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Fading Friendships: Alliances, Affinities and the Activation of International Identities

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In international politics 'friends' co-ally. But friendship is relational and contextual. Countries are more likely to act on particular common interests if few other actors share that identity. In contrast, new cleavages are likely to emerge as an identity becomes ubiquitous. The tendency for states to form alliances based on certain affinities is thus best thought of as a variable, rather than as a constant. For example, in systems where democracies are scarce, democracies eagerly co-ally. As democracy becomes common, however, incentives binding democratic allies together weaken compared to other definitions of mutual interest. This argument, and the evidence we provide, suggest that the salience of identities as cues to affinity and difference vary with the distribution of types in the system.

Countries form alliances to co-operate and to co-ordinate their national security policies. As treaties, alliances indicate an affinity among nations, or they reflect the need to document, advertise or encourage such an affinity.[1] Alliance contracts are thus most frequent among 'friends'.[2] Affinity or common purpose in turn imply that demand for alliances waxes and wanes as friendships, threats or expedience form or dissolve.

What causes states to create or alter their friendships? One of the basic questions for students of international affairs – one for which we have few answers and little systematic evidence – involves the origins of interests and affinities. While anecdotes abound, not much is known about why states become friendly, or what might lead relationships to endure or to deteriorate over time. One way to begin to evaluate the evolution of interests is to look at concrete indicators of institutional continuity and change. Alliances appear particularly useful in this regard, given their formal, but also impermanent nature. States that form alliances must prefer these ties to other relationships that could conceivably (but do not) occur. Conversely, states that abandon alliances, or that fail to form alliance treaties, must prefer other friendships or no formal commitment to the status quo.

In the wake of the democratic peace observation, research on alliances paid particular attention to the effects of regime type in delineating affinities and difference. Early studies

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[1] Bruce Bueno de Mesquita, *The War Trap* (New Haven, Conn.: Yale University Press); James D. Fearon, 'Signaling Foreign Policy Interests: Tying Hands versus Sinking Costs', *Journal of Conflict Resolution*, 41 (1997), 68–90; Michael Spence, 'Job Market Signaling', *The Quarterly Journal of Economics*, 87 (1973), 355–74.

[2] Alastair Smith, 'Alliance Formation and War', *International Studies Quarterly*, 39 (1995), 405–25.

suggested that democracies prefer other democracies as allies.[3] More recent research suggests instead that democracies are no more likely to co-ally than are autocracies.[4] If alliances form between friends, and democracies are clearly friendlier towards one another than other regime combinations, it is odd that democracies do not exhibit a noticeably stronger penchant to form or sustain alliances.

The friendliness of democracies towards one another need not be thought of as a constant. It may be that difference, and context, are as important as affinity. A system with few democracies is a much more hostile world for democracies than one with many informal friends. At the same time, the number of democracies in the system will tend to make any given pair of democracies less needy of mutual protection. Thus, democracy – or any other identity – could vary in its impact on affinity across space and time. After reviewing the relevant literature, we develop a formal agent-based model of alliance formation. The model reveals how identities become less salient as cues to co-operation as a given identity becomes prevalent in a system. Democracies are less likely to ally (and autocracies more likely to ally) as democracy becomes ubiquitous in international politics. Alliance patterns over the past two centuries appear to substantiate predictions from the model.

ALLYING TO WIN

Alliances have long been recognized as a key component of the study of international security. Realists in particular view alliances as one of two dynamics conditioning the structure of world power.[5] Countries can balance 'internally', forging military might through their own economic capacity and national determination, or they can contrive 'external' balances through foreign alliances. Nations blessed with neither size nor prosperity depend as a matter of course on informal or formal alignments to pursue the national interest.[6] Large or capable nations have the luxury of arming, but building a more powerful military is expensive and can raise considerable difficulties with other nations, where uncertainty and internal balancing invoke effects of the security dilemma.

Waltzian 'defensive' realism in particular emphasizes the need for states to be circumspect about arming.[7] States are not free from harm if their quest for power causes other nations to form opposing coalitions.[8] Yet, it is not obvious from Waltz's theory

[3] Randolph M. Siverson and Juliann Emmons, 'Birds of a Feather: Democratic Political Systems and Alliance Choices in the Twentieth Century', *Journal of Conflict Resolution*, 35 (1991), 285–306; Michael W. Simon and Erik Gartzke, 'Political System Similarity and the Choice of Allies: Do Democracies Flock Together or Do Opposites Attract?' *Journal of Conflict Resolution*, 40 (1996), 617–35.

[4] Brian Lai and Dan Reiter, 'Democracy, Political Similarity, and International Alliances, 1816–2002', *Journal of Conflict Resolution*, 44 (2000), 203–27.

[5] Alliances are arguably more amenable to change than arms spending (given other demands on national budgets).

[6] The argument applies in principle to treaties and international institutions generally. We focus on alliances as an adequate test of the argument and because pooling different types of institutions is problematic for various reasons.

[7] Charles L. Glaser, 'Realists as Optimists: Cooperation as Self-Help', *International Security*, 19 (1994), 50–90; Stephen Van Evera, 'Offense, Defense, and the Causes of War', *International Security*, 22 (1998), 5–43; Jeffrey W. Taliaferro, 'Security Seeking under Anarchy: Defensive Realism Revisited', *International Security*, 25 (2000), 128–61.

[8] Kenneth N. Waltz, *Man, the State, and War* (New York: Columbia University Press, 1959); Kenneth N. Waltz, *Theory of International Politics* (New York: McGraw-Hill, 1979).

how balancing can be generated adequately among egoistic states. While balancing may well be sufficient to achieve the social good of international stability, egoistic states are presumably better off letting others do the 'heavy lifting' needed to constrain common enemies.[9] Just as nations can free-ride within alliances, they can presumably also free-ride by not joining balancing coalitions. Since security and particularly stability cannot be denied to states that do not participate in balancing coalitions, and since balancing requires social action to be realized, defensive realism is in the odd position of juxtaposing anarchy and individual rationality with a theory that predicts collective action to provision a public good.

