Structural Inequality in the International System: The Growth of International Organization Networks

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INTRODUCTION

Scholars of world politics are feeling optimistic. The international system is characterized by an increasingly dense network of international organizations (IOs) that shape politics. With global economic inequality rampant, many are hopeful that pervasive institutionalization of global governance makes the world a better place, preventing war (Mansfield 2000; Oneal 2003; Oneal 1999) and repression (Hafner-Burton 2005), promoting education (Meyer, Ramirez, and Soysal 1992), democratization (Pevehouse 2005), trade (Rose 2004), and protection of the environment (Frank, Hironaka, and Schofer 2000), and advocating cooperation among nations (Chayes 1998; Keohane 1984). IOs, scholars tell us, offset threats of all kinds posed by international anarchy and national sovereignty.

This optimism masks another face of international relations. IOs also create social networks that generate relationships of inequality among nations, placing certain states in privileged positions over others and awarding some greater prestige. These structural inequalities matter; they are known to shape political life in important ways, at times providing incentives for conflict, domination, and even war (Dorussen and Ward 2006; Hafner-Burton and Montgomery 2006). As a pervasive feature of modern politics, these inequalities are also evolutionary. Yet as a subject of political inquiry, their formation and evolution have for the most part been ignored in favor of their effects. Most researchers see IOs as tools that moderate the existing anarchical structure of international relations, not as features that generate structure and thereby influence states' behaviors. Structural realist theories of political science argue that IOs are epiphenomenonal to state relations (Mearsheimer 1994/95),while standard theories of sociology contend that IOs create a universalistic world polity (Meyer et al. 1997).

This paper concerns the rise and evolution of structural inequality in world politics created by the global network of IOs. We take as our starting point the assumption, widely disregarded in political science,[1] that organizations create social networks. In the same way that firms organize corporate networks of relations or that schools organize social interactions among children, IOs structure international relations among nations, binding states together in affiliation networks created by joint membership.

Understanding IOs in this way means accepting that global political organizations are more than attributes of states that place institutional constraints on states' behavior. Like markets and militaries, we argue that IOs also stratify the international system, placing states in different relative positions in the larger network of global governance and endowing states with varying degrees of prestige (advantaging some states over others), thereby shaping international relations. Influence in world politics is not a substance or a possession like oil or money; it is a relational feature that emerges in the transactions of states (Brams 1968; Waltz 1979). IOs are the contemporary medium for these transactions.

In standing with the theme of this conference, we approach this subject with three preliminary aims: (1) to identify relational attributes created by the social network of IOs—prestige and position; (2) to generate empirical indicators to measure each concept and that can be widely applied to the study of world politics; and (3) to map the evolution of structural inequality in these attributes over time globally and across several prominent states. We begin by introducing social network analysis as a framework of investigation standard to a variety of disciplines outside of political science. We then briefly consider standard views of IOs and

[1] There are a few recent exceptions (Dorussen and Ward 2006; Hafner-Burton and Montgomery 2006; Ingram, Robinson, and Busch 2005; Maoz et al. 2005; Smith and White 1992).

inequality and explain how IOs create a global social network. Next, we define our social network concepts and indictors of prestige and position and use them to create specific measures of inequality generated by the network of organizations. Finally, we turn to preliminary historical analysis and map the evolution of structural inequality over time.

SOCIAL NETWORK ANALYSIS

Social network analysis (SNA) is a research methodology distinctive to the social and behavioral sciences. Like rational choice, it is not a unified set of theories but rather a framework for analysis based on a set of primary assumptions and formal tools which can be applied to an assortment of subjects. At its most essential, SNA concerns relationships defined by linkages among units, such as people, institutions, or even states. The underlying difference between SNA and standard ways to analyze a behavioral process is accordingly the use of concepts and indicators that identify associations among units (Wasserman and Faust 1997).

SNA concepts and indicators are relational. They describe the connections which associate one actor to another and cannot be reduced to the traits of an agent; relationships are not properties of agents but of systems of agents (Scott 2000). SNA research is thus grounded by the principles that actors and their behaviors are mutually dependent rather than autonomous; that relational ties between actors are channels for the diffusion of resources, whether material or nonmaterial; and that persistent patterns of associations among units create a social structure within which actions take place that provides occasions for or restrictions on behavior (Wasserman and Faust 1997).

Although generally disregarded by mainstream political science, research in anthropology, economics, organizational studies, social psychology, and sociology demonstrates that social networks operate on many levels and in many issue area. SNA has been used to

explain exchange networks (Bonacich 1987), adult kinship and relationship networks (Hoyt and Babchuk 1983; Mayer 1984), electronic networks (Kraut et al. 1998) and networks among children (Benenson 2001). Studies apply SNA to explain status hierarchy among chickens (Chase 1980) and primates (Cheney 1992; Dunbar 1992), as well as to explain global economic stratification (Rossem 1996; Snyder and Kick 1979), transaction flows in the international system (Brams 1969), international trade (Nemeth and Smith 1985; Smith and White 1992) and communication (Kim and Barnett 2000), democratic networks (Maoz 2001), and alliances (Maoz et al. 2005).

