ties but on their structure. Our empirical analysis indicates that the IGO network facilitates diffusion, even after accounting for traditional world polity variables that capture the extent to which a country engages with international organizations. Similarly, we offer a refinement of the mechanisms emphasized by scholars of coercive isomorphism. We do not doubt certain IGOs' (including the IMF and the World Bank) coercive role in pushing particular practices and structures. Our own results confirm that powerful democracies influence weaker states to adopt their political system. However, our analyses also show how location in the network formed through the large set of IGOs impacts the diffusion of democracy. Only a handful of IGOs are capable of coercing their member states, but hundreds can interpret and transfer normative information about models of the state. We agree that some IGOs can be channels for coercion, but we believe that most of these organizations' impact on global convergence occurs through normative mechanisms. This conclusion is certainly true in the case of democracy diffusion.

The IGO network effect we observe is particularly notable because our analyses show evidence that the process of democratization operates in other ways as predicted by extant theories. Consistent with world polity theory, we find that exposure to international society, as measured by the number of memberships in IGOs and INGOs, supports democratization. Furthermore, in addition to the structured, normative isomorphism that is our focus, we find evidence of mimetic isomorphism of rich countries by the poor, and coercive isomorphism whereby the militarily powerful influence the weak (DiMaggio and Powell 1983). The simultaneous presence of all three isomorphic influences is important; it shows that our evidence of the IGO network's efficacy is not due to model misspecification (Henisz et al. 2005). Furthermore, the fact that more familiar explanations for institutional influence on a global scale are at work in the democratization case suggests that it is not idiosyncratic: the structural properties of the IGO network may be relevant for other phenomena. We believe our approach here can usefully be extended to explain other instances of globalization.

We also observe some diffusion through other networks. Our analysis shows evidence of spatial diffusion, whose geographic reach seems to have expanded over time as the world has become smaller. We also observe strong and robust diffusion through the network of military alliances. Military alliances often involve collective use of force and military aid, which may offer a potent path for coercive influence. Normative influence, however, is also possible through socialization and delegitimation of the use of military force in the case of civil unrest.

Diffusion of democracy through the IGO network is both statistically and substantively significant. Figure 2 gives an idea of the magnitude of this effect. The figure shows the results in terms of the global average democracy, from 1950 to 2000, derived from a simulation of the democratic evolution of



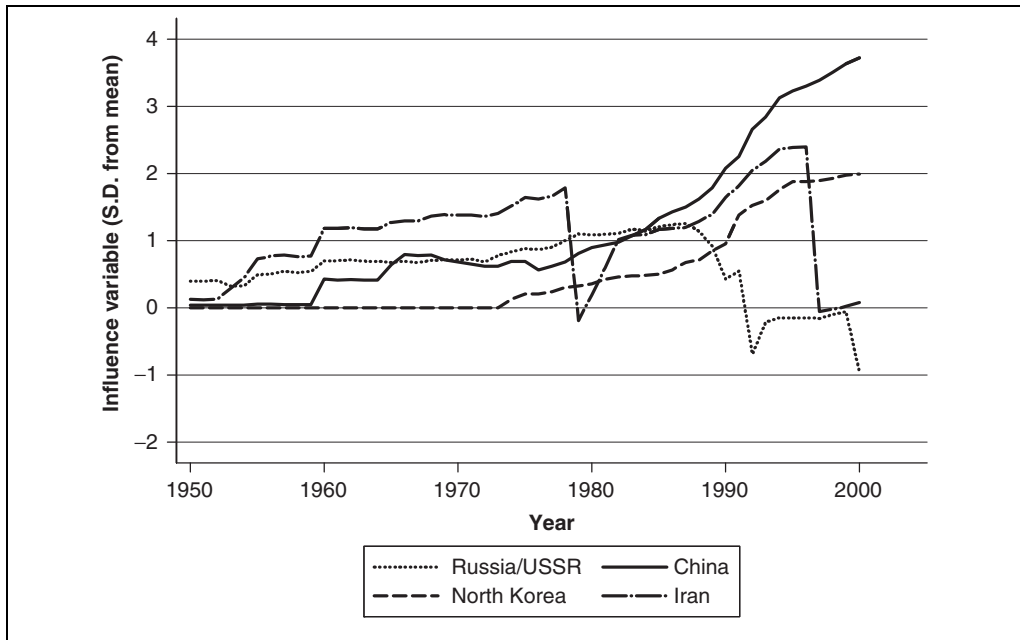
**Figure 2.** Simulated Democracy Levels without Positive Diffusion through IGO Networks

