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World-system position and democracy, 1972–2008

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Abstract

Global levels of democracy are higher than ever before, and democratic principles are now institutionalized as a world cultural norm. Nevertheless, a number of countries continue to feature governing systems that restrict political rights. Against this backdrop, I revisit traditional claims by world-system theory regarding the impact of the core/periphery hierarchy on national political systems. In doing so, I draw attention to the uneven character of democratic growth across world-system zones. Using an updated trichotomous measure of world-system position, and drawing from Freedom House and Polity IV ratings of democracy, I construct an annual time-series dataset producing a maximum of 5445 observations across 161 countries during the 1972–2008 period. Employing a series of random-effects tobit models with year-by-covariate interaction terms, I compare democratic growth among nations in the core, semiperiphery, and periphery. The results indicate significant gaps in democracy between core and non-core nations that are not dissipating over time, and that are perhaps growing slightly larger. In a series of robustness checks, I find that using an alternative measure of world-system position, an alternative measure of democracy, and an alternative estimation strategy produce similar results. In sum, despite the global spread of democracy, world-system boundaries remain fundamental in hindering cross-national convergence.

Keywords

Democracy, development, diffusion, globalization, world-system

Introduction

Less developed countries now resemble affluent nations across a range of policy domains and institutional characteristics. Scholars note the global diffusion of various Western models, including science and education (Schofer, 2003; Schofer and Meyer, 2005), as well as human rights (Pegram, 2010) and environmentalism (Longhofer and Schofer, 2010). Perhaps the most prominent trend among these, however, is the worldwide spread of democratic models (Torfason and Ingram, 2010). While only 5 percent of the world's countries were democratic in 1816, democracies outnumbered autocracies by the year 2000 (Gleditsch and Ward, 2006). During this time, 'the Western conception of democracy became a dominant global ideology' (Torfason and Ingram,

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2010: 359) and an 'emerging international norm' (O'Loughlin et al., 1998: 546). Accordingly, despite substantial differences in cultural background and socio-economic development, a large number of countries now formally embrace democratic principles.

In particular, a recent surge in democratization beginning in the 1970s dramatically increased the proportion of democratic governments in the world (Schwartzman, 1998; Simensen, 1999). As much of the world transitioned rapidly during this time, macro-comparative research began to highlight the importance of spatial proximity and network dynamics to help explain this impressive democratic growth (Gleditsch and Ward, 2006; Torfason and Ingram, 2010; Wejnert, 2005). Conversely, more critical theories that draw attention to economic dependency or world-system dynamics remain relatively quiet. Indeed, while world-system theory predicts significant gaps in democracy across world-system zones, Wejnert's (2005) recent study reports that these disparities significantly narrowed over time. In an age of political convergence, are world-system boundaries no longer relevant?

In this study, I bring new evidence to bear on this question. In a previous study, Clark and Beckfield (2009) construct a new trichotomous measure of world-system position, based on a country's structural location in the international trade network during the 1980–1990 period. Replicating their original methodology for the 1990–2000 period, I update this trade-based measure to incorporate new countries emerging during the post-Cold War era. Next, drawing from an annual time-series dataset producing a maximum of 5445 observations across 161 countries covering the 1972–2008 period, I employ random-effects tobit models with year-by-covariate interaction terms to examine democratic growth among the core, semiperiphery, and periphery. I first replicate Wejnert's (2005) earlier finding with an orthodox measure of world-system position used in her study. Similar to Wejnert (2005), I find that the semiperiphery and periphery politically converged with the core during the sample period. Conversely, when using the updated trade-based measure of world-system position, I find that the democracy gap between core and non-core nations did not narrow at all, and perhaps grew slightly larger.

In a series of robustness checks, I consider several alternative specifications. First, I examine an alternative measure of world-system position (Mahutga and Smith, 2011) that covers a smaller number of countries, but is valuable for disaggregating the top-tier of the world-system into two groups (an advanced core and a dynamic set of core contenders). Second, I examine an alternative measure of democracy (Bollen's Liberal Democracy Series) that covers a shorter period of time, but that minimizes measurement bias in the dependent variable. Third, I consider an alternative estimation strategy (fixed-effects logit models) that dichotomizes the dependent variable, but that allows me to examine longitudinal change with censored data. As I report below, these alternative specifications produce results that are consistent with the main findings. In sum, I conclude that world-system theory remains a relevant theoretical approach for understanding political change in the global era.

Explaining democracy

In this section, I review past research that directly and indirectly implicates world-system dynamics in understanding cross-national variation in democratic growth. I divide my review of the relevant literature into two sections. First, I consider the more conventional explanations of democratization (e.g. economic development, income inequality, cross-national diffusion) that may act as mediating factors linking a country's world-system position to its level of democracy. Second, I consider more fundamental explanations that directly link world-system position to political development. In sum, I argue that there is good reason to revisit world-system claims regarding the impact of the core/periphery hierarchy on national political systems.

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Internal and external dynamics

Arguably, the global spread of democracy could be explained in purely functional terms, as democratic principles seem appealing to a broad collection of interests. 'An increasingly democratic world appears to offer better prospects for peace, human rights, geopolitical stability, and increased trade and economic development' (O'Loughlin et al., 1998: 546). Nevertheless, the spatial and temporal clustering of democratic transitions (O'Loughlin et al., 1998; Schwartzman, 1998; Wejnert, 2005) suggests that other factors are at play. Scholars generally converge around two sets of explanations for understanding democratic growth, emphasizing either a) internal dynamics involving socio-economic development and income distribution, or b) external dynamics involving cross-national diffusion via socialization, exchange, and proximity.

I posit that a country's world-system position may influence democratic growth, at least in part, through these internal and external dynamics. Given that core nations feature higher levels of economic development and industrial sophistication (Mahutga and Smith, 2011), lower levels of income inequality (Mahutga et al., 2011), and greater integration in a variety of cross-national networks (e.g. economic, political, and cultural) (see Kick, 1987; Snyder and Kick, 1979; Van Rossem, 1996), core nations should experience greater democratic growth than semiperipheral and peripheral nations via these mediating factors. In fact, core nations not only feature higher levels of economic development, but world-system position significantly affects subsequent economic *growth* (Clark, 2010; Clark and Beckfield, 2009), thereby causing core and peripheral economies to diverge even further apart from one another. Thus, core nations not only enjoy the internal characteristics that make them better equipped to initiate and/or sustain democratic transitions, but they are also embedded in cross-national networks that expose them more heavily to democratic models. In this way, a country's status or position in the world-system functions as a composite measure that holistically captures these internal and external dynamics. But how do these dynamics influence democratization?

Research that examines internal mechanisms typically focus on the role that both socio-economic development and differentiation may play in promoting or hindering democratic growth. Dahl's (1971) model of democracy (or 'polyarchy') is largely captured by these dual factors, proposing that the emergence of democracy is made more likely by several conditions, including 1) high economic development and the prevalence of certain cultural values (e.g. belief in democratic principles, spirit of trust and compromise), as well as 2) low levels of economic inequality and ethnic/religious pluralism.

However, explanations related to socio-economic development typically garner more attention. Most notably, Lipset (1959) proposed that economic growth, industrialization, urbanization, and advances in literacy or schooling can serve as important precursors for the emergence of a stable democracy. From this perspective, economic modernization is thought to generate a diverse set of powerful groups that eventually make political demands. In particular, socio-economic development produces a large and educated middle class, oftentimes densely populated in urban centers, that is capable of organizing and challenging elites. In addition, economic prosperity ushers in a set of 'post-materialist' values that are conducive to the formation of democratic principles, such as self-expression, individual autonomy, political participation, tolerance, and trust (Inglehart, 1997; Inglehart and Welzel, 2005).

Development-based explanations attained wide appeal over the years, as studies consistently found support for Lipset's (1959) idea that socio-economic development promotes (or is associated with) democracy (Barro, 1999; Bollen, 1979, 1983, 1995; Bollen and Jackman, 1985; Burkhart, 1997; Burkhart and Lewis-Beck, 1994; Crenshaw, 1995; Cutright, 1963; Cutright and Wiley, 1969; Diamond, 1992; Gonick and Rosh, 1988; Li and Reuveny, 2003; Pevehouse, 2002b; Russett, 1965). By contrast, others question the causal efficacy of development, arguing that it is a

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necessary, but not sufficient, condition for democratization (Rueschemeyer et al., 1992), or that democracies are simply more likely to survive in wealthier nations, but that they do not emerge as a result of economic growth (Przeworski et al., 2000). Moreover, by some accounts, economic modernization does not guarantee democracy, but instead depends on the strength of various class groups (Moore, 1966; Stephens, 1989) during the shift to industrial production. In short, while socio-economic development is widely viewed as an important factor in understanding democratic growth, others are quick to nuance this relationship or stress other internal factors.

Indeed, a number of scholars suggest that a country's level of stratification also shapes its political development. Theoretically, an unequal distribution of income hinders democratic growth because elites must resort to repressive measures to maintain social order. Moreover, in highly unequal societies, non-elites lack the economic resources to effectively engage in political action (e.g. organize the citizenry, communicate effectively through mass media). Surprisingly, though, previous studies examining the relationship between democracy and income inequality produced mixed results. A number of studies showed that income inequality negatively affects democratic growth (Barro, 1999; Boix, 2003; Li and Reuveny, 2003; Muller, 1995a, 1995b), or that democracy and income inequality negatively affect one another (Muller, 1988; Rubinson and Quinlan, 1977). However, most of this work does not consider much of the post-1990 era when levels of inequality and democracy rose together throughout much of the world, especially in Eastern Europe. Moreover, other work finds that income inequality exerts no significant impact on democracy (Bollen and Jackman, 1995; Crenshaw, 1995), or that there is no significant relationship between the two measures in either direction (Bollen and Jackman, 1985). Ultimately, though, there is reason to suspect that domestic characteristics, such as socio-economic development and income inequality, may mediate much of the relationship between a country's world-system position and its democratic growth.

Another way in which world-system position may indirectly impact political development is through external dynamics. Given that core nations are more deeply integrated in international networks than non-core states, measures that capture various forms of cross-national diffusion may mediate some of the effect of world-system position. Studies that incorporate external dynamics are becoming quite popular. In fact, when taking into account the cross-national diffusion of democratic models, the effects of social-economic development can attenuate substantially (Wejnert, 2005). Diffusion-based arguments emphasize the importance of a range of factors, including geographic proximity, cross-national communication, trade relations, international organization ties, colonial history, and hegemonic influence.

In one line of research, scholars examine whether cross-national economic exchange impacts democratization. Theoretically, trade and foreign investment promote democracy by a) strengthening domestic institutions that foster democratic growth, such as impartial courts and bureaucracies that support the rule of law, transparency, property rights, as well as civil and human rights, and b) exposing countries to democratic partners and other actors in the international community, thereby enhancing the flow of information and ideas that emanate from global civil society (Li and Reuveny, 2003). However, previous work examining the impact of trade and capital flows on democracy produced inconsistent results, reporting effects that are positive, mixed, or conditional (Balaev, 2009; Li and Reuveny, 2003; Rudra, 2005).