SNA has also been widely used to study organizations, particularly by sociologists and social psychologists. Research includes SNA of corporations (Ahuja 2000; Davis and Greve 1997; Davis and Mizruchi 1999; Powell, Koput, and Smith-Doerr 1996), intraorganization networks (Friedkin 1982; Hansen 2002), schools (Estell 2002; McFarland 2001; Roland 2002; Salmivalli 1997; Xie 2003), universities (Friedkin 1983), laboratories (Allen and Cohen 1969), media (Contractor and Eisenberg 1990), and civil society organizations (Lake and Wong 2005). Recently, a few scholars have begun to acknowledge that IOs create social networks among their members and that these networks shape politics in very significant ways that are different from conventional understandings of what IOs do (Beckfield 2003; Dorussen and Ward 2006; Hafner-Burton and Montgomery 2006; Ingram, Robinson, and Busch 2005; Kim and Barnett 2000; Oneal 2003). These perspectives are only just developing and most concern themselves with the effects of organizational networks on various behaviors.

INTERNATIONAL ORGANIZATIONS AND INEQUALITY

Most scholars of international organization today view IOs as a vehicle for cooperation instead of social networks that structure world politics by placing states in relative positions and

endowing them with prestige in the international system. Our collective knowledge on organizations tells us that IOs encourage the exchange of information between states and create occasions for coordination among governments (Chayes 1998; Keohane 1984). They provide channels for states to articulate credible commitments to a particular action (Moravcsik 2000; Pevehouse 2005). They create dense systems to diffuse global norms among states with very different cultural and political histories, teaching elites new values, generating a mutual sense of identity, legitimating collective decisions, and changing notions of identity and self-interest (Deutsch 1957; Finnemore 1996; Johnston 2001; Oneal 1996; Russett 1998). They embody world culture and enact policy scripts composed of standardized elements that are deemed legitimate in their environments (Meyer et al. 1997). They reinforce democracy and enhance the progress of markets (Oneal 1999; Russett 1998; Russett 2001). And they increase the costs of aggression, establishing conflict resolution mechanisms, and changing state preferences to be less belligerent (Russett 2001).

These standard points of view are helpful. But on the whole, they either ignore how organizations structure the international system—focusing instead on how IO membership alleviates the problems associated with international anarchy—or alternatively, see that structure as reasonably standardized and generally constructive—taking for granted that relational ties are practically free from discrimination. Both views overvalue the role that IOs play in smoothing the progress of international relations. And they stand in sharp contrast to research in most other social and behavioral sciences demonstrating that organizations of all kinds create social networks, which in turn create disparate structures that shape behavior in important ways.

We know very little about the social network of IOs and even less about states' relative positions of structural inequality within that network. Previous studies do provide rudimentary

information about inequality; most measure structural inequality across the number of IOs a state belongs to relative to other states. We know, for example, that during the first half of the 20th century states joined IOs at exponential rates (Wallace 1970); that rich states have tended to belong to more organizations than poor states (Shanks 1996); but that inequality in the number of IO memberships has steadily declined since the 1960s, as more and more states from the periphery join the network (Beckfield 2003).

This knowledge is partial. Counting the number of organizations a state belongs to or the number of mutual memberships two states share provides little information about the structure of inequality these organizations create in the international system. It says nothing about which states are most central to global governance, which are isolated, or how states group their associations. These are fundamental questions of modern politics that require a relational perspective on IOs and some attention to the ways in which they structure inequality in the international system.

SOCIAL POSITIONS AND PRESTIGE

A state's structural position relative to other states in the system places external constraints and pressures on it, while a state's power enables it to take actions. Both concepts have long been staples of international relations theory; both structural realism (Waltz 1979) and world systems theory (Wallerstein 1974) argue that state action is constrained by outside influences due to a state's material position in the international system and enabled by a state's resources. For realism, a state's position is determined by the distribution of material power. Rationalist theories argue that states with similar levels of material power may be more likely to conflict due to uncertainties about the likely outcome of war (Fearon 1995). Additionally, structural realists argue that the overall amount of conflict in the system is affected by the distribution of material

power. Certain systemic configurations are more or less likely to lead to conflict than others. In particular, bipolar systems with two great powers are much more stable than multipolar systems with many great powers (Waltz 1979). By contrast, world systems theory argues that a state's position in the system (core, semi-periphery, or periphery) depends on ties; in particular, economic flows and military treaties among all of the states in the system. These ties flow among states in the core and between states in the periphery and the core, but not among states in the periphery (Borgatti and Everett 1999; Rossem 1996; Snyder and Kick 1979). Conflict is likely between periphery and core.

Like world systems theory, social network analysis derives states' positions and power (which we call prestige) from the ties between nodes in a network. However, instead of using material ties, social network analysis uses social ties. A state's social position in the international system, like its material position, constrains what a state can do by exposing a state to external pressures as well as feedback from its own actions, while its social power enables a state to take action. Both are derived from the overall pattern of social ties in the entire social network.

We focus on social ties between states that are constituted by common international organization membership. While many social network studies only determine whether a tie exists or not between two nodes, information on the strength of a tie can be used to perform a more in-depth analysis of the structure of a network. In the specific case of the social network formed by IO membership, the strength of a tie between two states is measured by the number of shared IO memberships. The distribution of social ties in the international system, like the distribution of material power, is uneven; some states have very strong ties to many other states, while others have weaker ties to only a few. The distribution of ties determines states' structural positions relative to each other; states with similar patterns of ties are placed into structurally similar

positions. A state's social power, or prestige, is an attribute that a state possesses by virtue of its direct relational ties with other states (although this can be weighted by the prestige of the other states); the more other countries a state is connected to more strongly, the more prestige a state possesses.