Power-seeking states can presumably pursue alliances for private benefit, but the strongly zero-sum nature of competition in offensive realism poses other challenges.[10] The neo-mercantilist critique of liberal trade theory is precisely that concerns about relative gains stymie co-operation under anarchy.[11] Nations that cannot co-operate over commerce because some participants will get more must similarly find it difficult to co-operate over security, where relative gains concerns are even more intense. To prefer to ally, a power-seeking sovereign and its prospective partner must each expect to obtain more power from an alliance, which of course should not be possible.[12] The realist preoccupation with zero-sum competition means that allies should seek to shirk alliance costs, while hoarding benefits. Powerful states should seek to capture any surplus, or compel corresponding transfers from allies, since any benefit foregone is a future disadvantage in the zero-sum competition of world affairs. As Niou *et al.* note, victory can be particularly hazardous for an alliance.[13]

As Powell and Snidal explain, differences between relative and absolute gains diminish as the number of participating states increases.[14] Two countries can fail to trade if each insists on receiving a majority of the surplus. Add a third relative gains egoist and all nations can prefer obtaining some benefit from commerce, rather than accepting reversion to a status quo that makes two of the three nations strictly worse off. This also implies that alliances are possible in an *n*-state world, but relative gains concerns reassert themselves if the effects of power cannot be completely internalized by the alliance. Defeating an enemy helps not just states that actively participate in a contest, but any

[9] The basic point is made by hegemonic stability theory (Robert Gilpin, *War and Change in World Politics* (New York: Cambridge University Press, 1981); William R. Thompson, *On Global War: Historical-Structural Approaches to World Politics* (Columbia: University of South Carolina Press, 1988)). See also Duncan Snidal, 'The Limits of Hegemonic Stability Theory', *International Organization*, 39 (1985), 579–614.

[10] John J. Mearsheimer, *The Tragedy of Great Power Politics* (New York: W.W. Norton, 2001); Randall L. Schweller, 'Bandwagoning for Profit: Bringing the Revisionist State Back In', *International Security*, 19 (1994), 72–107; Randall L. Schweller, 'Neorealism's Status-Quo Bias: What Security Dilemma?' *Security Studies*, 5 (1996), 90–121; Randall L. Schweller, *Deadly Imbalances: Tripolarity and Hitler's Strategy of World Conquest* (New York: Columbia University Press, 1998).

[11] Joseph M. Grieco, *Cooperation among Nations: Europe, America, and Non-Tariff Barriers to Trade* (Ithaca, N.Y.: Cornell University Press, 1990).

[12] Alliances can be made where all members receive exactly the same (proportionate) increase (decrease) in security.

[13] Emerson S. Niou, Peter Ordeshook and Gregory Rose, *The Balance of Power: Stability in International Systems* (Cambridge: Cambridge University Press, 1989).

[14] Robert Powell, 'Absolute and Relative Gains in International Relations Theory', *American Political Science Review*, 85 (1991), 1303–20; Duncan Snidal, 'Relative Gains and the Pattern of International Cooperation', *American Political Science Review*, 85 (1991), 701–26.

other nations threatened by the defeated state. Allies gain to the extent that victory can be converted into private benefits (plunder, territory, trade), but lose when victory is costly and where benefits are public (global or regional stability or security, norm enforcement). This difference between economic co-operation (where benefits are largely internalized) and security co-operation (where benefits may be public) means that explaining alliances among power maximizers is arguably more challenging than explaining the presence of international trade.

Even if egoistic states can find common ground to ally, it is far from clear who they should choose as partners. With dozens of nations in the international system, there exist thousands of potential alliance coalitions. Less than 1 per cent of the potential dyadic pairings contain an actual alliance. This seems extraordinarily choosy of countries if alliances are simply aggregating capabilities. With almost all potential alliance combinations unfulfilled, any state with narrow security interests would do well to cast its net farther afield. If instead, as seems apparent, alliances are formed among a much more restricted set of potential partners, then some additional factor beyond security or capability aggregation must be driving the high degree of selectivity in forming alliance dyads.

By the same measure, it seems very unlikely that alliance decisions are driven by uniform considerations across countries. Waltz's own theoretical framework of internal versus external balancing suggests that the decision to ally cannot be driven by power aggregation alone.[15] Sorokin offers a constrained-optimization model of the choices states make in constructing a security plan that mixes arms and alliances: '[W]hen a state relies on its own arms, it decides whether and in what way to use them; when it relies on allies, it may have access to a larger pool of capabilities, but it sacrifices control'.[16] If states all share the same security preferences, then it is not clear why they should differ in their response to the tradeoff between capabilities and control.

One possibility is that alliance selectivity and differential responses to the alternatives of arming and allying simply reflect the skewed distribution of power. Few states are sufficiently capable to add significant military potential to an alliance. Major and regional powers should be much in demand as allies, and they are. However, large, prosperous countries are also relatively intensive internal balancers, typically spending a higher proportion of gross domestic production (GDP) on defence than smaller states.[17] Weak nations constitute the majority of states, and the majority of alliance partners, as Altfeld, and later Morrow, point out.[18] Asymmetric alliance ties are much more common than pairings of roughly comparable states. Morrow explains these asymmetric alliances in

[15] Indeed, the decision to arm or ally must introduce domestic politics into international affairs, countering Waltz's conviction that international imperatives dictate foreign policy, and that domestic politics can safely be ignored.

[16] Gerald L. Sorokin, 'Alliance Formation and General Deterrence: A Game-Theoretic Model and the Case of Israel', *Journal of Conflict Resolution*, 38 (1994), 298–325; Gerald L. Sorokin, 'Arms, Alliances, and Security Tradeoffs in Enduring Rivalries', *International Studies Quarterly*, 38 (1994), 421–46, p. 424.

[17] Mancur Olson and Richard Zeckhauser, 'An Economic Theory of Alliances', *Review of Economics and Statistics*, 48 (1966), 266–79; Todd Sandler, 'The Economic Theory of Alliances: A Survey', *Journal of Conflict Resolution*, 37 (1993), 446–83; Todd Sandler and Keith Hartley, *The Economics of Defense* (New York: Cambridge University Press, 1995).

[18] Michael F. Altfeld, 'The Decision to Ally: A Theory and Test', *Western Political Quarterly*, 37 (1984), 523–44; James D. Morrow, 'Alliances and Asymmetry: An Alternative to the Capability Aggregation Model of Alliances', *American Journal of Political Science*, 35 (1991), 904–33.

terms of complementary 'alliance goods'. Weaker states want security while capable partners seek autonomy (i.e., influence). This conception and the supporting evidence reveal a more varied set of state objectives. Nations are not only power or security seeking, but are often willing to 'trade' security for other objectives, though doing so presumably dilutes a capable nation's ability to protect its own territory.

While the notion of alliance goods is informative, our ability to predict which countries ally remains limited. Knowing that alliances more frequently involve unequal powers does not tell us which of the many possible unequal alliances are most likely to form. Any attempt to explain the origins of alliances must ultimately confront the question of state preferences. Indeed, power may be instrumental; leaders perhaps view power or security not unlike how consumers or firms view income. The objective in accumulating these assets has less to do with each as an end in its own right and more to do with exercising power or security as the medium through which political goals can be realized. Powerful nations are not fortunate simply because they are powerful, but because power allows them to create a world that more nearly suits their interests or preferences. As such, we must know something of national preferences or interests to understand international behaviour.