*Note:* The figure shows the global averages in democracy scores derived from a simulation that models country-level democracy between 1950 and 2000 but omits the effect of positive diffusion through the IGO network (restricts it to zero). The darker shaded area shows a 90 percent confidence interval of the restricted simulation, based on 100 repetitions. The lighter shaded area shows the confidence interval of a reference simulation that includes IGO diffusion and tracks the actual historical level of democracy closely. We generated the coefficients for the simulations using a linear regression estimation for the specification in Model 5, other specifications yield similar results.

each state in which the effect of positive influence through the IGO network has been artificially restricted to zero. While a reference simulation without this restriction tracks the actual historical pattern closely, the restricted simulation shows a sharper drop in the 1960s and a much later and weaker reversal. The outcome of this process over 50 years is a four-point difference in democracy scores, which represents almost the entire change associated with the third wave of democratization between 1970 and 2000. It is no overstatement to say that our analyses suggest that the IGO network has been fundamental to global democratization.

Policymakers interested in the ongoing evolution of democracy around the world

might take heart in evidence of the IGO network's positive influence on democratization. However, while our evidence speaks to the unfolding of democratization on a global scale, policymakers should also consider the detailed structure of the network. The impact on a specific state depends on its membership in the same IGOs as democratic states, and it may be moderated by the character of the IGOs themselves. Figure 3 presents the historical values of the IGO network influence variable we use in our models, for a set of nondemocratic countries in the post-1950 period. Notably, China experienced a relatively large and increasing democratizing influence at the end of the period, but it continues to trail in democracy. North Korea was also exposed to



**Figure 3.** Normative Influence through IGOs on Selected States

*Note:* The figure shows the value of the IGO network influence variable for four states. Influence depends on the democracy level of other states and the level of IGO connectedness to those states. The unit in the graph is the number of standard deviations from the mean level of influence in the system.

increasing influence in this period, although this increase was considerably smaller and almost solely due to greater imbalance, rather than increased engagement.

On the other hand, the figure shows that the net influence on Russia and Iran was not positive at the end of the twentieth century. The causes here reflect a fundamental implication of our argument: which states a focal state is connected to in the IGO network makes a big difference in the normative influence it faces. The case of Iran is particularly illuminating. After the Islamic revolution and the overthrow of the Shah, Iran's democracy score rose close to that of its counterparts in the IGO network, which reduced the normative influence to democratize further. Iran again experienced increasing influence in the 1980s and 1990s, partly due to increased autocracy within Iran, but mostly due to its counterparts' democratization. With President Mohammad Khatami's

reforms in 1997, Iran again caught up with its IGO counterparts, who were themselves low in democracy; Iran did not experience any net influence in the year 2000. Similarly, although Russia was still much less democratic than the typical Western democracy after the fall of the Berlin Wall, when compared with its counterparts in the IGO network, it was actually slightly more democratic than average and did not experience net positive influence through the network. These examples point to considerable opportunities for future research, focusing on the regional and historical idiosyncrasies that influence the diffusion of democracy.