Agents that are in structurally similar social positions are expected to act in similar ways (Borgatti 1992; Faust 1988; Sailer 1978-1979). However, how this similarity of positions alters agents' behaviors depends on whether structurally similar agents see each other as being in competition within the same social niche or whether they identify with each other and cooperate instead (Burt 1987). Identification and cooperation among similar agents does not necessarily mean a decrease in competition in general; in-group favoritism can be combined with hostility towards out-groups (Levine and Moreland 1998); well-defined groups can support aggression against others (McFarland 2001).

Social theories common to a variety of behavioral sciences predict that agents with greater prestige may exhibit a greater or lesser propensity to conflict with others (Estell 2002; McFarland 2001; Pettit 1990; Prinstein 2003; Wright 1996; Xie 2003). Prestige, a form of social capital, enables agents to draw on the resources of others to obtain certain goals (Bourdieu 1986). Different theories of social capital argue that it results from being connected to other important actors or from being connected to actors that are less well-connected; two in particular are predominant (Portes 1998). The first theory holds that ties to other prestigious actors makes an actor even more prestigious (Coleman 1990); the second argues that connections to weakly-connected actors are more valuable as social capital because acting as a bridge between disconnected parties is a powerful position (Burt 1992).

MEASURING IO SOCIAL NETWORKS

Both structural position and prestige are derived from the strength of ties between states, which we measure as the number of IOs that two states have in common. For each year, we take the *n* states and *k* IOs that exist for that year,[2] forming an *n* by *k* affiliation matrix *A*.[3] Each entry is either 1 (if a state is a full member of an IO) or 0 (if not). We then convert the affiliation matrix *A* into a sociomatrix *S* by multiplying the matrix by its transpose ($S = A'A$). Each off-diagonal entry s_{ij} is equal to the number of IOs that states *i* and *j* have in common, while the diagonal s_{ii} is equal to the total number of IOs country *i* belongs to.[4]

We use this matrix to derive measures of structural position and prestige. States can be grouped together by how similar or different their positions are vis-à-vis other states. Structural positions are determined by measuring the distances between every pair of actors, then grouping together actors based on their common distance from other actors in the same group as well as actors in other groups (called clusters in social network analysis). We use the absolute value metric, in which the distance between two states is

$$d_{ij} = \sum_{k \neq i,j} \left| s_{ik} - s_{jk} \right|$$

[2] See the COW2 project (2003) and Pevehouse, Nordstrom, and Warnke (2003) for the COW2 criteria for state and IO existence respectively. We count only full members of IOs.

[3] An affiliation matrix is a social network term for a special case of a two-mode matrix. A two-mode matrix has two distinct types of entities; an affiliation matrix is a two-mode matrix with only one set of actors (Wasserman and Faust 1997).

[4] All social network attributes were calculated using the sna package in R (Butts 2005; R Development Core Team 2005)

After determining the distance between every pair of countries, we partition states into clusters using average-link hierarchical clustering. Hierarchical clustering starts with each actor in a separate group, then increases the distance level using the clustering criteria until the desired number of clusters or the desired level is reached. We use average-link clustering because it produces more homogeneous and stable clusters than other methods.[5] Either a level or a number of clusters can be set. Here we set the level to the median distance between states in order to see whether the international system has become fragmented into more positions or has consolidated into fewer positions.[6]

A *prestigious* actor is the recipient of many ties.[7] From the sociomatrix *S*, we can compute prestige values for each state. The appropriate prestige measure to use depends upon whether higher prestige comes from being linked to prestigious actors, any actors, or non-

[5] See Wasserman (1997, p. 381) on different clustering criteria. For example, single-link clustering puts together the two clusters with the smallest minimum pairwise distance, and tends to create more heterogeneous, less stable clusters. Complete-link clustering, by contrast, merges two clusters with the smallest maximum pairwise distance in each step. Average-link clustering strikes a balance between the two.

[6] Elsewhere we have set the number of clusters to be proportional to the number of states in the system in order to test the hypothesis that states that inhabit larger clusters are more prone to conflict (Hafner-Burton and Montgomery 2006).

[7] See Wasserman (1997, Chapter 5) on centrality and prestige. Technically, these two measures differ based on whether the underlying ties are symmetrical (centrality) or directed (prestige); since ties between states are symmetrical, we use a centrality measure rather than a prestige measure. However, the two are conceptually very similar.

prestigious actors. For example, bargaining leverage may be increased if actors have connections to otherwise weakly connected actors,[8] while being connected to strongly connected actors may increase the resources a state can draw upon. As a default assumption, we treat all actors as equal, since it is unclear whether being connected to strong or weak actors would be more likely to affect conflict (or, for that matter, what weight should be put on the prestige of an actor). We then define the *prestige* of a state as the sum of a state's ties to all (*n*) other actors in the system, known as degree centrality (Wasserman and Faust 1997, p. 199):

$$PRESTIGE_i = \sum_{i \neq j}^{n} S_{ij}$$

We also generate eigenvector centrality and Bonacich power centrality measures for comparison; eigenvector centrality assumes that connections to more prestigious actors increase prestige, while negative weights in Bonacich power centrality increase the value of ties to more weakly connected actors.[9] Due to the density of connections in the international system, neither measure had a large effect on the ordering of most actors' prestige values.