A more popular idea is that democratic principles spread worldwide through international governmental organizations (IGOs). Research covering the previous two centuries shows that countries tied to democratic partners through IGO memberships are more likely themselves to democratize (Torfason and Ingram, 2010; Wejnert, 2005). In some cases, international organizations positively affect the transition to, and longevity of, new democracies by pressuring regime leaders to institute political reforms, which, in turn, enhances their legitimacy (Pevehouse, 2002a,

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2002b; Simensen, 1999). Indeed, IGOs are capable of enforcing democratic norms among its member states via sanctions, diplomacy, mediation, as well as shaming (Donno, 2010). However, others argue that the IGO network primarily diffuses models through socialization. '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' (Torfason and Ingram, 2010: 372). Accordingly, there is evidence that even international nongovernmental organizations (INGOs) are associated with democratic growth (Li and Reuveny, 2003).

Other forms of diffusion may not mediate much of the effect of world-system position on democracy, but may be operative nonetheless. For example, one dynamic known for spreading democracy is diffusion via geographic proximity. By the 1990s, the world had dichotomized into two regions consisting of a democratic zone (the Americas, Europe, and Australasia) and an autocratic zone (Africa, the Middle East, and Asia). Moreover, these zones conform to spatial clustering patterns that persist even when controlling for economic development (O'Loughlin et al., 1998). Regional patterns suggest that democratic (and autocratic) transitions depend, at least in part, on what happens in neighboring states, as countries tend to emulate their neighbors (Gleditsch and Ward, 2006). Theoretically, spatial proximity may be an important mechanism of diffusion given that neighboring countries feature a greater number of linkages than more distant countries (Wejnert, 2005). Spatial clustering of democratic transitions could also be explained by 'tipping effects', whereby the presence of one transition increases the likelihood of subsequent transitions. Indeed, the costs of *not* transitioning to democracy (e.g. receiving aid, establishing trade relations) may become steeper as more countries within the region become democratic (Gleditsch and Ward, 2006). Not surprisingly, a number of studies find empirical evidence of spatial patterns in the spread of democratic models (Brinks and Coppedge, 2006; Gleditsch and Ward, 2006; Li and Reuveny, 2003; Pevehouse, 2002a; Torfason and Ingram, 2010; Wejnert, 2005).

Collectively, the internal and external dynamics reviewed here suggest a wealth of factors that potentially mediate the relationship between world-system dynamics and democratic growth. However, net of a country's level of economic development or exposure to democratic models, does a country's position in the world-system directly impact its political development? In the next section, I review world-system theory in relation to democratic growth.

Structural location in the world-system

Although a number of theoretical perspectives play a role in explaining the global spread of democracy, critical macro-comparative approaches tend to contribute less to this narrative. Dependency and world-system theories remain popular for examining economic development (Mahutga and Smith, 2011) and income inequality (Lee et al., 2007), but scholars less actively adopt these frameworks for investigating the contours of democracy's global spread. In this section, I elaborate a more direct link between a country's position in the world-system and its level of democracy, developing the following arguments: 1) an unequal distribution of political power in the periphery helps sustain exploitive core/periphery relations, 2) when democratic transitions do occur in the periphery, they are often limited or cosmetic in nature, and 3) the classic democratizing effects of socio-economic development tend to be distorted in the periphery.

According to world-system theory, countries occupy one of three zones within the world economy: core, semiperiphery, and periphery. Core states refer to the set of wealthy and powerful

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countries that feature dense economic ties with other nations. Peripheral states, by contrast, refer to a larger collection of poor and isolated nations, whose exchange relations are concentrated with the core. Semiperipheral states, meanwhile, occupy an intermediate position (Clark and Beckfield, 2009). A world-system approach suggests that core/periphery relations in the world economy may help explain cross-national variation in democratic growth and why non-democratic regimes persist in some parts of the world.

First, core/periphery relations are thought to promote autocratic regimes in the non-core (Bollen and Jackman, 1985). Economic production is more profitable for foreign investors entering the non-core when labor conditions there are poor and political power is concentrated among local elites. Thus, peripheral nations rely on attracting foreign investment by supplying cheap and docile labor to core investors who are seeking to reduce their production costs (London and Ross, 1995; Shandra et al., 2003). Consequently, maintaining an attractive labor pool encourages repressive labor policies and/or the lax enforcement of existing labor standards, which may require significant repression of political rights and civil liberties. Accordingly, recent work shows that trade dependence with a hegemonic partner negatively affects democratic growth (Balaev, 2009).

Second, although democratic models diffuse widely, the form they take and/or the extent to which they are actually implemented may vary considerably across countries. Democratic systems that are installed within non-core nations may be 'loosely coupled' from the Western models they intend to mimic. Among developing countries, political reforms sometimes produce 'low-intensity democracies' that feature minor or cosmetic change to the existing political structure (O'Loughlin et al., 1998). Some scholars emphasize the importance of American hegemonic influence in promoting democratic models via foreign aid packages (e.g. Scott and Steele, 2011). However, Robinson (1996: 49) suggests that the United States actually promotes 'a system in which a small group actually rules and mass participation in decision-making is confined to leadership choice in elections carefully managed by competing elites'. Such electoral systems, Robinson explains, represent little more than a stable form of social control intended to suppress mass political movements in the developing world that seek to install popular democracy. In this way, elites in less developed countries attempt to 'lock-in' a limited form of democracy.

Third, non-core status in the world-system may also disrupt or distort *the effects of development* on democratization. As Bollen (1983: 470) explains, 'the core's support of elites in the periphery and semiperiphery is thought to hinder the processes associated with socioeconomic development that contribute to democratic forms of government'. While economic development traditionally produces groups that politically challenge elites (e.g. the bourgeoisie, skilled workers, organized labor), these groups do not perform the same function in the non-core because they are relatively weak vis-à-vis core-supported elites. Indeed, past research shows that occupying a non-core position reduces the positive effect of economic development on democracy (Burkhart, 1997; Burkhart and Lewis-Beck, 1994). Thus, not only do core nations benefit from higher levels of socio-economic development, but the impact of development may be greater there.

Finally, a country's structural location in the world-system captures a range of 'unobservable' processes (Mahutga et al., 2011) that may involve complex interactions among variables or that incorporate core/periphery mechanisms operating at a systemic level. For example, core nations are thought to democratize more readily than the non-core so that the class interests of non-elites in the core will diverge from those of non-elites located in the periphery and semiperiphery, thereby preventing the formation of a unified international class consciousness (Bollen, 1983). However, such dynamics are difficult to detect and may be invisible to observers.

While the preceding arguments paint an image of uneven political development, it is also true that democratic transitions have occurred throughout most regions of the world by now (Schwartzman,

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1998; Wejnert, 2005). Scholars talk of a 'global rise' in democracy (Torfason and Ingram, 2010), which spread over the last two centuries in a series of 'waves' (Huntington, 1991). To be sure, the frequent disregard of women's suffrage by scholars distorts the timing of democratic transitions and calls into question the standard narrative (Paxton, 2000). More generally, though, the identification of democratic waves is compatible with a world-system approach that examines how an international political structure formed and evolved over time (Modelski, 2000, 2005).

Moreover, the most recent democratic 'wave' beginning in the 1970s can be interpreted from a world-system perspective as occurring in the stagnant B-phase of the Kondratiev wave, whereby political reforms arose primarily among emerging nations (Schwartzman, 1998). This B-phase is linked to the ascendance of the 'middle strata' in international trade (Kim and Shin, 2002), where production activities were relocated from traditional core nations. 'These semiperiphery nations, by virtue of global economic convergence, have lost their quality of ''semiperipheralness'' and taken on some qualities of the core, such as an enlarged working class and an industrial bourgeoisie that can contest the power of the landed aristocracy. Growth of these new sectors reduced the level of economic ''disarticulation,'' thereby removing the obstructions to democracy' (Schwartzman, 1998: 176). Thus, democratization since the 1970s may be linked with upward mobility in the world-system, whereby democratic transitions occurred predominantly in a number of emerging nations that began to exhibit more core-like characteristics. In sum, there is reason to suspect that world-system dynamics continue to shape cross-national variation in democratic growth even in an era of rapid political development.

Nevertheless, past research provides limited support for world-system expectations. Bollen's (1983) seminal piece demonstrates a positive association between a country's world-system position and its level of democracy, a finding replicated in subsequent studies (Bollen and Jackman, 1985; Gonick and Rosh, 1988). However, others critique these results on the grounds that world-system position is simply a crude proxy for economic development (Weede and Kummer, 1983). Other research shows that measures of world-system position and economic dependency are unrelated to levels of democracy (Gasiorowski, 1988). Moreover, others find that world-system position is not a significant or robust predictor of democratic *growth* (Crenshaw, 1995; Muller, 1995a; Paxton, 2002). More recently, Wejnert (2005) finds that core countries experienced higher levels of democracy between 1800 and 1999, but that peripheral countries experienced faster democratic growth during this time, a finding contrary to world-system expectations. 'Being a peripheral country can be a ''benefit'' – the rate of those countries' democratization accelerates faster than in other countries' (Wejnert, 2005: 67). Overall, the evidence linking world-system position and democracy is mixed (Wejnert, 2005), and its impact on democratic change is notably absent.

However, previous studies testing for the effects of world-system position typically rely on some version of Snyder and Kick's (1979) orthodox measure, oftentimes with revisions from Bollen (1983) and/or additions from Bollen and Appold (1993). As Clark and Beckfield (2009) explain, the continued use of Snyder and Kick's measure is problematic due, in part, to the measure's age and informal construction. In particular, the international trade network is now considerably more dense than was the case in prior decades (Kim and Shin, 2002), featuring substantial world-system mobility (Clark, 2010; Mahutga and Smith, 2011; Smith and White, 1992), suggesting that the use of a more recent and/or dynamic measure of world-system position may uncover the importance of the core/periphery hierarchy for understanding democratic growth since the 1970s.

In response to these concerns, Clark and Beckfield (2009) construct a new trichotomous measure of world-system position using data from the international trade network covering the 1980–1990 period. In their study, Clark and Beckfield (2009) find that their new measure outperforms the orthodox measure in predicting cross-national variation in economic growth. In this study,

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I replicate Clark and Beckfield's original methodology for the 1990–2000 period and update their measure to incorporate new countries that emerged during the post-Cold War era. I then 'blend' these two measures together to form a dynamic trade-based indicator of world-system position that I use to predict democratic growth during the sample period. In the next section, I outline details from my replication, describe the other variables used in the analyses, and review my estimation strategy.

Methods

Independent variables

World-system position (orthodox version). I first replicate Wejnert's (2005) finding of political convergence across world-system zones using the 'orthodox' version of world-system position, consisting of Snyder and Kick's (1979) original measure with revisions from Bollen (1983) and additions from Bollen and Appold (1993). I then compare the performance of this measure to that of the more recent trade-based version.

World-system position (trade version). Following prior network studies (Clark and Beckfield, 2009; Mahutga, 2006; Mahutga and Smith, 2011; Nemeth and Smith, 1985; Smith and White, 1992), I measure a country's world-system position based on its structural location in the world trade network. Trade data come from the *Direction of Trade Statistics* (International Monetary Fund, 2004) to cover the years 1990–2000 for 161 countries. When constructing network data on trade, analysts can rely on either export data (trade flows *from* the reporting country to its partner) or import data (trade flows *to* the reporting country from its partner). Because both reports consider trade flows to and from each country pair, only one is necessary to fill the entire network. I use the import version because it is considered more accurate than the export version (see Kim and Shin, 2002). I then dichotomize the raw data with a cut-off of $1 million (US), the lowest non-zero value that the IMF reports, in order to calculate inter-block densities (see below). Thus, all network cells representing imports from country *j* to country *i*, whose average annual value between 1990 and 2000 is equal to or greater than $1 million (US), are coded as one, and zero otherwise.