Our analysis shows that the mechanisms of democratic diffusion are highly dependent on the underlying IGO network structure. As Figure 3 illustrates, this structure is far from uniform. These two facts suggest that a more nuanced approach to the impact of international organizations is essential, if the

evolution of social and political structures in countries around the world is to be fully understood. Considering Meyer and colleagues' (1997) newly discovered island society, we can say that its democratization would depend very much on which international organizations it joined. Recognition that world culture supports norms embedded in particular network structures, derived from organizational memberships and braced by bureaucracy, significantly alters the sociological account of globalization. In fact, the differences constitute what amounts to a separate and extended theory—one with more potential to explain the observed vagaries of global convergence.

### Acknowledgments

The authors are grateful to Alexander H. Montgomery, Emilie Hafner-Burton, Ray Horton, Edouard Maciejewski, Charles Tilly, Erik Gartzke, John Boli, and participants of seminars at Columbia University, London Business School, Harvard Kennedy School, and the annual meetings of The Academy of Management and the American Political Science Association.

### Notes

1. We measure centrality using "weighted degree centrality," which is calculated as the sum of all direct ties a country has in the network weighted by the strength of each tie.
2. As noted, we estimate these models using ordered-probit regressions. We also estimated these models using standard linear regressions (which do not account for the discrete nature of the data) and the results are materially the same.
3. In the online supplement, we include a "minimal" specification, containing only *democracy (lagged)* and the two factors of the interaction we use to construct our main variable (*global diffusion and centrality in the IGO network*) as controls. In that model, the coefficient for *centrality in the IGO network* is positive and significant. *IGO network diffusion* maintains its size and significance.
4. In a supplementary analysis, we examined the impact of coercive influence specifically between states connected in the IGO network. The coefficient is generally small but positive, and in some specifications marginally significant. However, the direct normative influence through IGOs maintains its size and strong significance.
5. In our analysis of the whole period from 1950 to 2000 (not reported here due to space constraints),

diffusion of democracy through the IGO network is positive and significant and similar in size as in our other models. A breakdown by positive and negative influence shows significant results for both types. Other coefficients are also similar to those observed for the two separate periods.

6. We repeated this analysis restricting the IGO network to even longer memberships (20 years), and results are substantively the same as those in Model 15. We also performed an analysis excluding new states completely for 10 years after they enter the system; results are substantively the same.
7. We report results from the propensity score matching in greater detail in the online supplement.
8. In the Arrellano-Bond estimation, we tested for second-order autocorrelation in the data, which would raise issues with the specification, but we found no evidence that this was an issue.

### References

- ALADI (Latin American Integration Association). 2006. "Action Program." Retrieved January 2006 (<http://www.aladi.org/>).
- Banks, Arthur S. 2008. *Cross-National Time Series Data Archive*, Databanks International, Jerusalem, Israel.
- Beckfield, Jason. 2003. "Inequality in the World Polity: The Structure of International Organization." *American Sociological Review* 68:401–424.
- Boehmer, Charles, Erik Gartzke, and Timothy Nordstrom. 2004. "Do Intergovernmental Organizations Promote Peace?" *World Politics* 57:1–38.
- Boli, John and George M. Thomas. 1997. "World Culture in the World Polity: A Century of International Non-governmental Organization." *American Sociological Review* 62:171–90.
- Boswell, Terry and Christopher Chase-Dunn. 2000. *The Spiral of Capitalism and Socialism: Toward Global Democracy*. Boulder, CO: Lynn Rienner Publishers.
- Central European Initiative (CEI). 2004. "Objectives." Retrieved October 2006 (<http://www.ceinet.org/>).
- Correlates of War Project (COW). 2008. Correlates of War Project. Retrieved October 2008 (<http://www.correlatesofwar.org/>).
- DiMaggio, Paul J. and Walter W. Powell. 1983. "The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields." *American Sociological Review* 48:147–60.
- Dobbin, Frank and John R. Sutton. 1998. "The Strength of a Weak State: The Rights Revolution and the Rise of Human Resources Management Divisions." *American Journal of Sociology* 104:441–76.
- Dorussen, Han and Hugh Ward. 2005. "Inter Governmental Organizations and the Kantian Peace: A Network Perspective." Paper presented at the 3rd