FINDING COMMON GROUND

Smith, following Bueno de Mesquita, claims that alliances form between 'friends'.[19] Alliances are costly, with the costs conditioned to a considerable extent by a state's choice of partners.[20] Countries with similar political, economic, social or ethnic characteristics should be able to exercise influence or maintain security with the mildest tradeoffs in terms of compromised policies or abrogated autonomy. Patrons that share similar interests with their protégés can be more confident that their allies will not drag them into unwanted conflicts, while protégés need worry less about being exploited or abandoned by their patrons to the degree that each shares share similar preferences.[21]

If friends ally, what is the basis for friendship in international affairs? A multitude of issues could conceivably generate affinities or animosities among states. For example,

[19] Smith, 'Alliance Formation and War'; Bueno de Mesquita, *The War Trap*. Bueno de Mesquita uses portfolios of alliance ties to operationalize his expected utility theory of interstate war. For an improved approach to estimating affinities for the alliance portfolio measure, see Curtis S. Signorino and Jeffrey M. Ritter, 'Tau-b or Not Tau-b: Measuring the Similarity of Foreign Policy Positions', *International Studies Quarterly*, 43 (2001), 115–44.

[20] James D. Morrow, 'Alliances, Credibility, and Peacetime Costs', *Journal of Conflict Resolution*, 38 (1994), 270–94.

[21] Thomas J. Christensen and Jack Snyder, 'Chain Gangs and Passed Bucks: Predicting Alliance Patterns in Multipolarity', *International Organization*, 44 (1990), 137–68; David H. Bearce, Kristen M. Flanagan and Katherine M. Floros, 'Alliances, Internal Information, and Military Conflict among Member States', *International Organization* 60 (2006), 595–625. States that are widely recognized to have highly similar interests may not need to ally to signal common purpose. This 'common conjecture' effect could bias in favour of our hypotheses if: (a) interests become more similar as the number of similar regime types increases, and (b) the common conjecture effect is large relative to the tendency for 'friends' to co-ally. Conversely, common conjecture works against our hypotheses if interests are most compatible when regime types are scarce. We see preference heterogeneity increasing with the number of relevant actors. Gartzke demonstrates a common conjecture effect on alliance status, but it is small relative to the effect of affinity. See Erik Gartzke, 'Alliances, Reputation, and International Politics', University of California, San Diego, typescript, 2010.

scholars have debated whether trade follows the flag, or whether alliance ties reflect existing trading relationships.[22] Others claim that foreign policy preferences, and international cleavages, reflect ethnic affinities or differences or cultural biases endemic to diasporas in domestic politics.[23] Rather than propose a particular hierarchy of preferences, we adopt a dimension along which affinities and cleavages generally are believed to exist, and then discuss how these interests respond to an evolving environment.

The most prominent research programme relaxing the assumption that states are all uniform in their objectives and interests involves the democratic peace. If democracies are less likely to fight with each other than with non-democracies, perhaps democracies also show a special affinity for other democracies in forming formal national security bonds. Similar preferences could derive from selection; elites or populations in democracies share in common the decision to create and sustain popular rule. Alternatively, the norms or institutions of democracy may be responsible for fashioning common foreign policies, or a natural compatibility may form from like regimes. Democracies arguably face fewer compromises in forging common security bonds. As such, democracies would seem to constitute 'friends' in the very sense proposed by Bueno de Mesquita, Smith and rationalist alliance theories generally.[24] Certainly, the popular conception, championed by leaders like Woodrow Wilson and Franklin Delano Roosevelt and epitomized by institutions like the North Atlantic Treaty Organization, is that democracies naturally gravitate towards one another as allies.

Surprisingly, a preference among democracies for democratic allies is far from an established fact. A number of studies examine how regime type affects alliance choice. Walt argues that states with similar political characteristics should prefer to co-ally, but finds no support for this argument in a study of thirty-six alliances.[25] Walt however selects on the dependent variable and blurs the distinction between informal alignments and formal alliances, making it difficult to evaluate his conclusions.[26] In contrast, Siverson and Starr find that states tend to change their alliance ties after regime change, though the substantive effect of regime transition is quite small.[27]

[22] Joanne Gowa and Edward D. Mansfield, 'Power Politics and International Trade', *American Political Science Review*, 87 (1993), 408–20; Joanne Gowa and Edward D. Mansfield, 'Alliances, Imperfect Markets, and Major Power Trade', *International Organization*, 58 (2004), 775–805; Edward D. Mansfield and Rachel Bronson, 'Alliances, Preferential Trading Agreements, and International Trade', *American Political Science Review*, 91 (1997), 94–107; James D. Morrow, Randolph M. Siverson and Tressa E. Tabares, 'The Political Determinants of International Trade: The Major Powers, 1907–90', *American Political Science Review*, 92 (1998), 649–61; Benjamin O. Fordham, 'Trade and Asymmetric Alliances', *Journal of Peace Research*, 47 (2010), 685–96.

[23] Samuel P. Huntington, *The Clash of Civilizations and the Remaking of World Order* (New York: Simon and Schuster, 1996); John J. Mearsheimer and Stephen M. Walt, 'The Israel Lobby and U.S. Policy', *Middle East Policy* 13 (2006), 29–87; David M. Paul and Rachel Anderson Paul, *Ethnic Lobbies and US Foreign Policy* (Boulder, Colo.: Lynne Rienner, 2009); Tony Smith, *Foreign Attachments: The Power of Ethnic Groups in Making American Foreign Policy* (Cambridge, Mass.: Harvard University Press, 2000).

[24] Bueno de Mesquita, *The War Trap*; Smith, 'Alliance Formation and War'.

[25] Stephen M. Walt, *The Origins of Alliances* (Ithaca, N.Y.: Cornell University Press, 1987).

[26] Sorokin, 'Alliance Formation and General Deterrence'; Sorokin, 'Arms, Alliances, and Security Tradeoffs in Enduring Rivalries'.

[27] Randolph M. Siverson and Harvey Starr, 'Regime Change and the Restructuring of Alliances', *American Journal of Political Science*, 38 (1994), 145–61.

Siverson and Emmons offer a direct test of the impact of joint democracy on decisions to ally.[28] They find differing results in analyses of different time periods.[29] On balance, however, they conclude that democracies prefer democratic allies. Thompson confirms the results of Siverson and Emmons by using a different dataset of regime type and a longer time frame.[30] Both studies base their conclusions on a comparison of the proportion of alliances between democracies. Simon and Gartzke find instead that differing regime types prefer to co-ally.[31] They point out problems in the inferences made by Siverson and Emmons and by Thompson, as the availability of alliance partners is constrained by the distribution of regime types and by the sample properties of states seeking to ally. By segmenting the alliance data into regime type categories, Simon and Gartzke find that alliances between like regimes are much less frequent than alliances between regimes of differing regime type. Lai and Reiter examine ten hypotheses related to regime type and alliance formation drawn from three theoretical perspectives: constructivism, economic interdependence and credible commitments.[32] The study controls for a variety of possible confounding covariates, such as culture, threat, trade and learning. The authors find that states with similar regime types are more likely to co-ally, but that democracy *per se* is not unique as a determinant of nations' alliance choices.