We use two different metrics, Gini and coefficient of variation (Firebaugh 1999), to measure inequality in social network positions across time. The coefficient of variation is simply

[8] See Bonacich (1987) for a generalization of centrality measures and conditions under which ties to weakly connected actors may be a source of prestige.

[9] The selection of the weight β in Bonacich's centrality measure is often arbitrary; moreover, this measure is often unstable to changes in β. When β is set to the reciprocal of the largest eigenvalue of *S*, Bonacich centrality is a constant multiple of eigenvector centrality. We set β to the *negative* reciprocal of the largest eigenvalue of *S* to obtain a centrality score that is in a sense the reciprocal of eigenvector centrality.

the standard deviation of a measure divided by the mean. These two measures are generally highly correlated for social network measures; for indegree centrality, the correlation is 0.99, while for average distance, the correlation is 0.87. To measure position inequality across the entire system, we first determine the average distance for each state and then calculate the inequality in average distance; for prestige inequality, we calculate the coefficient of variation of degree centrality. Due to the high correlation between our two metrics, we only plot the coefficient of variation. It is also a better measure of inequality for distances between states, since distance is not a resource or quantity, but rather a measure of how relatively far apart the states in the international system are. If all states but one were an equal but small distance apart and a single isolated state was very distant from the rest, then we would want the inequality measure to be small, representing how close together states are; however, the Gini coefficient would be large, while the coefficient of variation would be small.

HISTORICAL EVOLUTION OF THE NETWORK

We use these SNA tools to trace the historical evolution of inequality generated by the network of IOs over time. Our objective is to refocus analytical attention away from the standard worldview that regards states as independent users of IOs toward a worldview that understands states as embedded in an interconnected set of organizational associations that structures world politics by endowing members with prestige and placing them in different positions in the international system (Hafner-Burton and Montgomery 2006). As we will illustrate, this analytical shift has implications for the ways in which we understand the context of international relations.

Our evidence is derived from pooled cross-national time-series data on state membership in IOs during the 20th century, provided by Pevehouse et al. (2003). Where relevant, we focus our attention on six time periods of historical interest: immediately preceding (1910) and

following (1920) WWI; during (1942) and following (1952) WWII; the fall of the Berlin Wall (1989); and the end of the 20th century (1999). Like others before us, we recognize that IOs exhibit a great deal of institutional variation (Boehmer, Gartzke, and Nordstrom 2004; Ingram 2006). Nevertheless, we adopt the simplifying assumption here that IOs can be analyzed as if they are a homogenous population of associations. We thus assume that social network properties that emerge through one set of IOs (such as security organizations) are socially equivalent to properties emerging though another set of IOs (such as economic organizations). We begin by mapping inequality at the global level and then turn our attention to the experience of a dozen politically prominent states.

Prestige in the 20th Century

Figure 1 suggests that global levels of prestige inequality have declined over time. The figure illustrates four continuous trends. First, the number of states in the international system (plotted against the y-axis) has increased dramatically since the 19th century; over one hundred and fifty new states have come into existence, as old empires fell and colonization waned.[10] Second, the number of IOs (plotted against the left-hand axis) has grown exponentially since the end of WWII as nation-states have proliferated. The international system at the beginning of the 20th century was sparsely populated by organizations; 100 years later, the number of IOs has radically outpaced the growth of states and world politics is characterized by dense networks of organizations.

[10] We measure the number of states in the international system in accordance with the Correlates of War project (2003).