- General Conference of the European Consortium for Political Research (ECPR) in Budapest.
- European Central Bank (ECB). 2006. "Tasks." Retrieved October 2006 (<http://www.ecb.eu/ecb/orga/tasks/html/index.en.html>).
- Finnemore, Martha. 1993. "International Organizations as Teachers of Norms: The United Nations Educational, Scientific, and Cultural Organization and Science Policy." *International Organization* 47:565–97.
- Fligstein, Neil and Alec Stone Sweet. 2002. "Constructing Politics and Markets: An Institutional Account of European Integration." *American Journal of Sociology* 107:1206–43.
- Gibler, Douglas M. and Meredith Reid Sarkees. 2004. "Measuring Alliances: The Correlates of War Formal Interstate Alliance Dataset, 1816–2000." *Journal of Peace Research* 41:211–22.
- Gleditsch, Kristian S. 2002. "Expanded Trade and GDP Data." *Journal of Conflict Resolution* 46:712–24.
- Gleditsch, Kristian S. and Michael D. Ward. 2006. "Diffusion and the International Context of Democratization." *International Organization* 60: 911–33.
- Guillén, Mauro F. 2001. "Is Globalization Civilizing, Destructive or Feeble? A Critique of Five Key Debates in the Social Science Literature." *Annual Review of Sociology* 27:235–60.
- Hafner-Burton, Emilie M. and Alexander H. Montgomery. 2009. "Globalization and the Social Power Politics of International Economic Networks." Pp. 23–42 in *Networked Politics: Agency, Power, and Governance*, edited by M. Kahler. Ithaca, NY: Cornell University Press.
- Hafner-Burton, Emilie M. and K. Tsutsui. 2005. "Human Rights in a Globalizing World: The Paradox of Empty Promises." *American Journal of Sociology* 110:1373–411.
- Henisz, Witold J., Bennett A. Zelner, and Mauro F. Guillén. 2005. "The Worldwide Diffusion of Market-Oriented Infrastructure Reform, 1977–1999." *American Sociological Review* 70:871–97.
- Heston, Alan, Robert Summers, and Bettina Aten. 2006. "Penn World Table Version 6.2." CIC at UPenn. Retrieved October 2008 (<http://pwt.econ.upenn.edu/>).
- Homans, George Caspar. 1950. *The Human Group*. New York: Harcourt, Brace & World.
- Hughes, Melanie M., Lindsey Peterson, Jill Ann Harrison, and Pamela Paxton. 2009. "Power and Relation in the World Polity: The INGO Network Country Score, 1978–1998." *Social Forces* 87:1711–42.
- Ingram, Paul, Jeffrey Robinson, and Marc L. Busch. 2005. "The Intergovernmental Network of World Trade: IGO Connectedness, Governance, and Embeddedness." *American Journal of Sociology* 111:824–58.
- Lee, Chang Kil and David Strang. 2006. "The International Diffusion of Public-Sector Downsizing: Network Emulation and Theory-Driven Learning." *International Organization* 60:883–910.
- Mandelbaum, Michael. 2007. *Democracy's Good Name: The Rise and Risks of the World's Most Popular Form of Government*. New York: PublicAffairs.
- Mansfield, Edward D. and Jon Pevehouse. 2006. *Democratization and the Varieties of International Organizations*. Conference on The New Science of International Organizations, University of Pennsylvania.
- Marshall, Monty G. and Keith Jagers. 2005. "Polity IV Project: Political Regime Characteristics and Transitions, 1800–2003." Retrieved October 2008 (<http://www.cidcm.umd.edu/inscr/polity/>).
- Marx, Karl. [1843] 1978. "Contribution to the Critique of Hegel's Philosophy of Right." Pp. 16–25 in *The Marx-Engels Reader*, edited by R. C. Tucker. New York: Norton.
- Meyer, John W., John Boli, George M. Thomas, and Francisco O. Ramirez. 1997. "World Society and the Nation-State." *American Journal of Sociology* 103:144–81.
- Meyer, John W. and Brian Rowan. 1977. "Institutionalized Organizations: Formal Structure as Myth and Ceremony." *American Journal of Sociology* 83:340–63.
- Mukherjee, Bumba and David Andrew Singer. 2007. "Diffusion or the IMF: Explaining the Politics of Liberalization." Working Paper, University of Notre Dame.
- Niger Basin Authority (NBA). 2004. "Goals." Retrieved January 2006 (<http://www.abn.ne/webeng/goal.htm>).
- Nye, Joseph S. 1991. *Bound to Lead: The Changing Nature of American Power*. New York: Basic Books.
- Pevehouse, Jon C. 2005. *Democracy from Above: Regional Organizations and Democratization*. Cambridge, UK: Cambridge University Press.
- Pevehouse, Jon, Timothy Nordstrom, and Kevin Warnke. 2004. "Intergovernmental Organizations, 1815–2000: A New Correlates of War Data Set." The Correlates of War Project. Retrieved October 2008 (<http://www.correlatesofwar.org/>).
- Pevehouse, Jon and Bruce Russett. 2006. "Democratic International Governmental Organizations Promote Peace." *International Organization* 60:969–1000.
- Polillo, Simone and Mauro F. Guillén. 2005. "Globalization Pressures and the State: The Worldwide Spread of Central Bank Independence." *American Journal of Sociology* 110:1764–804.
- Rogers, Everett M. 2003. *Diffusion of Innovations*, 5th ed. New York: Free Press.
- Russett, Bruce M. and John R. Oneal. 2001. *Triangulating Peace: Democracy, Interdependence,*