Using these network data, I then replicated Clark and Beckfield's original methodology (see their study for a more detailed description). All procedures were performed in UCINET 6 (Borgatti et al., 2002). I first fit a continuous core/periphery model on the data to identify how 'core-like' each actor is. I then permuted the rows and columns of the network based on these continuous coreness scores, with the most core-like actor occupying the top row and left-most column, and the least core-like actor occupying the bottom row and right-most column. Thus, the order of the countries is fixed, with only the cut-lines representing the block boundaries to be determined. I then calculated a series of intra-block densities for the core, semiperiphery, and periphery until the three blocks, collectively, most closely approached their respective ideal block densities.[1] These ideal block densities are 1) a 'one-block' intra-core region, whereby all core countries are connected to one another, 2) a 'zero-block' intra-periphery region, whereby all peripheral countries are isolated from one another, and 3) a '.412-block' intra-semiperiphery region, whereby trade relations among the semiperiphery take on the density value of the entire network (i.e. .412), falling in between an integrated one-block and an isolated zero-block.[2] As Clark and Beckfield (2009: 13) explain, block classifications 'are determined by what combination of actors simultaneously maximize the density of intra-core ties, minimize the density of intra-periphery ties, and match the network's overall density with the intra-semiperiphery block, such that any changes made to the final partitioning would, on the whole, move the affected groups too far away from their respective idealized values'.

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The resulting partition for the 1990–2000 world trade network maximizes the density of the intra-core block (.990) with 47 states, minimizes the density of the intra-periphery block (.047) with 76 states, and creates a 38-country intra-semiperiphery block whose trade density (.411) approaches the total density of the entire network (.412). This is comparable to Clark and Beckfield's partition of the 1980s trade network, which produced an intra-core density of .979, an intra-peripheral density of .049, and an intra-semiperipheral density of .379 that arrives close to the total density of the entire network (.380) (see Appendix A for trade-based classifications for all states during the 1980–1990 period and the 1990–2000 period).

Similar to Clark and Beckfield's 1980s measure, the 1990s measure features an expanded core, consisting of 16 'orthodox core' countries (North America, much of Europe, Japan, and Australia) and 31 'new core' countries from every region of the world, including the West (Finland, Ireland, New Zealand, Portugal, and Spain), Latin America (Argentina, Brazil, Chile, and Mexico), Africa (South Africa), the Middle East (Egypt, Iran, Israel, Pakistan, Saudi Arabia, Turkey, and United Arab Emirates), East Asia (China, India, Indonesia, Malaysia, Singapore, South Korea, and Thailand), and Eastern Europe (Bulgaria, Czech Republic, Hungary, Poland, Romania, Russia, and Ukraine).

As a point of emphasis, most democratic growth within the core will necessarily be driven by countries comprising this latter group of upwardly mobile states. The average Freedom House rating across the sample period for 'orthodox core' countries is 6.84 (out of seven), with 74.6 percent of its country-year observations given the maximum rating, and only 0.35 percent given a rating less than six. By contrast, the average Freedom House rating for the 'new core' is only 4.41, with only 13.4 percent of its country-year observations given the maximum rating, and 66.4 percent given a rating less than six. Thus, consistent with the idea that democratic growth was a B-phase phenomenon in recent decades, most democratic transitions during the sample period will necessarily come from the emerging economies of the 'new core'.

Also, it is important to note that the world-system measure presented here pertains specifically to a country's level of network integration in international trade, which is not necessarily a proxy for core/periphery hierarchies in other realms. As Clark and Beckfield (2009) point out, countries that are more core-like in one respect may be less so in another. 'We maintain that just as all states exhibit a relative mix of core and peripheral activities within their borders, all states feature role sets that contain a relative mix of core and peripheral positions. While some states may be classified as core in the world economy, they may be relatively peripheral in the world polity. Other states may be highly integrated in world trade, but may lack military power' (Clark and Beckfield, 2009: 18). Thus, alternative methodologies that emphasize different relations will likely produce distinct classifications. However, the philosophical approach of the current methodology is consistent with previous network studies in that a country's status in the world-system is (at least in part) a function of its structural position in international trade (Lloyd et al., 2009). Much of this work is influenced by Galtung's (1971) center-periphery model, whereby core nations are defined as autonomous via their dense relations with both core and peripheral partners, while peripheral nations are defined as dependent via their concentrated ties with the core and relative isolation from one another.

In the subsequent analyses, I use Clark and Beckfield's original 1980s measure to represent a country's world-system position during the first half of the sample period (1972–1989), while I use the updated 1990s version to represent a country's world-system position during the second half of the sample period (1990–2008). In this way, the trade-based version of world-system position I use in the analyses is both updated (relative to the orthodox version) and dynamic (changing slightly across time).

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Dependent variable

Democracy. Democracy ratings come from *Freedom in the World* (Freedom House, 2010) and the *Polity IV Project* (Marshall and Jaggers, 2010), which represent the two 'most commonly used indicators of democracy' (Coppedge et al., 2008: 645) and are highly correlated with one another in my dataset during the sample period ($r = .896$). Freedom House's annual survey measures freedom according to two broad categories: political rights and civil liberties. Political rights take into consideration the electoral process (e.g. free and fair elections), political pluralism and participation (e.g. inclusiveness in the political process), and the functioning of government (e.g. corruption and transparency). Civil liberties take into account freedom of expression (e.g. press freedom, academic freedom, religious freedom), organizational rights (e.g. freedom of assembly, labor rights), rule of law (independent judiciary, civilian control over police, political repression), and individual rights (private property rights, gender equity, equal economic opportunity). Each country is rated on a seven-point scale in both categories, with one representing the most free, and seven representing the least free. I calculated each country's average score across both categories and inverted this value so that higher numbers represent greater levels of democracy, thereby creating a 13-point scale, ranging from one (low) to seven (high). Polity IV ratings cover a wider numerical range, from -10 (low) to 10 (high). However, they are available for fewer countries, and they reflect a more narrow range of criteria (political participation, executive recruitment, and constraints on executive authority). Nevertheless, I report results for both dependent variables below.

Control variables

Several controls are logged to reduce skew, as noted below.

Year. In all models, I estimate the effect of time (1972 = 1; 2008 = 37) to control for the steady rise in democracy levels across the sample period. More importantly, in order to estimate the longitudinal effects of world-system position, I create a set of year-by-covariate interactions, where the main effect of world-system position indicates the magnitude of the initial democracy gap, and the interaction term indicates the magnitude of departure from this gap. In this way, I can estimate whether world-system position is an effective predictor of a country's democratic level *and* growth over time. In all models, year is standardized (mean = 0) so that the main effect of world-system position refers to the middle of the sample period.

Region. I also consider the effect of world-system position on democratic growth net of regional controls. In particular, I am interested in whether peripheral status is a proxy for Africa and/or whether democratic growth in one of the world-system zones is driven by the dramatic change in Eastern Europe during the sample period. I constructed six regional dummy variables: 1) Europe and the West (the excluded reference category), 2) Latin America and the Caribbean, 3) Central and Sub-Saharan Africa, 4) North Africa and the Middle East, 5) East Asia and the Pacific, and 6) Eastern Europe and Central Asia.

I also include two substantive controls that broadly capture a country's internal dynamics:

GDP PC (log). I measure economic development with each country's gross domestic product per capita (GDP PC) in constant 2000 US dollars. While GDP PC data based on purchasing power parity are popular in cross-national research, this measure is not available for the entire sample period, with coverage beginning in 1980. Fortunately, the official exchange rate version that I use and the

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purchasing power parity version are very highly correlated during the 1980–2008 period ($r = .931$), so the use of the former should not be considered problematic. Data come from the *World Development Indicators* (International Bank for Reconstruction and Development, 2010).

Gini (log). To measure a country's level of income inequality, I rely on a new dataset designed to enhance the comparability of observations found in the United Nations University-World Institute for Development Economics Research (UNU-WIDER) dataset, version 2.0c (2008). The Standardized World Income Inequality Database (SWIID) reports comparable Gini coefficients (I use estimates based on net income) for a large cross-national sample covering the previous five decades (Solt, 2009). The database maximizes the comparability of UNU-WIDER observations that are based on full population coverage by using Gini ratios generated through the pairings of observations categorized by reference unit code (household per capita, household adult equivalent, household without adjustment, employee, and person) and income definition (net income, gross income, expenditures, and unidentified), using inequality data from the Luxembourg Income Study to serve as a baseline. Because income inequality levels remain quite stable over time (Korzeniewicz and Moran, 2009), I fill missing values for each country with that country's nearest observed estimate. In those cases where the missing value is equidistant from prior and latter estimates, I selected the more recent estimate.

I capture external dynamics for each country with a variety of controls, beginning with several measures of cultural and economic globalization:

IGO memberships (log). IGOs refer to the number of international governmental organization membership ties belonging to each country. Data come from the *Correlates of War* project (Pevehouse et al., 2004).

Trade openness (log). Trade openness refers to the sum of exports and imports of goods and services, calculated as a share of GDP. Data come from the *World Development Indicators* (International Bank for Reconstruction and Development, 2010).

FDI inflows (log). FDI inflows refer to net inflows of foreign direct investment to acquire a lasting management interest (10% or more of voting stock) in a domestic enterprise, measured as a share of gross domestic product. Inflows represent the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments. Data come from the *World Development Indicators* (International Bank for Reconstruction and Development, 2010).

I also examine cross-national diffusion via spatial dynamics, colonial ties, and historical events:

Regional average. I capture spatial dynamics with each country's regional average Freedom House (or Polity IV) rating. The measure is standardized within regions (mean = 0) so that the measure focuses on longitudinal variation and ignores all cross-regional variation. Higher scores indicate countries that are located within regions that are democratizing rapidly.

Commonwealth member. Some work suggests that democratic models might diffuse through colonial linkages. Earlier studies found that former British colonies feature higher levels of democracy (Bollen and Jackman, 1985) and greater democratic growth (Bollen and Jackman, 1995; Muller, 1995a, 1995b), while more recent work examining the broader impact of colonial networks finds less support for this contention (Wejnert, 2005). I examine the influence of British colonialism and hegemony with a dummy variable indicating whether or not a country was part of the British

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Empire and member of the Commonwealth. I include former members of the Commonwealth that were part of the Empire (Ireland and Zimbabwe), but exclude current members that were not former British colonies (Mozambique and Rwanda). The following countries in the sample are coded as Commonwealth nations: Australia, Bahamas, Bangladesh, Barbados, Brunei, Cameroon, Canada, Cyprus, Fiji, Gambia, Ghana, Guyana, India, Ireland, Jamaica, Kenya, Malawi, Malaysia, Maldives, Malta, Mauritius, New Zealand, Nigeria, Pakistan, Papua New Guinea, Sierra Leone, Singapore, Solomon Islands, South Africa, Sri Lanka, Tanzania, Trinidad-Tobago, Uganda, United Kingdom, Zambia, and Zimbabwe.

Period (1989–1991). Following Wejnert (2005), I also control for historical events during the sample period. Specifically, democratic growth spikes during the communist collapse, suggesting the importance of isolating the effects of this unique phenomenon. Thus, I include a dummy variable to capture this period, coded as one during the years 1989–1991, and zero otherwise.