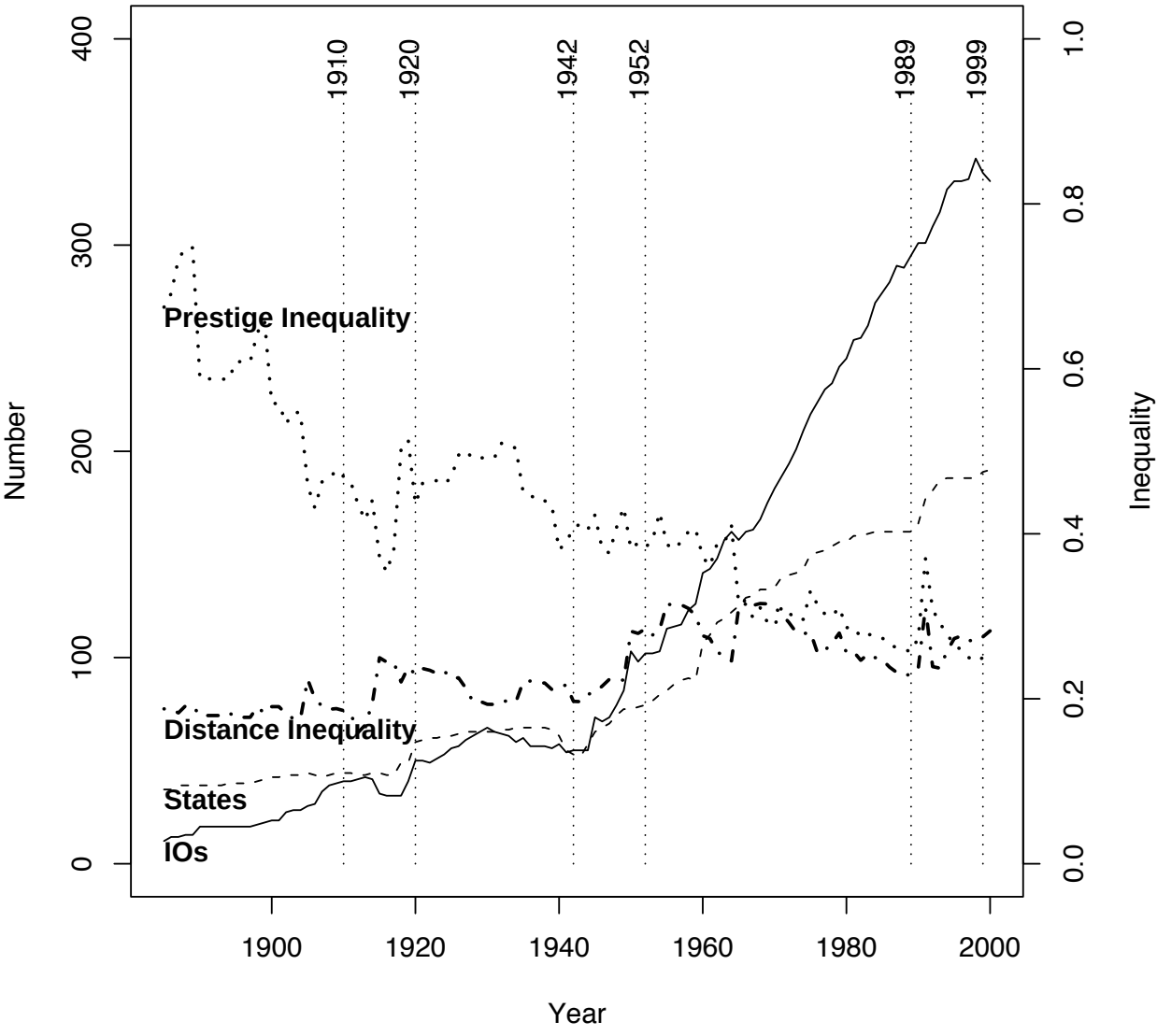

Figure 1: Population of IOs, States; Prestige and Distance Inequality, 1885-2000

Third, while states and IOs have proliferated, world levels of prestige inequality (plotted against the right-hand axis) have declined over time. As more and more states belong to more and more IOs, their associations are distributed increasingly evenly over the long-term (Beckfield 2003). This trend suggests that a growing number of states are gaining prestige in the international network of IOs; most belong to many organizations and most share ties with many

other states. It also suggests that world trends of prestige inequality have been bumpy, as the pattern of decline is non-monotonic. In particular, prestige inequality took short-term upswings at the turn of both the 20th and 21st centuries and during and between both World Wars.[11]

Fourth, while the distribution of prestige has become more equal, the distribution of distances has become wider, indicating that some groups of states have become much closer to each other, leaving others more distant. While there is some variation in our distance inequality measure (plotted against the right-hand axis), two general increases in inequality are apparent: at the beginning of the first and the end of the second World Wars. While prestige itself is becoming more evenly distributed, states are not forming a single cohesive group (which would decrease the variation in distance), but rather are drifting apart into their own separate cohesive groups. We investigate this trend further below.

World level indicators can be misleading because they smooth out the important relative variations that we know shape international relations. Figure 2 adds caution to optimism. Here, to economize, we plot the relative prestige (where the prestige of each state is divided by the prestige of the most prestigious state in the system that year) of a dozen politically prominent states over six panel years: 1910, 1920, 1942, 1952, 1989 and 1999. We have chosen a sample of states that have been in existence since before 1910 (and existed at the beginning of every one of our years) that contains the great powers and at least one representative from every major region: Brazil (BRA), China (CHN), Ethiopia (ETH), France (FRN), Iran (IRN), Japan (JPN), Mexico (MEX), Russia (RUS), Thailand (THI), Turkey (TUR), the United Kingdom (UKG) and the United States (USA).

[11] This decline trend is robust across the alternative Gini coefficient indicator common to studies of inequality.