- and *International Organizations*. New York: W. W. Norton & Company.
- Selznick, Philip. 1957. *Leadership in Administration*. New York: Harper & Row.
- Schofer, Evan and Ann Hironaka. 2005. "The Effects of World Society on Environmental Protection Outcomes." *Social Forces* 84:25–47.
- Schofer, Evan and John W. Meyer. 2006. "The World-Wide Expansion of Higher Education in the Twentieth Century." *American Sociological Review* 70:898–920.
- Simmons, Beth A., Frank Dobbin, and Geoffrey Garrett. 2006. "Introduction: The International Diffusion of Liberalism." *International Organization* 60:781–810.
- Singer, J. David, Stuart Bremer, and John Stuckey. 1972. "Capability Distribution, Uncertainty, and Major Power War, 1820–1965." Pp. 19–48 in *Peace, War, and Numbers*, edited by B. Russett. Beverly Hills, CA: Sage.
- Tilly, Charles. 2007. *Democracy*. New York: Cambridge University Press.
- United Nations Conference on Trade and Development (UNCTAD). 2008. "FDI Flows and Stocks." Retrieved October 2008 (<http://stats.unctad.org/FDI/>).
- United Nations Statistics Division (UNSD). 2006. "Standard Country and Area Codes Classifications: Regions." Retrieved October 2008 (<http://unstats.un.org/>).
- Wejnert, Barbara. 2005. "Diffusion, Development, and Democracy, 1800–1999." *American Sociological Review* 70:53–81.
- White, Halbert. 1980. "A Heteroskedasticity-Consistent Covariance Matrix Estimator and a Direct Test for Heteroskedasticity." *Econometrica* 48:817–38.

**Magnus Thor Torfason** is a doctoral candidate at Columbia Business School. His research interests include the interaction between social norms and network structure, and normative diffusion at both institutional and intra-organizational levels. His current research projects examine the effect of network structure on antinormative behavior in an online environment; the role of networks in the collapse of the Icelandic financial system; and the impact of inter-state network ties on the population dynamics of international organization.

**Paul Ingram** is the Kravis Professor of Business at the Columbia Business School, and Faculty Director of the Columbia Senior Executive Program. His PhD is from Cornell University. His current research projects examine contention over Walmart's expansion; the influence of social network structure on wellbeing; and the institutional determinants of foreign direct investment.