In separate diagnostics, I detected high levels of correlation among the following variables: year, regional average (all versions), and IGO memberships. Thus, I residualize each of the predictors by year to reduce collinearity in the models. I then calculated variance inflation factor (VIF) scores through OLS estimation for each of the models presented below. In all but one model, the maximum VIF score was below 10, suggesting that collinearity is not endemic in these analyses (Chatterjee et al., 2000). The one exception occurs during the Mahutga and Smith replication (Table 4, model 6), where the maximum VIF score is 10.15 (barely above the recommended cutoff).

Several of the control variables contain missing data, an issue which I address in two stages. First, I interpolate/extrapolate holes in the annual time-series data for GDP PC, IGOs, trade openness, and FDI inflows using a linear time trend. For all variables, the interpolation/extrapolation values only constitute 7.8 percent (GDP PC) to 11.2 percent (FDI inflows) of the total. Moreover, this procedure does not substantially alter the relationship between these variables and democracy (as measured by Freedom House), as the correlation coefficients between democracy and these variables do not increase or decrease by more than .032 as a result of the interpolation/extrapolation. Nevertheless, to ensure that this does not influence the results, I include a dummy variable in the models indicating whether or not a case is included due to interpolation/extrapolation.

I then impute the remaining missing data for GDP PC, Gini, trade openness, and FDI inflows using the surrounding values of the regional controls, GDP PC, Gini, IGOs, trade openness, and FDI inflows. Imputed values comprise a small portion of the total for each variable, ranging from 1.4 percent (trade openness) to 10.1 percent (Gini). Moreover, the imputation does not substantially alter the relationship between these variables and democracy (as measured by Freedom House), as the correlation coefficients between democracy and these variables do not increase or decrease by more than .040. Nevertheless, to ensure this procedure does not influence the results, I also include a dummy variable in the models indicating whether or not a case is included due to imputation.

Sample

The primary models featuring the trade-based version of world-system position in the Freedom House sample consist of 5445 observations across 161 countries during the 1972–2008 period. The pooled data are unbalanced with some states contributing more observations than others. However, countries contribute 33.8 observations on average during the sample period, and every country is present for at least three years. The secondary models featuring the trade-based version of world-system position in the Polity IV sample consist of 5124 observations across 154 countries during the 1972–2008 period. These data are also unbalanced, but countries contribute 33.3 observations on average during the sample period, and every country is present for at least three years.

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Estimation strategy

Democracy is a limited dependent variable, featuring a censored distribution in which more than 20 percent of the observations are clustered at either the lower or upper limit of the distribution. In my Freedom House sample of 5445 cases, 500 are left-censored at one (the minimum rating), and 768 are right-censored at seven (the maximum rating). In my Polity IV sample of 5124 cases, 143 are left-censored at -10 (the minimum rating), and 950 are right-censored at 10 (the maximum rating). Theoretically, we can imagine a variable, 'propensity to democratize', that would vary across all observations. For most cases, we can use the observed democracy rating as a measure of propensity. However, among those observations that are right-censored with a maximum rating (or left-censored with a minimum rating), we are unable to assess variation in propensity, even though some of these cases represent societies that democratized (or autocratized) more comprehensively and/or show greater (or lesser) support of democratic principles than other societies that likewise fully democratized (or autocratized).

For example, Freedom House's original scoring gives all states that earn a combined political rights score of 36 to 40 the highest rating, while giving those states that earn a combined political rights score of zero to five the lowest rating. This already censors variation to some degree. More importantly, though, even among those states that receive a score of 40 (which indicates that a state received a perfect score of four on all 10 political rights criteria), this simply means that the state features *good* practices and laws for *most or all* elements pertaining to each criterion. Once a state achieves good practices, enacts good legislation, and does so for most political rights components, there is nothing to distinguish this country from another that reforms its practices further, passes a new law, or simply expands its good practices and laws across every domain. In short, the propensity to democratize (or not democratize) among these limit cases is effectively censored.

Unfortunately, conventional regression methods fail to account for the qualitative difference between limit and non-limit observations (Greene, 2008). Specifically, least squares estimators are biased and inconsistent under such circumstances (Greene, 2008; Hill et al., 2008). Of course, if one were solely interested in modeling a state's likelihood of having fully democratized, limit observations would not be problematic. However, such an estimation strategy (e.g. probit) would come at the expense of discarding all variation among the non-limit observations (Tobin, 1958).

Tobit models represent an appropriate solution to modeling limited dependent variables, such as democracy, because of their two components: 1) a discrete function that determines whether or not the dependent variable is observed (e.g. whether a state becomes fully democratic or autocratic), and 2) a continuous function that determines the value of the dependent variable among cases where the outcome is not observed (e.g. the democracy rating among states that are not fully democratized or autocratized) (Tobin, 1958). For example, the observable outcome y_i equals one (or seven) in Freedom House if the latent value is unobserved (i.e. censored at the minimum or maximum rating), whereas y_i takes on the latent value in all other cases (i.e. when the latent value is in between the minimum and maximum rating).

$$\begin{aligned} y_i &= 1 \text{ if } y_i^* \leq 1 \\ y_i &= y_i^* \text{ if } y_i^* > 1 \text{ and } y_i^* < 7 \\ y_i &= 7 \text{ if } y_i^* \geq 7 \end{aligned} \tag{1}$$

Because my dataset contains multiple observations for different countries across time, I employ random-effects tobit models (RETMs) to accommodate the panel structure of the censored data. The random-effects model represents one estimation strategy designed to correct for the problem

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of heterogeneity bias (the confounding effect of unmeasured time-invariant variables). When estimating RETMs, it is possible to compare the performance of the panel estimator (random-effects tobit) to the pooled estimator (tobit) by calculating ρ, which is the fraction of the overall variance indicated by the panel estimator. When ρ equals zero, the panel-level variance (i.e. country-level variance) is unimportant, and the panel estimator is not different from the pooled estimator. In the trade-based models presented below, however, the proportion of the overall variance explained by the panel-level variance ranged from .602 to .855. Moreover, a series of likelihood-ratio tests comparing the two estimators confirm that the panel estimator is a significant improvement over the pooled estimator in all models ($p < .001$).

The random effects estimator in these models uses adaptive quadrature to compute the log likelihood and its derivatives. For all models presented below, I set the number of quadrature points to 48. If estimates noticeably change when altering the number of quadrature points, the quadrature is not reliably approximating the likelihood. Thus, in separate diagnostics, I checked the sensitivity of my results by replicating the Freedom House version of the fully specified trade-based model (Table 3, model 3) when setting the number of quadrature points to 32 and 64. The coefficients for all measures fluctuate by less than .01 percent, suggesting that the quadrature approximation is accurate (the largest fluctuation occurs with the coefficient for trade openness, whose estimate is .00005281% smaller when setting the number of integration points to 32).

Results

Trends and patterns

I begin by reviewing recent trends and patterns in democratic growth during the 1972–2008 period. Among the 125 countries with both a Freedom House rating and a world-system classification throughout the sample period, the average level of democracy in this group rose from 3.61 to 4.50, an increase of 24.7 percent, or almost one full point, and covering almost 15 percent of the entire scale (1–7). This high level of democratic growth is consistent with other accounts describing this period (Torfason and Ingram, 2010; Wejnert, 2005). However, the overall trend masks important cross-national variation. Figure 1 shows the average Freedom House rating during the sample period by world-system position, using the trade-based version introduced in this study. Of the 125 countries noted above, 108 are consistently categorized as belonging to either the core ($N = 39$), semiperiphery ($N = 17$), or periphery ($N = 52$). Figure 1 depicts democracy trends for these 108 states.

First, we can compare differences in democracy *levels* across world-system zones. Consistent with theoretical expectations, core states feature the highest average levels of democracy, followed by the semiperiphery, and then the periphery. At no point does the semiperiphery pass the core, and at no point does the periphery pass the semiperiphery. Second, we can compare differences in *change* over time across these zones. Again, consistent with theory, the core's average level of democracy increased by well over one full point (which is greater than the world average), while the semiperiphery and periphery increased their averages by less than one point (which is less than the world average). Overall, Figure 1 suggests that the semiperiphery and periphery are not narrowing the democracy gap, but that, if anything, the discrepancy may be widening slightly.

Table 1 compares democratic growth across these 108 countries in greater detail. The first column reports each zone's change score, referring to the average increase in each group's democracy rating between 1972 and 2008. As noted above, the core's increase of 1.26 is greater than the increases exhibited by the semiperiphery (0.50) or the periphery (0.80). In the second column, I

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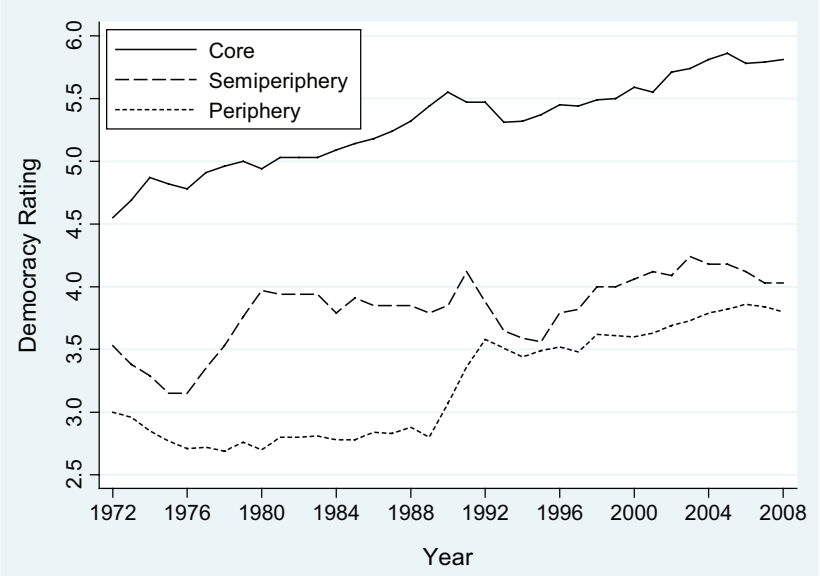


Figure 1. Democracy rating (by world-system position), 1972–2008.
Note: There are 125 countries with both a democracy rating from Freedom House and a world-system position for both the 1980s and 1990s. Of these 125 states, 108 are consistently categorized as belonging to either the core (*N* = 39), semiperiphery (*N* = 17), or periphery (*N* = 52). The above figure depicts democracy trends for these 108 states.

report the growth rate in each zone's average democracy rating between 1972 and 2008. From this perspective, the periphery's growth rate (26.7%) is almost equal to that of the core's (27.7%), and both are substantially greater than the semiperiphery's growth rate (14.2%). Again, though, neither non-core zone demonstrates convergence with the core. Moreover, the fact that the core democratized the most during this period is all the more impressive when considering that over 30 percent of the core (12 countries) already achieved the maximum Freedom House rating by 1972 (see the third column), making growth impossible for almost one-third of this group. Conversely, almost no countries in the non-core reached this ceiling by the beginning of the sample period. By 2008, seven more core countries achieved the maximum democracy rating, while the non-core exhibited very little change in this regard.