A similar picture emerges from the examination of other alliance-related variables. Several studies have found that joint democracy is associated with increased alliance durability, but these studies have reached differing conclusions about the monadic effect of democracy.[33] Gaubatz, for example, finds that democracy is not a statistically significant predictor of alliance durability, while Reed concludes that alliances with more democracies are more durable. Work on the relationship between democracy and victory has reached similarly divergent findings, with Reiter and Stam concluding that the relationship is not a function of the tendency for democracies to come to one another's aid, while Choi concludes that democracies make far more effective partners in war.[34] Similarly, while Leeds finds that democratic states are more likely to uphold alliance commitments, Gartzke and Gleditsch use data from a broader time series to argue that informational and institutional features of domestic politics make democracies less reliable alliance partners.[35] The relationship between regime type and alliances is thus less clear than the friendship logic suggests.

[28] Siverson and Emmons, 'Birds of a Feather'.

[29] For another study that finds varying effects of shared regime type across time, see Anessa L. Kimball, 'Alliance Formation and Conflict Initiation: The Missing Link', *Journal of Peace Research*, 43 (2006), 371–89. Our theory anticipates and helps to explain historic change in the salience of regime type for alliance formation.

[30] William R. Thompson, 'Systemic Leadership and the Democratic Peace', Indiana University, typescript, 1995.

[31] Simon and Gartzke, 'Political System Similarity and the Choice of Allies'.

[32] Lai and Reiter, 'Democracy, Political Similarity, and International Alliances'.

[33] D. Scott Bennett, 'Testing Alternative Models of Alliance Duration, 1816–1984', *American Journal of Political Science*, 41 (1997), 846–78; Kurt Taylor Gaubatz, 'Democratic States and Commitment in International Relations', *International Organization*, 50 (1996), 109–39; William Reed, 'Alliance Duration and Democracy: An Extension and Cross-Validation of "Democratic States and Commitment in International Relations"', *American Journal of Political Science*, 41 (1997), 1072–8.

[34] Dan Reiter and Allan C. Stam, *Democracies at War* (Princeton, N.J.: Princeton University Press, 2002); Ajin Choi, 'Democratic Synergy and Victory in War, 1816–1992', *International Studies Quarterly*, 48 (2004), 663–82.

[35] Brett Ashley Leeds, 'Alliance Reliability in Times of War: Explaining State Decisions to Violate Treaties', *International Organization*, 57 (2003), 801–27; Erik Gartzke and Kristian S. Gleditsch, 'Why

THE END OF A FRIEND

Perhaps one reason that it has proven difficult to document a connection between regime type and alliance affinity is that the salience of regime type as a motive for friendship has changed over time. Affinities and antagonisms change with the proximity and intensity of threats. The old adage that the enemy of an enemy is a friend speaks to the shifting relational nature of politics under anarchy. At times, as with the alliance between the Western powers and the Soviet Union in the Second World War, strategic realities produce incentives to co-operate in the absence of similar underlying preferences. If two dissimilar nations ally against an opponent whose preferences are even more divergent from either ally, then one still must reference preferences to explain a core link in the chain. Moreover, as the contrast between Anglo-American trust and Western–Soviet mistrust makes clear, alliances of conviction will typically prove more durable and more effective than alliances of convenience.

The lack of robust evidence for a connection between democracy and alliance choice could be explained if the forces of friendship among democracies have yet to gather sufficient momentum. A number of scholars have argued that democracies have created a collective security community whose 'tightness' can be expected to grow as the number and strength of states in the community increases.[36] Collective security implies that democratic alliance ties should multiply as more democracies enter the international system. Yet, while democracies do appear to be protecting one another informally,[37] it is not clear that there is an increasing tendency for democracies to co-ally.[38]

Another possibility presents itself if we address the enemy-of-an-enemy logic a bit more earnestly. The argument is not that friendship causes alliances, but that enmity causes states to look to ally with partners that are *relatively friendly*. By seeking to characterize the supply of allies, while ignoring demand, the collective security perspective is missing half of the equation. Existing rational choice approaches do consider the role of threats, but prominent interpretations appear to ignore the dynamism inherent in this conception of friendship. If alliances are formed substantially in the presence of enemies, then who one's friend might be depends on the nature of one's enemies. Yet, if states are friends or

(F'note continued)
Democracies May Actually Be Less Reliable Allies', *American Journal of Political Science*, 48 (2004), 775–95. In a later study, Leeds and co-authors observe that democracies experience greater leadership turnover, but democracies are less likely than autocracies to abrogate alliances when there is a shift in the societal coalition supporting the leader. Brett Ashley Leeds, Michaela Mattes and Jeremy S. Vogel, 'Interests, Institutions, and the Reliability of International Commitments', *American Journal of Political Science*, 53 (2009), 461–76.

[36] Charles A. Kupchan and Clifford A. Kupchan, 'The Promise of Collective Security', *International Security*, 20 (1995), 52–61; Thomas Risse-Kappen, 'Collective Identity in a Democratic Community: The Case of NATO', in Peter Katzenstein, ed., *The Culture of National Security: Norms and Identity in World Politics* (New York: Columbia University Press, 1996), pp. 357–99; Thomas Risse-Kappen, *Cooperation Among Democracies: The European Influence on U.S. Foreign Policy* (Princeton, N.J.: Princeton University Press, 1997); Alexander Wendt, *Social Theory of International Politics* (Cambridge: Cambridge University Press, 1999). For a critique of arguments favouring or anticipating collective security, see Richard K. Betts, 'Systems for Peace or Causes of War? Collective Security, Arms Control, and the New Empire', *International Security*, 17 (1992), 5–43.

[37] Kelly M. Kadera, Marc J.C. Crescenzi and Megan L. Shannon, 'Democratic Survival, Peace, and War in the International System', *American Journal of Political Science*, 47 (2003), 234–47.

[38] We directly examine the dynamic relationship between regime type and alliance status in the empirical section.

enemies only in *relative* terms, then affinity or enmity must also be *contextual*, at least in part. Changes in the availability of affinities or animosities among states should lead states to reconsider which states constitute enemies, and which friends. Put simply, the incentives for any two states to identify as friends and to ally should be considered temporary.

By construction, as more states convert to democracy, fewer must remain as autocracies, reducing the number of unlike regimes. The decline in the size or strength of threats should weaken the bonds uniting democratic states. This effect is enhanced by the fact that democracies tend to cluster geographically.[39] Enemies are abundant or absent (or at least distant), alternately heightening or diminishing the need for strong security arrangements among friends.[40]

We can take this argument even further by recognizing that regime type is only one dimension along which states might find common identity/difference and a reason to co-operate. Constructivist theories emphasize the role of the 'other' in coalescing social preferences.[41] Having a threat that is clearly opposed to the interests or actions of a given group of individuals or countries creates a catalyst for the formation or resurrection of a particular identity. During the Super Bowl, many Americans find themselves coalescing or dividing up along fan loyalty lines. At other times, cleavages appear across class, race, partisanship or geography. For most people, the salience of the Super Bowl identity is temporary, with other identities resurfacing not long after the game ends.