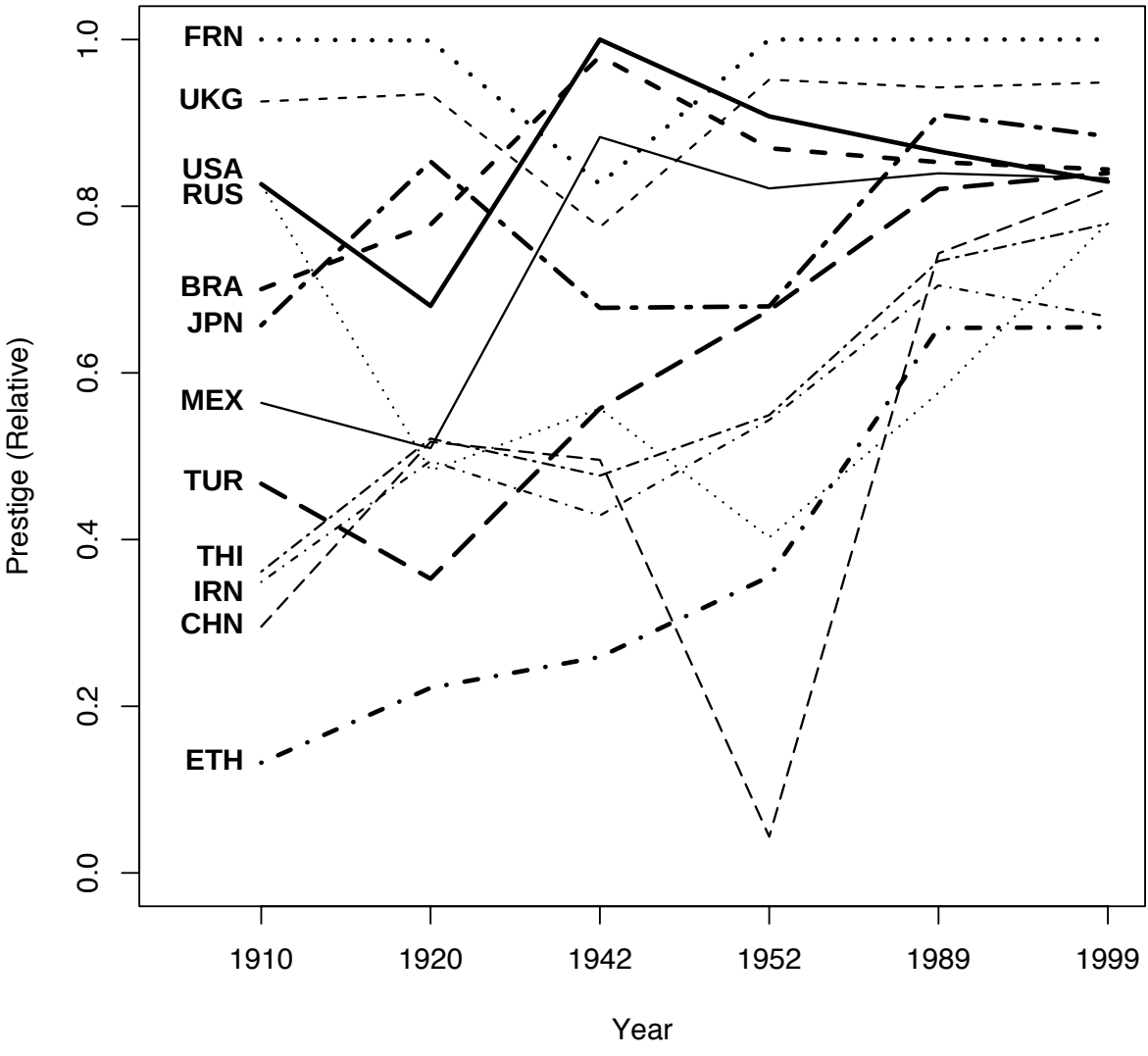

Figure 2: Relative Prestige for twelve prominent states, 1910, 1920, 1942, 1952, 1989, and 1999[12]

Figure 2 illustrates three historical trends. First, prestige rankings in the IO network exhibit hierarchy, but they are hardly stationary. Differences in relative prestige between rich core states (such as France or the United Kingdom), poorer developing states (such as Mexico or

[12] Note that the y-axis is an interval rather than continuous scale.

Turkey), and impoverished underdeveloped states (such as Ethiopia) have declined over time. For example, France had 7.5 times the prestige of Ethiopia in 1910, but only 1.5 times its prestige in 1999. The United States started out with 1.5 times Mexico's prestige in 1910; by 1999, their scores were nearly identical. Structural inequality created by the IO network accordingly looks very different from inequality created by relative disparities in military power or markets and suggests that IOs organize the international system in ways that are not entirely derivative.[13]

Second, this process of convergence has not been uniform over the course of history. States' evolution of relative prestige derived from the IO network has been bumpy and non-monotonic in almost every case (with the exception of Ethiopia). Moreover, prestige is clearly not proportional to military or economic attributes.

Third, states' rank orderings of relative prestige have shifted during the 20th century. Table 1 provides an additional illustration to clarify the information in Figure 1. Of the dozen states shown here, only three have held the same rank order of relative prestige from 1910 to 1999: the two most prestigious—France and the United Kingdom—and the least prestigious—Ethiopia. Four experienced a decline in their relative rank over the century— Russia, Iran, Thailand and the United States—while five witnessed an increase—Brazil, China, Japan, Mexico and Turkey. Contrary to structural positions created by the world division of labor, structural inequalities created by the network of IOs are not a stable fixture of international relations but variable over time (Chase-Dunn 1998).

[13] This is a point we intend to explore in greater detail in our next draft.

TABLE 1. Rank Orderings of Relative Prestige Among Twelve Prominent States, 1910-1999

	Year					
	1910	1920	1942	1952	1989	1999
United States	3.5	5	1	3	4	7
Mexico	7	8	3	5	6	6
Brazil	5	4	2	4	5	4
United Kingdom	2	2	5	2	2	2
France	1	1	4	1	1	1
Russia	3.5	10	7.5	10	12	9
Ethiopia	12	12	12	11	11	12
Iran	10	9	11	9	10	11
Turkey	8	11	7.5	7	7	5
China	11	7	9	12	8	8
Japan	6	3	6	6	3	3
Thailand	9	6	10	8	9	10

Fourth, certain groups of states trend together over time. For example, France and the United Kingdom enjoy the highest relative prestige available to any state in the international system, a degree of political influence that is not derived from their market or military capabilities alone. Their historical trends show a clear dip during WWII, driven by the failure of IOs to prevent war and the resulting death of many European organizations. By the early 1950s, both states had recovered their loss of associations and have held their relative prestige in the network of IOs steady ever since.