Finally, if we use Freedom House's three-tier categorization of Not Free (rating of 1.0–2.5), Partly Free (rating of 3.0–5.0), and Free (rating of 5.5–7.0), we can examine change in each zone's likelihood of their countries exiting the Not Free category and/or entering the Free category. As expected, peripheral states (57.7%) were more likely to be classified as Not Free in 1972 than either the semiperiphery (41.2%) or the core (33.3%). By 2008, all three groups reduced these percentages, but the core reduced their percentage of Not Free states by more than two-thirds (13 to 4), while the periphery cut their percentage by less than half (30 to 17), and the semiperiphery by about one quarter (7 to 5). In 1972, core countries had a higher percentage of its countries classified as Free (48.7%) than either the semiperiphery (23.5%) or the periphery (21.2%). And, by 2008, this disparity grew, as 11 more countries from the core became Free, while the semiperiphery and periphery experienced no aggregate change at all. In sum, if the rise in democratic growth since the 1970s produced cross-national convergence in political development, it would seem to be due to either a) convergence occurring within world-system zones, or b) convergence occurring

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Table 1. Democratic growth (by world-system position), 1972–2008

	Change score (1972–2008)	Growth rate (1972–2008)	Max. rating (1972)	Max. rating (2008)	Not Free (1972)	Not Free (2008)	Free (1972)	Free (2008)
Core (*N* = 39)	1.26	27.7 %	12 (30.8 %)	19 (48.7 %)	13 (33.3 %)	4 (10.3 %)	19 (48.7 %)	30 (76.9 %)
Semiperiphery (*N* = 17)	0.50	14.2 %	0 (0.0 %)	2 (11.8 %)	7 (41.2 %)	5 (29.4 %)	4 (23.5 %)	4 (23.5 %)
Periphery (*N* = 52)	0.80	26.7 %	2 (3.8 %)	2 (3.8 %)	30 (57.7 %)	17 (32.7 %)	11 (21.2 %)	11 (21.2 %)

Notes: Change score refers to each group's average increase in their democracy rating between 1972 and 2008; Growth rate refers to each group's average growth rate in their democracy rating between 1972 and 2008; Max. rating refers to the number of states in each group that had received the maximum rating (7) in the given year; Not Free refers to the number of states in each group that were considered 'not free' (i.e. receiving a Freedom House rating between 1 and 2.5) in the given year; Free refers to the number of states in each group that were considered 'free' (i.e. receiving a Freedom House rating between 5.5 and 7) in the given year; Core = Argentina, Australia, Austria, Belgium, Brazil, Bulgaria, Canada, China, Denmark, Egypt, Finland, France, Greece, Hungary, India, Indonesia, Iran, Ireland, Italy, Japan, Malaysia, Mexico, Netherlands, New Zealand, Norway, Pakistan, Poland, Portugal, Romania, Saudi Arabia, Singapore, South Korea, Spain, Sweden, Switzerland, Thailand, Turkey, United Kingdom, and United States; Semiperiphery = Algeria, Bangladesh, Colombia, Côte d'Ivoire, Cyprus, Kenya, Kuwait, Libya, Nigeria, Panama, Peru, Philippines, Sri Lanka, Tunisia, Uruguay, Venezuela, and Zimbabwe; Periphery = Afghanistan, Albania, Barbados, Benin, Bolivia, Brunei, Burkina Faso, Burundi, Cambodia, Cameroon, Central African Republic, Chad, Congo (DR), Congo (R), Dominican Republic, El Salvador, Equatorial Guinea, Ethiopia, Fiji, Gabon, Gambia, Guinea, Guyana, Haiti, Honduras, Iceland, Jamaica, Laos, Liberia, Madagascar, Malawi, Maldives, Mali, Mauritania, Mauritius, Mongolia, Myanmar, Nepal, Nicaragua, Niger, Oman, Paraguay, Qatar, Rwanda, Senegal, Sierra Leone, Somalia, Sudan, Togo, Trinidad-Tobago, Uganda, and Zambia.

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between the semiperiphery and periphery, because c) neither non-core zone appears to be converging with the core.

Analyses

In Tables 2 and 3, I report results from a series of RETMs examining the relationship between world-system position and democratic growth. Each cell reports the unstandardized coefficient with the standard error in parentheses. In Table 2, I replicate Wejnert's (2005) finding of political convergence across world-system zones with the orthodox measure of world-system position. In Table 3, I repeat these models with the trade-based version of world-system position.

Table 2 consists of six models. In model 1, I regress democracy (Freedom House rating) on the orthodox version of world-system position. In model 2, I introduce the interaction terms. In model 3, I introduce the controls. In models 4–6, I replicate these models with the Polity IV ratings. Model 1 shows that states in the orthodox semiperiphery and periphery are significantly less democratic than the orthodox core. Model 2 then replicates Wejnert's (2005) finding of a democratic core and a less-democratic non-core converging over time. The results show that the orthodox semiperiphery is significantly less democratic than the orthodox core (b = -4.595; $p < .001$), but that this negative effect significantly attenuates over time (b = .463; $p < .001$). Likewise, the orthodox periphery is significantly less democratic than the orthodox core (b = -5.621; $p < .001$), but this negative effect also weakens (b = .331; $p < .001$). Thus, these initial results show a large democratic gap between the core and non-core becoming smaller across the sample period. Finally, model 3 shows that these effects persist even when the control measures are included. Although the controls weaken the main effects of the semiperiphery and periphery, the interaction effects remain substantial. In models 4–6, I replace the Freedom House ratings with those from Polity IV. The results are similar, except that the periphery-by-year interaction becomes marginally significant in the fully specified model. Overall, these results suggest a large democracy gap across the world-system that becomes significantly smaller during the sample period.

In models 3 and 6, most of the control measures perform as expected. The regional dummies show the expected democracy gap between the West and all five non-Western regions. As expected, GDP PC is a positive, significant predictor of democratic growth in model 3 ($p < .001$). However, in model 6, when the Polity IV ratings are used, the effect of GDP PC is significant and *negative* ($p < .001$). I revisit this unexpected finding below. In both models 3 and 6, the Gini is positively associated with democracy at the highest level of significance ($p < .001$). This contrasts with previous findings that report a negative association between these two measures. However, most of these studies do not consider much of the post-1990 era when inequality and democracy levels started to rise together. I revisit this finding below, as well.

Models 3 and 6 show more consistent support for the diffusion variables. IGOs ($p < .001$), FDI inflows ($p < .05$), regional average ($p < .001$), and Commonwealth membership ($p < .001$) all exert positive effects on democracy in model 3, while the latter two remain significant in model 6 ($p < .001$). Only trade openness is non-significant in both models. These results are consistent with the following notions: 1) democratic models flow through international organizations and economic exchange; 2) democratization in a country's regional neighbors appears to be influential, thereby capturing an important spatial dynamic in the spread of democracy; and 3) British hegemonic influence is operative in diffusing democratic principles. Overall, the above effects appear when controlling for the collapse of communism during the 1989–1991 period, and when including technical controls for the two procedures designed to address missing data: interpolation/extrapolation and imputation.

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Table 2. Random-effects tobit models of democracy, 1972–2008

	Freedom House			Polity IV		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Year	.451*** (.018)	.103 (.079)	.069 (.074)	2.856*** (.069)	1.567** (.459)	1.931*** (.440)
Orthodox semiperiphery (0 = core)	−4.673*** (.669)	−4.595*** (.666)	−1.113* (.444)	−20.386*** (2.779)	−19.530*** (2.786)	−10.817*** (2.713)
Orthodox periphery (0 = core)	−5.693*** (.596)	−5.621*** (.594)	−.998* (.460)	−26.194*** (2.575)	−25.377*** (2.584)	−14.275*** (2.842)
Orthodox semiperiphery x year		.463*** (.087)	.562*** (.079)		1.565** (.480)	1.111* (.453)
Orthodox periphery x year		.331*** (.082)	.411*** (.075)		1.236** (.466)	.843† (.442)
Latin America			−2.054*** (.439)			−12.577*** (2.644)
Africa			−3.698*** (.452)			−21.165*** (2.699)
Middle East			−3.086*** (.461)			−17.389*** (2.709)
East Asia			−3.094*** (.436)			−17.995*** (2.600)
Eastern Europe			−2.421*** (.529)			−14.730*** (2.956)
GDP PC			.385*** (.052)			−.867*** (.226)
Gini			.607** (.193)			3.448*** (.765)
IGO memberships			.606*** (.100)			−.320 (.396)
Trade openness			−.060 (.047)			−.153 (.175)
FDI inflows			.471* (.185)			.230 (.701)
Regional average			.448*** (.024)			2.697*** (.159)
Commonwealth member			1.079*** (.227)			4.519*** (1.241)
Period (1989–1991)			−.140* (.061)			.002 (.236)
Interpolated/extrapolated cases			−.414*** (.051)			−1.200*** (.205)
Imputed cases			−2.529*** (.358)			−6.846*** (1.804)
Left-censored	434	434	434	87	87	87
Uncensored	3,442	3,442	3,442	3,424	3,424	3,424
Right-censored	720	720	720	890	890	890
N (states)	4596(125)	4596(125)	4596(125)	4401(121)	4401(121)	4401(121)
BIC	12,031	12,017	11,487	20,239	20,244	19,889

†$p < .1$; * $p < .05$; ** $p < .01$; *** $p < .001$ (two-tailed tests).
Note: Each cell reports the unstandardized coefficient with the standard error in parentheses.

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Table 3. Random-effects tobit models of democracy, 1972–2008

	Freedom House			Polity IV		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Year	.429*** (.017)	.531*** (.033)	.491*** (.034)	2.839*** (.066)	3.258*** (.137)	3.424*** (.141)
Trade semiperiphery (0 = core)	−1.210*** (.151)	−1.194*** (.151)	−.843*** (.138)	−2.219*** (.584)	−2.152*** (.584)	−.725 (.537)
Trade periphery (0 = core)	−1.013*** (.170)	−1.107*** (.170)	−.800*** (.152)	−1.950** (.658)	−2.234** (.658)	.183 (.606)
Trade semiperiphery x year		−.300*** (.051)	−.150** (.049)		−1.102*** (.201)	−1.110*** (.191)
Trade periphery x year		−.080* (.040)	−.067† (.040)		−.333* (.163)	−.493** (.162)
Latin America			−2.581*** (.425)			−23.693*** (2.564)
Africa			−4.068*** (.434)			−32.491*** (2.569)
Middle East			−4.011*** (.454)			−29.163*** (2.667)
East Asia			−3.881*** (.443)			−27.685*** (2.646)
Eastern Europe			−3.118*** (.423)			−25.136*** (2.512)
GDP PC			.356*** (.046)			−.749*** (.208)
Gini			.676*** (.172)			3.081*** (.667)
IGO memberships			.133* (.063)			−.170 (.252)
Trade openness			.008 (.042)			−.194 (.158)
FDI inflows			−.105 (.123)			−.519 (.462)
Regional average			.438*** (.023)			2.874*** (.145)
Commonwealth member			1.104*** (.259)			4.846** (1.455)
Period (1989–1991)			−.096† (.056)			.041 (.212)
Interpolated/extrapolated cases			−.331*** (.045)			−.993*** (.177)
Imputed cases			−1.786*** (.359)			−6.455** (1.874)
Left-censored	500	500	500	143	143	143
Uncensored	4177	4177	4177	4031	4031	4031
Right-censored	768	768	768	950	950	950
N (states)	5445(161)	5445(161)	5445(161)	5124(154)	5124(154)	5124(154)
BIC	14,397	14,378	13,822	23,691	23,676	23,139

†$p < .1$; * $p < .05$; ** $p < .01$; *** $p < .001$ (two-tailed tests).