The recognition that identities are fleeting, or at least contextual and temporary, can have important implications for the study of international relations. Democracy was the rallying cry of Western nations in the twentieth century. This may continue, but as more nations adopt institutions of popular suffrage, being a member of the democratic club is no longer quite so exclusive. Pundits have in recent years begun to distinguish between different kinds of democracy. 'Illiberal democracies' are said to be different, a distinction that effectively bisects the inclusiveness of the democratic label.[42] While elections have been an important unifying principle, popular rule can still lead to leaders that are highly unpopular elsewhere. An election victory by Hamas in 2006 in the Gaza Strip led to, if anything, worse relations between the United States and the Palestinian Authority than had previously been the case under the autocratic Arafat regime.[43] Similar transitions

[39] Kristian Gleditsch, *All International Politics Is Local: The Diffusion of Conflict, Integration, and Democratization* (Ann Arbor: University of Michigan Press, 2002).

[40] Readers will note the persistence of the NATO alliance. Still, recall that the future of NATO was a subject of considerable doubt and debate in the early 1990s, see John J. Mearsheimer, 'Back to the Future: Instability in Europe after the Cold War', *International Security*, 15 (1990), 5–56; Kenneth N. Waltz, 'The Emerging Structure of International Politics', *International Security*, 18 (1993), 75–6. NATO was revived because of instability in the Balkans. Its operations have been outside of Europe proper, so that today it functions in large part as a forum for peacemaking operations, and for the enforcement of international norms, such as in the First Gulf War. Note, too, that the persistence of NATO is abetted by the desire of the United States to maintain influence over European security, and the inability of Europeans to mount an exclusive European defence structure, in large part because of the absence of trust or consensus among Europeans about who should run such an organization.

[41] Ted Hopf, *Social Construction of International Politics: Identities and Foreign Policies, Moscow, 1955 and 1999* (Ithaca, N.Y.: Cornell University Press, 2002).

[42] Fareed Zakaria, 'The Rise of Illiberal Democracy', *Foreign Affairs*, 76 (1997), 22–43.

[43] 'Simply because it won the votes of a desperate people is no reason to grant even the slightest scrap of legitimacy – or the first aid dollar – to Hamas' (Mortimer B. Zuckerman, *U.S. News and World Report*, 13 February 2006, p. 63).

have occurred in modern European history. Pan-Slavism swept the Balkans at the beginning of the twentieth century, as national groups united in opposition to domination by the Ottoman and Austro-Hungarian empires. The Pan-Slavist movement yielded Yugoslavia in the wake of the First World War. Yet, pan-Slavism turned out to be fragile. With the passing of Josip Tito and the rise of post-Cold War geo-politics in the 1990s, Yugoslavia fractured along other identity lines.

If alliances arise in world politics in response to an enemy or an 'other', then victory is just the prelude to some new conflict along lines that have yet to assert themselves. In the midst of the Cold War, it made perfect sense to arm the Afghan Mujahideen in their struggle against the Soviet Union. With the collapse of the Soviet Union, the basis for common interest between Washington and fundamentalist Islamists was eradicated. Animosities that had remained dormant when both groups faced a common foe reasserted themselves. The galvanizing effect of the 9/11 terrorist attacks was to make it seem as if differences between the West and fundamentalist Islam were ancient, deep and immutable. Today, the idea of finding common purpose with the Mujahideen appears bizarre, just as current policies regarding as yet unanticipated foes that seem entirely justified in today's political climate might someday prompt congressional inquiries or blue-ribbon fact-finding panels.

MODELLING EVOLVING ALLIANCE FRIENDSHIPS

Below we use a simple formal model to help illustrate our argument. While past studies have frequently relied on game theory to model alliance behaviour, our interest in changing systemic dynamics, with numerous actors, militates against such an approach. A fully game-theoretic model would impose strong rationality assumptions (given the requirement that actors anticipate the possible alliance decisions of all other actors in the system), making such an approach intractable for our purposes. For this reason, we instead rely on an agent-based model.[44] The goal of this model is to determine whether a simple set of assumptions about actor characteristics and interactions produces a consistent pattern of behaviour as attributes of the system in which actors operate change, even while allowing for variation on a number of relevant variables. More specifically, we are interested in how the probability that similar-regime actors ally is affected by changes in the system in which they interact, most notably the proportion of system actors that are democratic.

In the model, a set of actors with defined capabilities and with preferences that can diverge on multiple dimensions interact with one another to produce policy outcomes, from which they derive utility. Policy outcomes in each interaction are determined by the relative capabilities of the two sides; capable actors are able to produce policy outcomes closer to their ideal point, generating greater utility for themselves and correspondingly lower utility for their opponent. An individual actor's utility is thus its summed utility from interactions with every other actor in the system.

Alliances permit actors to aggregate capabilities and thus potentially to produce preferable policy outcomes in interactions with actors outside the alliance. Alliances also have a downside, however. Alliance partners must agree on a common policy objective – what we call the alliance's 'effective ideal point' – that, unless allies have identical

[44] The model was constructed using NetLogo. Additional details and the code are available from the authors.

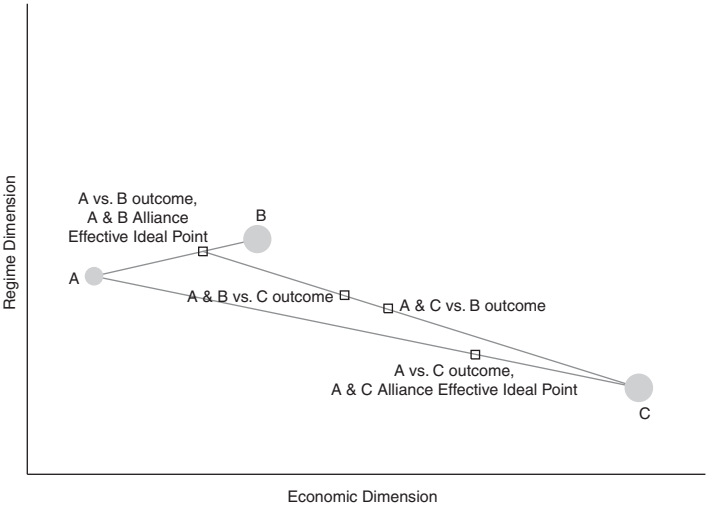

Fig. 1. An example of alliance decisions in the model

preferences, necessarily means that outcomes will differ from the ideal point of at least some members of the alliance. In other words, the benefits associated with the alliance's greater capabilities are at least partially offset for actors by the need to compromise with other alliance members about the policies the alliance will pursue.