The Americas have also evolved together. Although they began with substantial disparities in relative prestige at the turn of the 20th century, Brazil, Mexico and the United States all peaked relative to other states during WWII, an effect driven by European decline. Yet American prestige would deteriorate in the immediate aftermath of the war, as Europe reestablished its connections to the world of global governance. Today, all three countries enjoy roughly equal levels of relative prestige, notably below the Europeans.

Japan was one of the only states to experience a substantial increase in relative prestige from 1910 to 1920, shielded from the isolation many states faced during WWI. Like the

Europeans, they too would decline substantially in prestige relative to other states during WWII. Devastated by war and isolated from the international community, recovery of their associations to the social network of IOs took longer than in Europe. By 1952, Japan remained at the same level of prestige that it had during the war. But during the Cold War, Japan rose steadily in prestige and by the end of the 20th century is third in our sample of twelve states only to France and the United Kingdom.

China and Russia also experienced similar trends during the 20th century. Both suffered substantial declines in relative prestige during Communism and both enjoyed some recovery by the time the Berlin Wall had fallen. Russia, which achieved considerable relative prestige in 1910 shortly before the Revolution, saw their status collapse during both WWI and WWII. Although they would rise during the Cold War, Russia experienced its most dramatic increase in prestige after the collapse of the Soviet Union. China, by contrast, had little relative prestige at the beginning of the 20th Century and would experience a substantial increase throughout both World Wars. Yet their prestige would fall dramatically at the beginning of the Cold War, shortly before the Cultural Revolution. While China was among the world's most isolated in the early 1950s, they experienced a dramatic rise in relative prestige by 1989, increasing still further by the end of the century.

Iran and Thailand have almost identical patterns of evolution in this respect. Both began at the turn of the 20th century at a disadvantage but have risen almost steadily over the years to increasing positions of relative prestige. So too have Turkey and Ethiopia, two nations with low relative prestige in 1910 that had gained a substantial increase 90 years later.

Position in the 20th Century

While prestige inequality is generally on the decline in the international system, structural positions are becoming increasingly fragmented, as can be seen in Figure 3. The location of each country in this figure is based on its distance from all other states. To graph the distance from every state to every other state in a system with n states, n-1 dimensions are required; we use multidimensional scaling to reduce this to two dimensions. Consequently, distances between states in this figure have meaning, but are not an entirely accurate representation. Distances are not comparable across figures, since each axis of each plot is scaled for readability. Each cluster is assigned a symbol (circle, square, diamond, upward triangle, or downward triangle); the outer limits of each cluster in this two-dimensional space is outlined to better identify the limits. The mean prestige of each group is given in parentheses in the legend for each year.

We see a rising number of clusters over time, which indicate that the network structure of international relations is shifting over time, as states fragment into more subgroups. The cutoff to determine the number of groups (median distance) is somewhat arbitrary, but given any consistent cutoff level (mean, median, etc.), the number of groups clearly does increase over time. Although a single core of prestigious states persists (with some shifts in membership over time), the gap in relative prestige between the top two or three groups has diminished significantly. The third most prestigious group in 1910 had a third of the prestige of the most prestigious; in 1999, the third most prestigious group had over two-thirds of the prestige of the most popular group.

Many of the patterns of group membership are similar to the patterns of relative prestige in the international system. From 1910 through 1999, the UK and France were consistently in the group with the most prestige with the exception of 1942. This is due to the death (or temporary elimination in some cases) of many European IOs during the war. As a result, the most

prestigious group is primarily composed of American states in 1942, including Brazil, the United States, and Mexico. Russia has had a history of slowly moving from the most popular group in 1910 to the third most popular in 1952 and 1989; however, in 1999, it moved back up to the second group. Similarly, China moved into the second most popular group by 1920, then became almost entirely marginalized by 1952 (even Ethiopia was in a higher-ranked grouping). It has steadily moved back into the international system since then. Although states like Ethiopia continue to be quite some distance from the most prestigious states, the rise in average prestige for the more marginal groups is indicative of the splintering of the international system into popular, yet separate, groupings. There are still a few entirely isolated states (Taiwan is the outlier in 1989 and 1999, as Afghanistan and Nepal are in 1920) as well as a clear marginalized grouping with prestige a third of the most popular group in 1999, but the fraction of states that are relatively marginalized is shrinking over time.

The distribution of distance has slowly widened over time. This is not simply due to an increase in the number of states or the number of international organizations, but rather is due to an increasing tendency of states to set up smaller, more regionalized organizations rather than all states joining organizations that duplicate existing membership patterns. The small but definite increase in the distance inequality is indicative of this trend. This result, along with the increasing number of groups in the system, work against a notion of the international system as being divided into two (core/periphery) or three groups (core/semi-periphery/periphery) as world systems theory would have it. Although a core of tightly connected states clearly does exist, the more peripheral groups have internal connections with each other as well as connections with a notional core of states.