Note: Each cell reports the unstandardized coefficient with the standard error in parentheses.

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How do these results compare when I use the updated trade-based version of world-system position? Table 3 addresses this question. Model 1 presents the main effects of world-system position. These results show that the trade-based semiperiphery (b = -1.210; $p < .001$) and periphery (b = -1.013; $p < .001$) exhibit significantly lower levels of democracy than the core. In model 2, I introduce the interaction terms. The main effects of the semiperiphery and periphery remain negative ($p < .001$), but the interaction terms indicate that these initial gaps did not decline, and that the core-semiperiphery gap (b = -.300; $p < .001$) and core-periphery gap (b = -.080; $p < .05$) actually increased slightly.

In model 3, we can see how much of the relationship between world-system position and democracy is mediated by the control measures. While the main effects of the semiperiphery and periphery are not greatly affected, the coefficients of the interaction terms become notably smaller. Specifically, the semiperiphery-by-year coefficient is now half as large, but still significant (b = -.150; $p < .01$), while the periphery-by-year coefficient is reduced by a smaller amount, but becomes marginally significant in the process (b = -.067; $p < .10$). Nevertheless, the results indicate that the democracy gap between the core and non-core did not dissipate over time. When using the Polity IV ratings in models 4–6, the results are similar except that the control measures mediate more of the main effect of world-system position than the effects of the interaction terms. In sum, both sets of models indicate that countries in the semiperiphery and periphery are not converging with the core, but are perhaps diverging slightly.

The control measures perform similarly in these models, except that FDI inflows are now a non-significant predictor of democracy in both the Freedom House and Polity IV models. More importantly, the results for GDP PC remain mixed, positively affecting a country's Freedom House ratings, but negatively affecting a country's Polity IV ratings. Meanwhile, income inequality remains positively associated with democracy in both models.

In separate analyses, I checked for influential observations in these models via robust regression, whereby outliers are dropped or down-weighted. The procedure begins by fitting a regression, calculating Cook's D, and excluding any observation for which $D > 1$. Next, the procedure calculates weights for each remaining case based on the absolute value of the residuals. Weights range from 0 to 1, with larger residual values getting down-weighted more, and dropped cases receiving a weight of 0.

I then re-estimated the RETMs from Table 3 when excluding those observations given a weight of a) .10 or less, b) .25 or less, and c) .50 or less. For the Freedom House replications, no outliers were detected for models 1 and 2 at any of these three specified levels, indicating that the widening gap between the core and non-core is not driven by outliers. In model 3, 10 observations were flagged as outliers at the .10 level, along with 22 observations at the .25 level, and 86 observations at the .50 level. In all three instances, when re-running model 3 without these observations, the periphery-by-year coefficient drops out of significance, suggesting that the control measures mediate more of the world-system effect when outliers are excluded.

For the Polity IV replications, no outliers were detected at the .10 level for any of the three models. Two observations were flagged in model 3 at the .25 level, along with two observations in model 1 at the .50 level, and 34 observations in model 3 at the .50 level. In all three instances, though, when re-running these models without these observations, the results were substantively identical. In short, regardless of whether outliers are excluded from the above models, semiperipheral and peripheral states are diverging (not converging) with the core in their levels of political development. At most, outliers may be masking some of the mediation by the control measures in explaining the divergence between the core and periphery.

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Replications

To assess the robustness of my findings, I perform three sets of replications, employing an alternative measure of world-system position (Mahutga and Smith, 2011), an alternative measure of democracy (Bollen's Liberal Democracy Series), and an alternative estimation strategy (fixed-effects logit).

In the first replication, I consider an alternative measure of world-system position: Mahutga and Smith's (2011) categorical measure. Although this measure covers a smaller number of countries in the models presented below (86–90), it is valuable for disaggregating world-system position into finer groupings, especially the top-tier. The measure refers to a state's structural location in the international trade network based on five commodity categories (high tech/heavy manufacturing, sophisticated extractive, simple extractive, low-wage/light manufactures, and animal products and byproducts) across three years: 1965, 1980, and 2000.[3] The result is a six-group partition, with each group featuring an average Freedom House rating across the sample period that conforms to world-system expectations: core (6.84), core contenders (5.79), semiperiphery (4.49), strong periphery (4.27), weak periphery (3.95), and weakest periphery (2.99). Importantly, the Mahutga and Smith measure is highly correlated with my trade-based measure (r = .839), with the correspondence growing stronger over time (r = .806 in the 1970s; r = .878 in the 2000s).

Of particular interest is the partition made in the top-tier between the core and core contenders. Core nations refer to the 'strongest countries in the world led by the United States' (Mahutga and Smith, 2011: 264), while core contenders refer to 'some developed European countries… and many of the more dynamic economies of the developing world, including China (by 1980), Hong Kong, India, along with Brazil, South Korea, and Singapore (by 1980)' (Mahutga and Smith, 2011: 264). The core's average Freedom House rating across the sample period is 6.84, with 69.2 percent of all its country-year observations given the maximum rating, another 29.2 percent given a rating of 6.5, and the remaining observations all given a 6.0. By contrast, the average Freedom House rating across the sample period for the core contenders is 5.79, with less than half (47.2%) of its country-year observations given the maximum rating, and 20.6 percent of observations given a rating of 4.5 or less. Thus, most of the democratic growth from this top-tier of states must come from the core contenders, just as the upwardly mobile 'new core' countries are responsible for the bulk of democratic growth in my trade-based measure. Consequently, in the first replication, I use the Mahutga and Smith measure of world-system position, with core contenders serving as the excluded reference category. We should expect to see core contenders converging with the core in their level of democracy, while at the same time widening the gap between themselves and those countries residing in the semiperiphery and periphery.[4]

Table 4 reports the results. Model 1 shows that core states feature significantly higher levels of democracy than core contenders (b = 1.552; $p < .001$), while core contenders feature significantly higher levels of democracy than all groups in the semiperiphery and periphery ($p < .01$ or greater). How do these gaps change over time? In model 2, we see that while core contenders are converging with the core (b = -.703; $p < .001$), core contenders are also widening the democracy gap between themselves and all four groups in the semiperiphery and periphery, with three of the four comparisons reaching significance ($p < .001$). When introducing the controls in model 3, the semiperiphery-by-year coefficient is reduced by 52.9 percent (b = -.144; $p < .10$), the strong periphery-by-year coefficient is reduced by 42.8 percent (b = -.249; $p < .01$), and the weak periphery-by-year coefficient is reduced by 58.0 percent (b = -.198; $p < .05$). Nevertheless, all three comparisons remain significant ($p < .10$ or greater), while the other two comparisons remain mostly unaffected. The Polity IV models, presented in the subsequent columns, report similar results. Core contenders are

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Table 4. Replication with alternative world-system measure (Mahutga and Smith, 2011)

	Freedom House			Polity IV		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Year	.396*** (.020)	.727*** (.064)	.620*** (.068)	3.077*** (.092)	3.696*** (.290)	4.532*** (.314)
Core (0 = core contender)	1.552*** (.390)	1.746*** (.383)	.792* (.316)	22.089*** (4.678)	22.138*** (4.527)	9.257** (3.100)
Semiperiphery (0 = core contender)	−.343** (.132)	−.120 (.140)	.245† (.135)	−.425 (.567)	.634 (.630)	.651 (.583)
Strong periphery (0 = core contender)	−.980*** (.177)	−.770*** (.180)	−.074 (.171)	−3.466*** (.757)	−2.705** (.786)	−1.078 (.737)
Weak periphery (0 = core contender)	−.759*** (.194)	−.444* (.200)	.209 (.191)	−2.087* (.851)	−1.184 (.893)	.155 (.844)
Weakest periphery (0 = core contender)	−.882*** (.232)	−.553* (.236)	.091 (.226)	−3.367** (1.031)	−2.442* (1.068)	−1.385 (1.024)
Core x year		−.703*** (.103)	−.615*** (.099)		−4.000*** (.648)	−3.362*** (.594)
Semiperiphery x year		−.306*** (.083)	−.144† (.080)		.078 (.372)	−.096 (.349)
Strong periphery x year		−.435*** (.075)	−.249** (.075)		−.832* (.340)	−1.484*** (.334)
Weak periphery x year		−.471*** (.076)	−.198* (.078)		−.635† (.346)	−1.240*** (.347)
Weakest periphery x year		−.101 (.078)	.056 (.081)		−.686* (.347)	−1.610*** (.360)
Latin America			−2.548*** (.454)			−24.040*** (3.443)
Africa			−4.230*** (.529)			−37.906*** (3.722)
Middle East			−3.802*** (.506)			−29.585*** (3.819)
East Asia			−3.702*** (.496)			−29.520*** (3.788)
Eastern Europe			−2.239** (.860)			−16.749** (6.082)
GDP PC			.346*** (.081)			−3.012*** (.404)
Gini			.643** (.213)			4.747*** (.921)
IGO memberships			.247* (.121)			.355 (.536)
Trade openness			−.061 (.070)			.586† (.307)
FDI inflows			−1.010*** (.271)			−4.953*** (1.359)
Regional average			.366*** (.026)			2.800*** (.192)
Commonwealth member			.983** (.293)			6.484** (2.244)
Period (1989–1991)			.065 (.068)			.366 (.292)
Interpolated/extrapolated cases			−.225*** (.061)			−.820** (.270)
Imputed cases			−2.401*** (.581)			−9.845* (4.469)
Left-censored	107	107	107	119	119	119
Uncensored	2487	2487	2487	2171	2171	2171
Right-censored	715	715	715	870	870	870
N (states)	3309(90)	3309(90)	3309(90)	3160(86)	3160(86)	3160(86)
BIC	8,131	8,082	7,856	13,033	13,024	12,735

†$p < .1$; * $p < .05$; ** $p < .01$; *** $p < .001$ (two-tailed tests).

Note: Each cell reports the unstandardized coefficient with the standard error in parentheses.

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converging with the core, but diverging from the other groups, with the exception that the democracy gap between the core contenders and the semiperiphery does not significantly widen over time. In sum, these models suggest that most of the cross-national convergence in political development that occurred during the sample period is within the core (between the advanced core and the dynamic core contenders).[5]

The effects of the control measures are similar to those reported above, with two exceptions. First, FDI inflows negatively affect democracy ratings in both models 3 and 6 at the highest level of significance. And second, trade openness exerts a positive effect at a marginal level of significance in model 6. These results, combined with those from above, suggest that the impact of economic exchange on democracy is ambiguous.

In the second replication, I consider an alternative measure of democracy: Bollen's (1998) Liberal Democracy Series (LDS). While the Freedom House and Polity IV ratings remain popular, a number of scholars are critical of these measures. For example, Freedom House ratings are criticized as flawed due to political bias (Bollen, 1993; Bollen and Paxton, 2000), while the Polity IV is known for not considering female suffrage when assigning countries a democracy score (Paxton, 2000; Paxton et al., 2003). By contrast, although the LDS covers a shorter period of time (1972–1988), it minimizes the systematic error present in other democracy measures (Bollen, 2009). Nevertheless, the LDS is highly correlated with the ratings from both Freedom House ($r = .908$) and Polity IV ($r = .909$) in my dataset. Scores for this measure range widely, from 0 (less democratic) to 100 (more democratic), allowing me to estimate ordinary random-effects models (using a generalized least squares estimator) that include a first-order autocorrelation correction.