This inherent tradeoff to alliances is an essential feature of the model, and is thus worth illustrating with a simple example. Figure 1 represents an alliance decision in a simple system consisting of three actors, A, B and C, with ideal points in two dimensions (labelled for simplicity as regime and economic) corresponding to their location in the Cartesian space, and with A having half the capabilities of either B or C. Consider A's decision about whether to form an alliance with either B or C. In the status quo situation of no alliances, A's interaction with C produces a policy outcome at the point labelled 'A vs. C outcome', which lies on the line between A's ideal point and C's ideal point, closer to C because of C's greater strength. Assuming perfect cumulativity of resources, an alliance with B by contrast would shift the policy outcome in A's interaction with C to the point labelled 'A & B vs. C outcome'.[45] The addition of B's strength allows A to pull the policy outcome further from C's ideal point than otherwise would be possible; the tradeoff is that the outcome is pulled not towards A's preferred outcome but towards a different point determined by the combined preferences and relative capabilities of A and B. In this case, B's proximity and capabilities mean that this tradeoff benefits A. By contrast, A is unwilling to enter an alliance with C. Such an alliance, while it would have strengthened A against B, poses an unacceptable cost in terms of deviation from A's ideal point. As is evident in the figure, the point 'A & C vs. B outcome' is substantially further

[45] The model assumes that interactions among allied actors produce policy outcomes at the alliance's effective ideal point. In two-member alliances, this point is identical to the policy outcome that would have arisen in the absence of an alliance. In larger alliances, however, the outcome with the alliance differs from the outcome without it, providing an additional potential basis to accept or reject an alliance proposal.

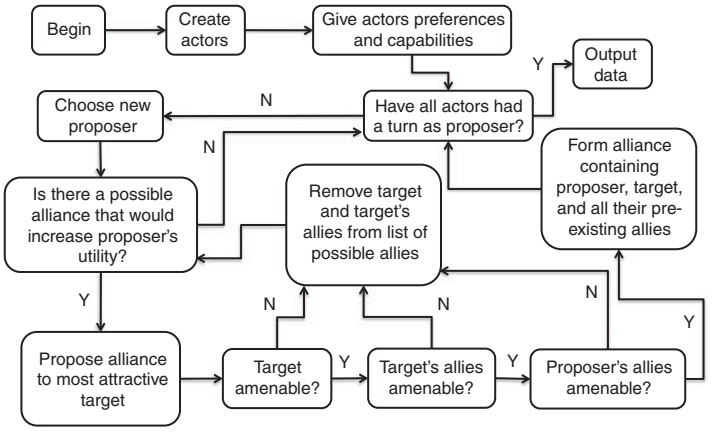

Fig. 2. Overview of the simulation model

from A's ideal point than is the policy outcome ('A vs. B outcome') that would arise in the absence of an alliance. In the cases discussed below, of course, there are substantially more actors. In making alliance decisions in a complex world, actors must weigh the consequences of alliance formation for interactions with all other actors in the system.

A single run of the model thus consists of several discrete phases. To facilitate understanding, we first describe the model informally, and then present the formal details. Figure 2 presents a graphical summary of the process that is followed in a single iteration of the model.[46] First, the world is populated with a set of actors with preferences on multiple dimensions, and with capabilities that vary according to a power law distribution. This assumption is useful because it ensures that in the model there are typically a few powerful actors and a much larger number of less capable states, just as in the empirical world.[47] One dimension is specified to correspond to the actor's regime type, while other dimensions correspond to other non-regime preferences, as with differences of opinion about how to organize the economy or differing preferences about significant political issues like international law, the environment, etc. Those actors with a regime score above a standard threshold are characterized as democracies, while the remainder are autocracies. Note that regime type enters into the model *only* through actor preferences: all else equal, actors will be happier in their interactions with states of a similar regime than they will be in interactions with states possessing a different regime type, but democracies do not otherwise differ from autocracies.

In the second phase, actors form alliances. Each actor, in random order, is given the opportunity to propose an alliance to another actor. In choosing the target of an alliance

[46] An appendix detailing the pseudocode, as well as other details of the model, is available from the authors.

[47] Cederman notes that casualties in wars are distributed according to a power law distribution (Lars-Erik Cederman, 'Modeling the Size of Wars: From Billiard Balls to Sandpiles', *American Political Science Review*, 97 (2003), 135–50). The power law also is appropriate given the absence of a 'typical' value for state strength and the fact that the strongest states are usually several standard deviations more powerful than the mean, unlike with a normal distribution. The basic model is robust to numerous changes. The specific power-law distribution chosen does not influence our results. A model in which capabilities are constant across actors produces effectively identical outcomes.

proposal, the proposer compares the utility that she would gain were the game to proceed to the conflict phase with the current alliance structure to the utility she would gain from entering the conflict phase allied to each remaining actor in the game. She then proposes the alliance that most benefits her, provided that at least one acceptable alliance exists. The target of the proposal likewise compares his expected utility from the current alliance structure to his utility in an alliance with the proposer, and accepts if the latter is greater than the former. Current allies of both the proposer and the target conduct a similar comparison, and have the right to veto any alliance proposal.[48] If the proposal is rejected, the proposer is given the opportunity to approach another actor. This process continues until either an alliance is formed or the proposer exhausts the list of attractive potential allies, after which a different actor who has not yet served as proposer is given the opportunity to propose an alliance.[49]

In the final (conflict) stage, every actor interacts with all others (both allies and non-allies) to generate local policy outcomes, drawing on their allies' capabilities in interactions with those outside the alliance.[50] Actors gain greater utility (or less disutility) from policy outcomes that are closer to their own ideal point. A given actor's overall utility is simply the sum of the individual utilities from all of his interactions. Ultimately, we are primarily interested in the results of the alliance stage of the model – indeed, as Figure 2 makes clear, the conflict phase is not formally included in the model because by the time it arises the alliance decisions that are of interest to us have already been made. However, because actors anticipate the implications of alliance decisions for the conflict phase, it is necessary to capture actors' expectations about conflict in the model. These anticipations govern actor decisions about making and accepting or rejecting alliance proposals.

We next provide formal details of the model. Let us start with a set A of actors, where each actor $i \in A$ is defined by capabilities c_i and ideal point $S_i = \{r_i, s_i^\sigma\}$, with $r, s \in [0,1]$ and $\sigma \in \{1,2,3,4\}$. Actor capabilities are determined by taking a random draw from a uniform distribution over the [0,1] interval and raising the resulting value to the negative α, where $0 \leq \alpha \leq 1$ is an exogenous parameter that determines the degree of variation in actor strength, with $\alpha = 0$ corresponding to uniform capabilities across actors and $\alpha = 1$ constituting exceptionally high variation. For actor preferences, r_i represents regime type, while s_i^σ represents preferences in up to four additional issue dimensions. In a given iteration of the model, values for the additional dimensions s_i^σ are selected randomly from a uniform distribution over the [0,1] interval. To ensure sufficient variation in systemic democracy, a predetermined set of actors in each iteration are assigned to be democracies, with the remainder non-democracies. Given a threshold regime value r_Θ separating democracies from non-democracies, regime scores for the democratic states are chosen randomly from a uniform

[48] This approach is taken for simplicity, as it ensures closed alliances and thus avoids questions about how to determine policy outcomes in complex situations, as with interactions between unallied actors who share an ally. We have also examined a number of alternative approaches, each of which yields substantively identical results.