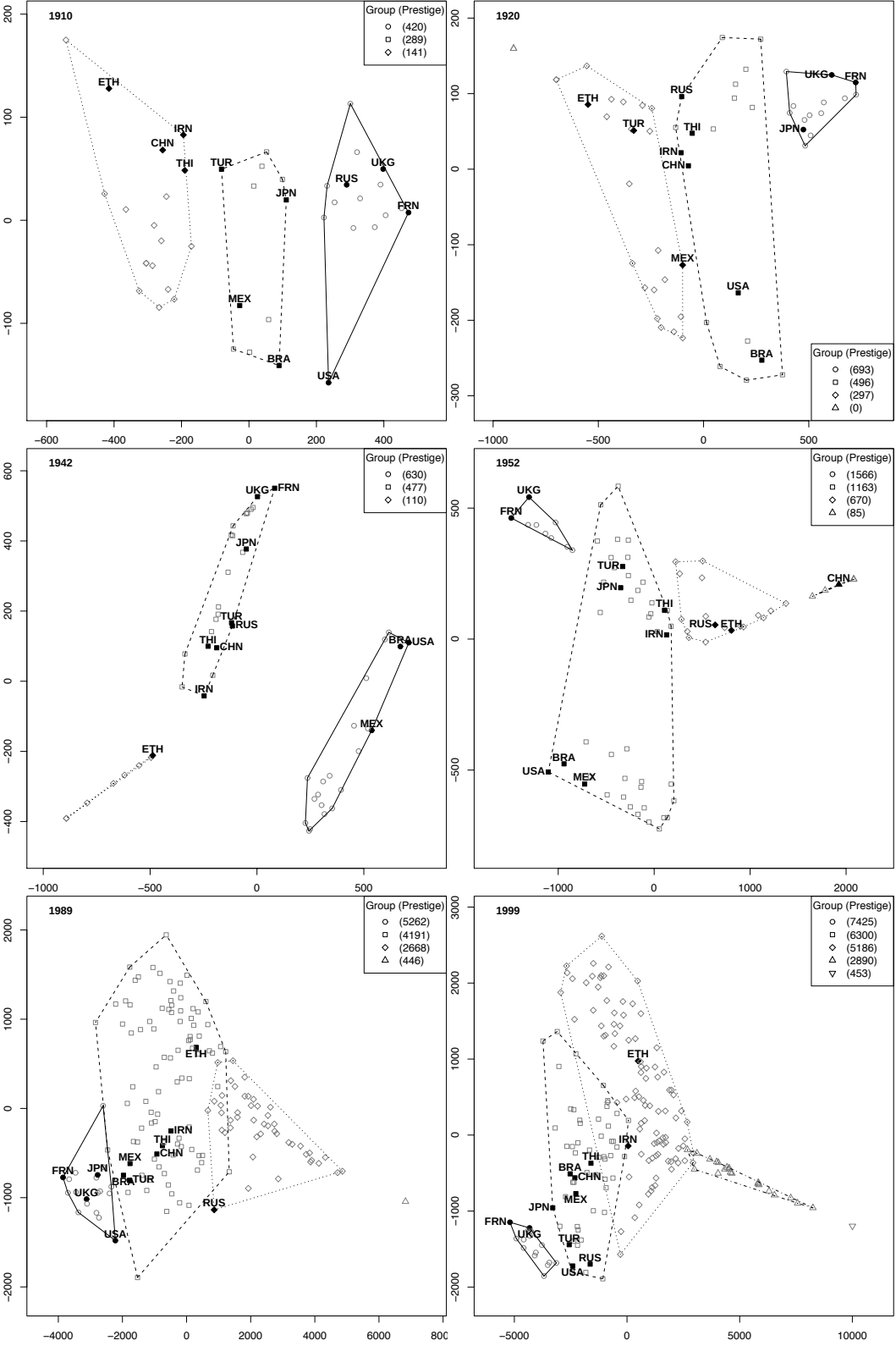

Figure 3: Clusters in the international system, 1910-1999

CONCLUSION

We live in a world distinguished by the pervasive institutionalization of world politics. IOs are everywhere and scholars generally seem convinced that their spread promises peace, justice, and cooperation. Perhaps, but political scientists are not seeing the whole picture. IOs do not simply take up space in the international anarchical system. They are not just isolated buildings that decision makers use to make choices. They also provide a structure to our system of international relations by placing states in various positions within the network of associations and providing certain states with greater or lesser prestige than others.

This structure exists inside anarchy; it is hierarchical, discriminatory and evolutionary. Like relative disparities in markets and militaries, relative patterns of associations in IOs give certain states privileges of action and influence in international relations. And this matters. An emerging body of research has begun to show that the IO network organizes structural inequality differently from trade or capabilities in ways that shape the politics of war (Dorussen and Ward 2006; Hafner-Burton and Montgomery 2006). It may likely shape a whole range of political issues that we do not yet know about. We thus need a much richer understanding of IOs in international politics which takes into consideration how the IO network is structured, which states occupy privileged and disadvantaged positions in that network, and how those features have evolved over the years.

This paper is our preliminary attempt at tackling this project. Our aims here have been exploratory and descriptive. Our evidence has shown several notable features of the network: that it is characterized by substantial inequality in prestige among states; that this imbalance is diminishing as more and more states belong to more and more IOs; that the process of convergence has been bumpy and variable for different states; that while the distribution of

prestige has become more equal, states have actually grown further apart and are forming separate cohesive groups, which are multiplying. It is our hope that the participants in this workshop will have some thoughts to share on where we should go from here; we welcome your suggestions.

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