Table 5 presents results that are similar to those already discussed. In model 1, both the trade-based semiperiphery ($b = -31.941$; $p < .001$) and periphery ($b = -36.759$; $p < .001$) feature significantly lower levels of democracy than the core. In model 2, we see that these gaps do not narrow, but instead grow wider. In fact, the gap between the core and the semiperiphery widens significantly ($b = -7.579$; $p < .05$), as it does between the core and periphery ($b = -8.762$; $p < .01$), even during this shorter time period. In model 3, the control measures mediate much of this effect, reducing the semiperiphery-by-year coefficient by 35.5 percent (and causing it to drop out of significance), and reducing the periphery-by-year coefficient by 34.8 percent. Nevertheless, these results are consistent with those from the Freedom House and Polity IV models in that the semiperiphery and periphery are not closing the democracy gap with the core.

Interestingly, while most of the control measures perform similarly in this replication, the Gini is a notable exception, now exerting a significant *negative* effect on democracy in model 3 ($p < .05$), contrary to the results reported above, but consistent with theory. Does restricting attention to the 1972–1988 period account for this result? In separate analyses, I estimated the fully specified models from Table 3 (models 3 and 6) during the pre-1990 era. In both models, the effect of Gini is *negative* ($p < .001$). These findings suggest that perhaps the negative association between income inequality and democracy during the pre-1990 era is historical and not generalizable to other eras. Conversely, it may be that the post-1990 era is unique in seeing both inequality and democracy rise together across a number of countries. Still another interpretation is that any association that exists between these two measures is spurious, with different associations manifesting accordingly across different eras. Unfortunately, the results here do little to advance the long-standing debate on this topic.

The other curious finding we can now revisit is the negative effect of GDP PC in the Polity IV model, which is both contrary to theory, and contrary to the positive effect that GDP PC exerts in both the Freedom House and LDS models. One explanation for the negative effect of GDP PC on the Polity IV rating is misspecification. In a previous study, Muller (1995a) finds that the

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Table 5. Replication with alternative democracy measure (LDS), 1972–1988

	Model 1	Model 2	Model 3
Year	5.312*** (1.187)	11.206*** (2.128)	8.866*** (2.157)
Trade semiperiphery (0 = core)	−31.941*** (8.575)	−39.043*** (9.251)	−12.049† (6.912)
Trade periphery (0 = core)	−36.759*** (6.213)	−44.892*** (6.689)	−10.585† (5.810)
Trade semiperiphery x year		−7.579* (3.705)	−4.888 (3.659)
Trade periphery x year		−8.762** (2.665)	−5.709* (2.692)
Latin America			−19.647** (7.458)
Africa			−48.470*** (8.311)
Middle East			−45.236*** (7.317)
East Asia			−32.648*** (7.454)
Eastern Europe			−57.208*** (9.041)
GDP PC			5.328*** (1.341)
Gini			−12.592* (5.585)
IGO memberships			1.520 (1.913)
Trade openness			−.965 (1.286)
FDI inflows			−1.079 (6.281)
Regional average			2.770*** (.390)
Commonwealth member			23.670*** (3.797)
Interpolated/extrapolated cases			−1.997† (1.199)
Imputed cases			−17.857*** (5.043)
N (states)	2260(137)	2260(137)	2260(137)
R^2	.193	.194	.631

†$p < .1$; * $p < .05$; ** $p < .01$; *** $p < .001$ (two-tailed tests).
Notes: All replications reported in Table 5 are random-effects models that include a first-order autocorrelation correction. Each cell reports the unstandardized coefficient with the standard error in parentheses.

relationship between economic development and democracy is actually curvilinear (negative, before turning positive) because income inequality (which, in theory, negatively affects democracy) is highest among middle-income countries. Appendix B shows a scatterplot with a fitted quadratic line between GDP PC (log) and Polity IV ratings for the year 2000. There is clearly a curvilinear association, as high levels of GDP PC are associated with very low and very high Polity IV ratings. In addition to Muller's (1995a) purported explanation for this association, another contributing factor may be the presence of a number of oil-rich countries in the Middle East that feature high levels of GDP PC, but low Polity IV ratings. Indeed, the six countries in the top-left corner of the scatterplot in Appendix B are Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates. Thus, I replicated the Polity IV models when including a second-order polynomial term for GDP PC and report these results in Appendix C. Model 1 replicates the fully specified model from Table 2 (featuring the orthodox measure of world-system position), model 2 replicates the fully specified model from Table 3 (featuring the trade-based measure of world-system position), and model 3 replicates the fully specified model from Table 4 (featuring the Mahutga and Smith measure of world-system position). I omit results for the control measures to preserve space, but they are available upon request. As these results show, GDP PC is now properly specified, but the effects of world-system position in all three models are similar to those reported above.

In the third replication, I consider an alternative estimation strategy: fixed-effects logit models. While this approach dichotomizes the dependent variable into democratic versus

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non-democratic states, this method allows me to examine longitudinal change using censored data, as outcomes that do not vary (states that are either always democratic or never democratic) are dropped from the model. By contrast, ordinary fixed-effects models retain observations that never vary (e.g. states that receive the maximum Freedom House rating throughout the entire sample period). Another advantage of logit is the ability to use multiple imputation to fill missing values for several of the control variables, as I do for these models. Following the convention set forth by Freedom House, I code all country-years with scores ranging from 5.5 to 7.0 as democratic, while all other scores are coded as non-democratic. Similarly, following Polity IV standards, I code all country-years with scores ranging from 7 to 10 as democratic, while all other scores are coded as non-democratic. And in the LDS, I code all country-years with scores ranging from 70 to 100 as democratic, while all other scores are coded as non-democratic. To discern democratic growth for each world-system zone (as defined by the trade-based measure of world-system position), I run fixed-effects logit models on three sub-samples (core, semiperiphery, and periphery) and interpret the coefficient for year as the indicator of democratization for that zone.

Table 6 reports the results. The top panel reports results when democracy is measured with the Freedom House ratings. The first two models are restricted to a sample of core states, the next two models only include the semiperiphery, and the last two models feature the periphery. Without controls, core states feature greater democratization across time ($b = 1.701$; $p < .001$) than either the semiperiphery ($b = .185$; NS) or the periphery ($b = .326$; $p < .001$), as indicated by the coefficient for year. Moreover, when the time-varying controls are included, democratization in the core remains significant ($b = 2.755$; $p < .001$), but not the semiperiphery ($b = .014$; NS) or periphery ($b = -.083$; NS). The middle panel replicates these models with the Polity IV ratings, but the results are similar, as democratization in the core is greater than either of the other two zones, with or without controls. Finally, the bottom panel shows similar results for the LDS. In sum, when analyzing longitudinal change through this alternative estimation strategy, core nations continue to show greater democratization during the sample period than either of the two non-core zones.

Discussion

A variety of theoretical perspectives help explain the global spread of democracy. However, critical macro-comparative approaches are used more sparingly. Theories that stress the importance of economic dependency and core/periphery relations in the world economy emerged in the 1960s and 1970s, but began to wane in the 1990s at the dawn of globalization as other cultural approaches started to become more popular. 'The rise and decline of world-system theory and dependency theory over the last two decades has been nearly as dramatic as the cycle of hegemonic rise and decline that they describe' (Kahler, 1991: 260). Initially, the dependency/world-system approach was subjected to empirical critiques (Firebaugh, 1992; Firebaugh and Beck, 1994). Subsequently, as economic disparities between countries began to fall (Firebaugh, 2003; Sala-i-Martin, 2006), it appeared that new theoretical approaches were required to understand the marvels of globalization. World-system theory was eventually challenged by neo-institutional theories emphasizing the diffusion of cultural models within an isomorphic 'world society' (Meyer et al., 1997).

The findings in this study, however, underscore the importance of critical approaches for examining political change in the global era. Clark and Beckfield (2009) conclude that an orthodox conception of the core/periphery hierarchy underestimates the extent to which core and non-core

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Table 6. Fixed-effects logit models of democracy

Freedom House (1972–2008)	Core		Semiperiphery		Periphery	
Year	1.701*** (.160)	2.755*** (.468)	.185 (.114)	.014 (.198)	.326*** (.085)	−.083 (.113)
GDP PC		.707 (.930)		2.168** (.712)		.962* (.463)
Gini		.654 (2.362)		−2.180 (1.556)		−.337 (.947)
IGO memberships		6.153*** (1.596)		1.413† (.749)		−.192 (.433)
Trade openness		−3.794*** (.902)		.113 (.563)		.089 (.420)
FDI inflows		35.231** (11.773)		5.676 (4.227)		6.326** (2.371)
Regional average		1.968*** (.395)		.018 (.269)		1.159*** (.237)
Period (1989–1991)		.002 (.509)		−.098 (.416)		.179 (.316)
N (states)	629 (18)	629 (18)	478 (16)	478 (16)	944 (29)	944 (29)
Polity IV (1972–2008)	Core		Semiperiphery		Periphery	
Year	2.716*** (.247)	3.496*** (.624)	.640*** (.135)	.202 (.196)	1.428*** (.122)	1.253*** (.132)
GDP PC		.504 (1.517)		2.179* (1.043)		.274 (.523)
Gini		10.650*** (2.920)		−6.334** (1.884)		2.094* (1.050)
IGO memberships		6.754** (2.156)		−.657 (.620)		.334 (.463)
Trade openness		2.532* (.996)		.880 (.654)		.561 (.382)
FDI inflows		−5.778 (9.723)		4.636 (4.489)		4.080* (2.016)
Regional average		2.948*** (.559)		1.739*** (.470)		.574† (.298)
Period (1989–1991)		−.134 (.654)		.477 (.508)		−.881* (.377)
N (states)	592 (17)	592 (17)	444 (15)	444 (15)	908 (28)	908 (28)
LDS (1972–1988)	Core		Semiperiphery		Periphery	
Year	2.187*** (.506)	10.490*** (2.824)	1.481** (.486)	2.300* (.946)	1.710*** (.416)	1.421* (.601)
GDP PC		−5.877 (3.641)		−12.240*** (3.430)		14.976*** (3.793)
Gini		−31.375** (11.165)		.347 (3.138)		3.958 (3.773)
IGO memberships		11.817† (6.616)		.700 (3.597)		−7.630** (2.906)
Trade openness		−17.709** (5.341)		−.932 (1.817)		−5.172** (1.531)
FDI inflows		178.484** (57.345)		9.379 (29.828)		5.577 (9.292)
Regional average		3.349** (.985)		2.377*** (.612)		1.013* (.441)
N (states)	170 (10)	170 (10)	153 (9)	153 (9)	184 (11)	184 (11)

†$p < .1$; * $p < .05$; ** $p < .01$; *** $p < .001$ (two-tailed tests).

Note: Each cell reports the unstandardized coefficient with the standard error in parentheses. In each model, the dependent variable is coded dichotomously (0 = undemocratic; 1 = democratic), indicating whether or not a country has crossed the following rating thresholds: Freedom House (5.5 or higher), Polity IV (7 or higher), and LDS (70 or higher).