[49] Note that accepting an alliance does not preclude an actor from subsequently taking a turn as alliance proposer, although any alliance that that actor proposes must be approved by their ally before it can come into effect.

[50] Dispute outcomes could be seen as arising through either violent conflict or negotiation. Most differences in international affairs are resolved through talk, rather than military violence; see James D. Fearon, 'Rationalist Explanations for War', *International Organization*, 49 (1995), 379–414. Since the impact of alliances can be felt either through war or diplomacy, an explicit model of conflict behavior is not necessary here.

distribution over (r_Θ,1], while non-democracies are similarly assigned a random regime value in the range [0,r_Θ]. Primary analysis and most robustness checks set $r_\Theta = 0.85$, which corresponds to 7 on the standard -10 to +10 Polity scale, but similar results follow any threshold value.

Define the subset $F_i \subseteq A$ to be the set consisting of actor i and all of i's allies (friends), with f corresponding to the number of members of F. The alliance's combined capabilities are captured by

$$c_{Fi} = k \sum_{Fi} c_i,$$

where $0 < k \leq 1$ represents the efficiency with which alliance partners are able to aggregate their collective capabilities.[51] In primary analysis and most robustness checks, k is set to an arbitrary value of 0.9; as elsewhere, the basic results continue to hold for any value of k such that actors are ever willing to form alliances. This alliance has an effective ideal point $S^*_{Fi} = \{r_{Fi}, s^\sigma_{Fi}\}$ that is the capability-weighted mean of member ideal points. Specifically,

$$r_{Fi} = \frac{\sum_{j \in Fi} c_j d_j}{\sum_{j \in Fi} c_j}.$$

The elements s^σ_{Fi} of S^*_{Fi} are defined analogously. Note that for an actor with no allies, $S^*_{Fi} = S_i$.

Given actors' capabilities and preferences and each alliance's joint capabilities and effective ideal point, one can determine policy outcomes from actor interactions and actor utilities from those policy outcomes. In interactions between non-allies, the policy outcome lies on the line connecting each side's alliance effective ideal point S^*_{Fi}, with the specific point on the line a function of relative capabilities. Formally, each interaction produces a policy outcome O_{ij} with elements o_{ij}, where

$$O_{ij} = \left\{ \frac{c_{Fi} r_{Fi} + c_{Fj} r_{Fj}}{c_{Fi} + c_{Fj}}, \frac{c_{Fi} s^1_{Fi} + c_{Fj} s^1_{Fj}}{c_{Fi} + c_{Fj}}, \ldots \right\}. \tag{1}$$

Interactions with allies by contrast produce outcomes at the alliance effective ideal point S^*_{Fi}. Actor utility from a given interaction is then simply the negative distance from the actor's ideal point to the policy outcome. Formally, actor i's utility from a given set of alliance partners is calculated as:

$$u_i = -\sum_{A \setminus F} \sqrt{\sum_S (s_i - o_{ij})^2} - (f-1) \sqrt{\sum_S (s_i - s^*_{Fi})^2}. \tag{2}$$

The first term in this utility function captures the actor's utility from interactions with non-alliance partners, while the second captures utility from the $f-1$ alliance partners (omitting the actor herself).[52] In every alliance formation decision, actors compare the

[51] For actors with no alliance partners, k is fixed to 1, as alliance inefficiencies obviously are not a pertinent factor.

[52] Because interactions with allies produce outcomes at the alliance effective ideal point, i gains the same utility from every interaction with an ally. We can thus simply multiply that utility by the number of allies, rather than having to sum over each ally.

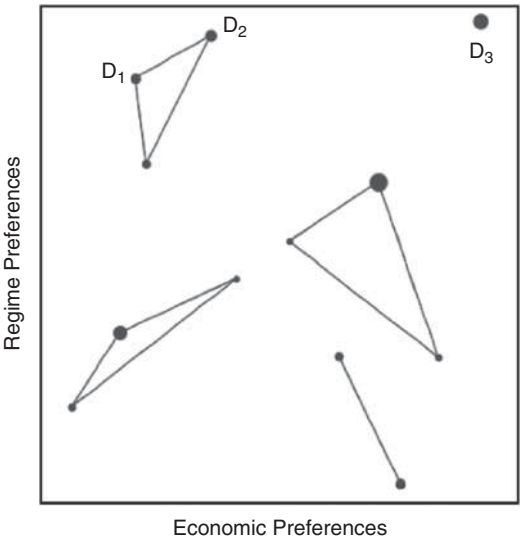

Fig. 3. Representative results from a single iteration ofall the model

utility that they would gain under the current alliance to what they would gain by forming a new alliance. Actors are open to forming a new alliance to the extent that formation of the new alliance raises their utility.[53]

Figure 3 provides a simple illustration of alliance decisions in the model, using a relatively limited number of actors and restricting preferences to two dimensions. Twelve actors are represented by dots, with their regime type captured by their vertical location in the figure, their preferences on the second dimension by their horizontal location, and their capabilities by their size. Thin lines connect the ideal points of actors sharing an alliance. In the figure, the three uppermost actors (D_1, D_2 and D_3) are democracies. The first two are part of an alliance that also includes a non-democracy. D_3, however, holds sufficiently extreme preferences on the second dimension that it did not ally with another democracy (or any other actor). The model thus captures a world in which regime type provides a basis for co-ordination, but not the sole one. A typical run of the model involves several thousand iterations, with each iteration constituting a single round of the process described above. The model produces at least 1,000 observations of potential alliances at each level of systemic democracy. The result is dyad-level data containing actor preferences and capabilities, whether or not two actors were allied, and the proportion of the system that is democratic.

Our interest, of course, is in what happens as changes in the attributes of member states change the composition of the international system. By altering the initial distribution of preferences, we are able to observe the effects of a changing system on the probability that

[53] This point illustrates the tensions inherent in the use of an agent-based model. Relative to a game-theoretic model, actors in our model are not particularly forward-looking. For example, they do not consider the possibility that agreeing to an alliance proposal now might allow the new alliance partner to veto a more attractive alliance proposal at a later date. We would only be able to capture this sort of foresight by dramatically limiting the number of actors in the resulting game-theoretic model, a much less appealing compromise given the objectives of this study.