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economies are diverging from one another. Similarly, an orthodox image of the world-system overestimates the extent to which core and non-core political systems are converging with one another. Specifically, I find that core nations began the 1970s with significantly greater levels of democracy, and that this gap does not dissipate during the sample period. If anything, the core diverged slightly from the non-core, experiencing greater democratic growth than either the semiperiphery or periphery. Rather, most of the cross-national convergence in political development occurred within the top-tier of the world-system, as upwardly mobile 'new core' economies moved considerably closer to the advanced capitalist democracies that comprise the 'orthodox core', while pulling away from nations that reside in the semiperiphery and periphery. These results are consistent across three measures of democracy, two measures of world-system position, and multiple estimation strategies.

Moreover, the slight divergence between core and non-core nations occurs net of other factors commonly used to explain democratization, including economic development, income inequality, cross-national diffusion via international organizations and economic exchange, spatial proximity to other democratic transitions, exposure to British hegemonic influence, and the collapse of communism. While these factors mediate some of the gap in democratic growth between core and non-core nations, the findings from this study suggest that occupying a core position in the world economy operates independently in shaping political development.

As democratic principles spread throughout the world, core nations implemented these models more quickly than countries in the semiperiphery and periphery. Not only do core nations feature socio-economic advantages, but they also benefit from their greater level of integration in cross-national networks. Conversely, non-core nations face pressures that hinder democratization, and the impact of traditionally democratizing forces within their societies are distorted. Moreover, once democracies do emerge, they appear to be more sustainable in core countries. Reverting back to the 108 countries featured in Table 1, only one of the 19 core countries (5.3%) considered Free in 1972 experienced negative change in their Freedom House rating during the sample period. By contrast, three of the four Free semiperipheral countries (75.0%) and five of the 11 Free peripheral countries (45.5%) were less democratic by the end of the sample period. More generally, negative change was less common among all core countries in this sample (10.3%) than in the semiperiphery (41.2%) and periphery (25.0%), suggesting that the core is also better equipped to consolidate their level of political freedom regardless of their starting point. This is made all the more remarkable by the fact that almost one-third of the core (and almost none of the non-core) reached the maximum Freedom House rating by 1972.

In conclusion, the findings from this study suggest that critical theories remain useful for understanding the rapid social and political change occurring in the global era. However, it is important that such perspectives remain dynamic, and that scholars appreciate the considerable fluidity in the world-system across time. As Clark and Beckfield (2009: 18) suggest, the presence of mobility does not detract from the concept of a core/periphery hierarchy because it is the role, rather than the identity, of the actor that is fundamental to world-system operations. 'We are less interested in preserving the identity of a core that is exclusively or predominantly Western/European, and more interested in preserving the conceptualization of a core that is fast-growing relative to an underdeveloping periphery.' Similarly, the results from this study identify a set of core nations that experienced rapid democratic growth during the sample period relative to a less developed non-core. In this way, world-system scholars are poised to address the widespread political reform that occurred across a wide range of countries in recent decades.

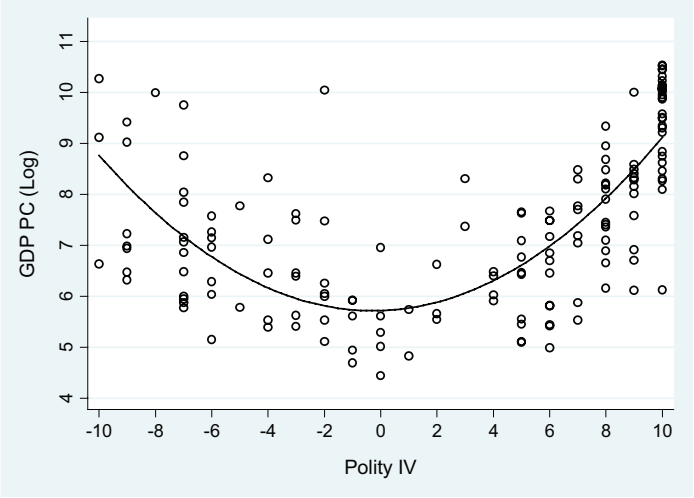
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Appendix A. World-system position during the 1980s (WSP_1) and 1990s (WSP_2)

State	WSP_1	WSP_2	State	WSP_1	WSP_2	State	WSP_1	WSP_2	State	WSP_1	WSP_2
Afghanistan	P	P	Denmark	C	C	Laos	P	P	Russia		C
Albania	P	P	Djibouti	P	P	Latvia		SP	Rwanda	P	P
Algeria	SP	SP	Dominican R	P	P	Lebanon	P	SP	Saudi Arabia	C	C
Angola	P	P	Ecuador	P	SP	Liberia	P	P	Senegal	P	P
Argentina	C	C	Egypt	C	C	Libya	SP	SP	Serbia-Mont.		P
Armenia		P	El Salvador	P	P	Lithuania		SP	Sierra Leone	P	P
Australia	C	C	Eq. Guinea	P	P	Macedonia		P	Singapore	C	C
Austria	C	C	Estonia		P	Madagascar	P	P	Slovakia		SP
Azerbaijan		P	Ethiopia	P	P	Malawi	P	P	Slovenia		SP
Bahamas	P	P	Fiji	P	P	Malaysia	C	C	Solomon Is.	P	P
Bahrain	P	SP	Finland	C	C	Maldives	P	P	Somalia	P	P
Bangladesh	SP	SP	France	C	C	Mali	P	P	South Africa	P	C
Barbados	P	P	Gabon	P	P	Malta	P	SP	South Korea	C	C
Belarus		SP	Gambia	P	P	Mauritania	P	P	Spain	C	C
Belgium	C	C	Georgia		P	Mauritius	P	P	Sri Lanka	SP	SP
Benin	P	P	Germany	C	C	Mexico	C	C	Sudan	P	P
Bolivia	P	P	Ghana	P	SP	Moldova		P	Suriname	P	P
Bosnia-Herz.		P	Greece	C	C	Mongolia	P	P	Sweden	C	C
Brazil	C	C	Guatemala	P	SP	Morocco	C	SP	Switzerland	C	C
Brunei	P	P	Guinea	P	P	Mozambique	P	P	Syria	P	SP
Bulgaria	C	C	Guinea-Bissau	P	P	Myanmar	P	P	Tajikistan		P
Burkina Faso	P	P	Guyana	P	P	Nepal	P	P	Tanzania	P	SP
Burundi	P	P	Haiti	P	P	Netherlands	C	C	Thailand	C	C
Cambodia	P	P	Honduras	P	P	New Zealand	C	C	Togo	P	P
Cameroon	P	P	Hungary	C	C	Nicaragua	P	P	Trinidad-Tobago	P	P
Canada	C	C	Iceland	P	P	Niger	P	P	Tunisia	SP	SP
Cape Verde	P	P	India	C	C	Nigeria	SP	SP	Turkey	C	C
CAR	P	P	Indonesia	C	C	North Korea	P	SP	Turkmen.		P
Chad	P	P	Iran	C	C	Norway	C	C	Uganda	P	P
Chile	SP	C	Iraq	SP	P	Oman	P	P	Ukraine		C
China	C	C	Ireland	C	C	Pakistan	C	C	UAE	SP	C
Colombia	SP	SP	Israel	SP	C	Panama	SP	SP	UK	C	C
Comoros	P	P	Italy	C	C	PNG	P	P	USA	C	C
Congo-DR	P	P	Jamaica	P	P	Paraguay	P	P	Uruguay	SP	SP
Congo-Rep.	P	P	Japan	C	C	Peru	SP	SP	Uzbekistan		P
Costa Rica	P	SP	Jordan	P	SP	Philippines	SP	SP	Venezuela	SP	SP
Côte d'Ivoire	SP	SP	Kazakhstan		SP	Poland	C	C	Vietnam	P	SP
Croatia		SP	Kenya	SP	SP	Portugal	C	C	Yemen		P
Cuba	P	SP	Kuwait	SP	SP	Qatar	P	P	Zambia	P	P
Cyprus	SP	SP	Kyrgyzstan		P	Romania	C	C	Zimbabwe	SP	SP
Czech Rep.		C									

Note: WSP_1 = World-system position (1980s); WSP_2 = World-system position (1990s); C = Core; SP = Semiperiphery; P = Periphery.

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Appendix B. Scatterplot of GDP PC (log) and Polity IV, 2000

Appendix C. Polity IV replication including GDP PC^2, 1972–2008

	Model 1 (Snyder & Kick)	Model 2 (Clark & Beckfield)	Model 3 (Mahutga & Smith)
Year	1.360** (.440)	3.257*** (.142)	4.027*** (.318)
Semiperiphery	−8.398** (2.673)		
Periphery	−11.773*** (2.799)		
Semiperiphery x year	1.556** (.451)		
Periphery x year	1.415** (.442)		
Semiperiphery		−.820 (.534)	
Periphery		.206 (.601)	
Semiperiphery x year		−.860*** (.193)	
Periphery x year		−.347* (.162)	
Core			7.164** (2.653)
Semiperiphery			.950 (.586)
Strong periphery			−.454 (.737)
Weak periphery			.725 (.841)
Weakest periphery			−1.095 (1.015)
Core x year			−3.739*** (.590)
Semiperiphery x year			.140 (.349)
Strong periphery x year			−1.076** (.336)
Weak periphery x year			−.646† (.353)
Weakest periphery x year			−1.244** (.360)
GDP PC	−.744* (.352)	−.607† (.327)	−3.117*** (.643)
GDP PC^2	1.416*** (.156)	1.176*** (.146)	2.219*** (.272)
Left-censored	87	143	119
Uncensored	3424	4031	2171
Right-censored	890	950	870
N (states)	4401(121)	5124(154)	3160(86)
BIC	19,816	23,083	12,677

†$p < .1$; * $p < .05$; ** $p < .01$; *** $p < .001$ (two-tailed tests).
Note: Each cell reports the unstandardized coefficient with the standard error in parentheses. All models are fully specified, with control variables left unreported to preserve space.

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Notes

1. Intra-block densities are derived by calculating the ratio of observed ties in the block to the number of theoretically possible intra-block ties (excluding self-ties).
2. Similar to Clark and Beckfield, I ignore the six off-diagonal regions (e.g. core sending to semiperiphery, periphery sending to core, etc.) so that the model focuses on maximizing intra-core density, minimizing intra-peripheral density, and matching intra-semiperipheral density with the network's total density. Nevertheless, the resulting off-diagonal densities are consistent with prior work (see Clark and Beckfield, 2009; Mahutga, 2006), showing that the core exports to, and imports from, the semiperiphery (.917 and .849, respectively) more than it does with the periphery (.596 and .446), and both sets of relations produce higher densities than the semiperiphery-periphery off-diagonals (.151 and .107).
3. I use the 1965 classification to cover the 1972–1979 period, while the 1980 classification covers the 1980–1999 period, and the 2000 classification covers the 2000–2008 period.
4. While Mahutga and Smith (2011) informally combine the core contenders with the semiperiphery as part of a larger middle-tier group, the average continuous coreness score (across the sample period) of the core contenders (.122) is actually slightly closer to the core (.189) than the semiperiphery (.052).
5. In separate analyses, I re-estimated the fully specified models when making both core groups the excluded reference category. In the Freedom House model, the democracy gap narrowed between the core and the weakest periphery ($p < .001$), while the gap did not significantly change for the other groups. In the Polity IV model, the democracy gap narrowed between the core and the semiperiphery ($p < .10$), but widened between the core and the strong periphery ($p < .01$), weak periphery ($p < .10$), and weakest periphery ($p < .01$). Thus, even in these models, convergence between the core and non-core is idiosyncratic and/or is accompanied by divergence elsewhere.

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