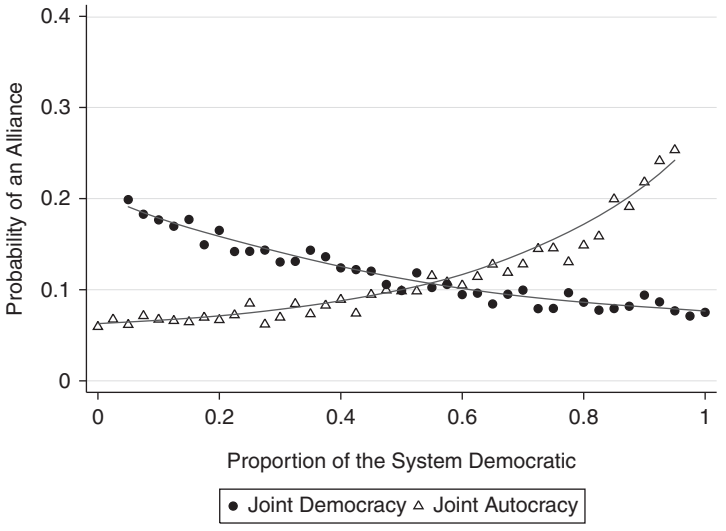

Fig. 4. Probability that similar-regime actors ally at different values of systemic democracy

similar-regime actors ally. Figure 4 summarizes the simulated probability of an intra-regime alliance for both democracies and autocracies at different levels of systemic democracy, along with lowess-smoothed lines for each regime type. In this run, the threshold value for democracy was set to 0.85, actors held preferences in four dimensions in addition to regime type, capabilities varied across actors to a moderate degree ($\alpha = 0.5$), and alliances cumulated capabilities imperfectly but relatively efficiently ($k = 0.9$). As democracies become more common, they become substantially less likely to ally with each other. When they are scarce, democracies benefit disproportionately from co-operation, as the increase in strength is useful in a hostile world, while the loss of efficiency that results from pooling their efforts is small relative to the large value of leveraging combined capabilities to confront the large differences that democracies initially have with most opponents. As democracy proliferates, however, the decline in external threats makes the internal differences among democracies more salient. In contrast, autocracies become substantially more likely to ally as the system becomes more democratic. This basic dynamic should hold for any characteristic that provides a basis for distinguishing among states, such as monarchy or economic structure. Changing aspects of the model such as the number of actors, the way in which actor capabilities are distributed, how efficiently capabilities cumulate within an alliance, or the threshold regime value for democracy can alter both the probability of an alliance and the slope of each line, but the basic comparative static result from Figure 4 (captured by the sign of the slope) is robust to changes in model specification. Indeed, the relationship is stronger in most robustness checks.[54]

It is difficult to imagine at this point what might replace democracy as a critical organizing identity in world affairs, just as it must have been difficult in the early 1940s to imagine that China would first become one of the chief adversaries of the United States,

[54] A detailed set of representative results at different parameter values appears in the online appendix.

then later an important counterbalance to Soviet power in Asia and the Pacific region, and finally a fast-rising global economic power. While it may not be possible to anticipate the nature of future cleavages – we could not test such claims even if we were inclined to make them – one can more easily surmise how the evolution of identity is likely to affect *existing* alliance structures. If the salience of democracy declines as a discriminating cue or identity with an increase in the number of democracies, then we should expect to see a decline in the tendency for democracies to co-ally. This prediction further helps to explain why the relationship between democracy and alliance choice is weaker empirically than liberal theory predicts. When democracies are scarce – i.e., when a democratic security community is at its weakest – democracies should tend to ally together at much higher rates than autocracies.

HYPOTHESIS 1 The probability of an alliance in democratic dyads declines as the system is more democratic.

In contrast, the salience of autocracy as an identity for alliance formation should be on the rise as autocracies shift from being ubiquitous to representing a bare majority of the world's countries.[55]

HYPOTHESIS 2 The probability of an alliance in an autocratic dyad increases as the system is more democratic.

RESEARCH DESIGN AND ANALYSIS

We assess the determinants of alliance status between 1816 and 2000. The basic statistical models are based on Lai and Reiter, with changes as discussed below.[56] Independent variables are lagged by one year to address endogeneity. We correct standard errors for clustering in dyads.

There are a few issues to address before proceeding. First, it is conceivable that changes in alliance patterns at the monadic level might distort a dyadic-level test of regime type and alliance formation. It could be argued, for example, that because democracies are safer today than in the past, they are *generally* less likely to ally. Since there are more democracies in the world over time, processes that lead democracies to participate in fewer alliances could be misinterpreted as evidence that democracies are becoming less inclined to ally *with other democracies*. Figure 5 details variation in the proportion of all dyads in the world containing an alliance over time (represented by hollow triangles), and the accompanying relationship for dyads containing at least one democracy (solid circles).[57] The figure also contains linear trend lines for both sets of alliance probabilities.

[55] For simplicity, the model contains democracies and autocracies, but does not include 'anocracies'. The empirical world includes states that are neither fully democratic nor autocratic, adding to the challenge of connecting theory with evidence. As we will see, however, this distinction does not appear to critically affect tests of the theory.

[56] Lai and Reiter, 'Democracy, Political Similarity, and International Alliances'.

[57] Plotting only jointly democratic alliance dyads reveals a similar pattern of rising propensity to ally over time (available from the authors). Our interest here is in the *relative* shift in democratic preference for democratic partners.

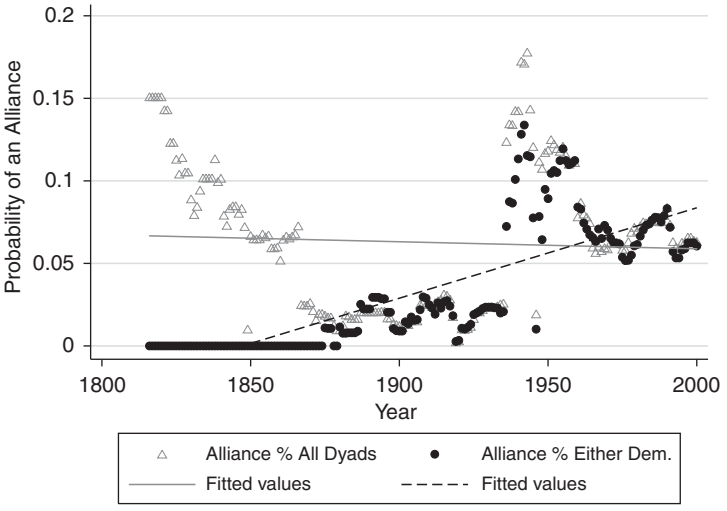

Fig. 5. Probability of alliance for democracies and all dyads

As Figure 5 reveals, the propensity to ally varies considerably over time, but there is no overall trend for alliance ties. Pairs of countries are not allying less over time. Democracies, in contrast, are actually increasing their propensity to ally (both with other states and with other democracies). This relationship is the opposite of the one that could conceivably bias findings in favour of our analysis. Dyads containing at least one democracy are more alliance-prone with the passage of time. Part of this relationship is due to the increasing number of democracies in the world. In the early nineteenth century, only the United States is coded by Polity as a democracy. American isolationism explains why dyads containing democracies initially have no alliances. By the early twentieth century, more states are democratic, and alliances involving democracies begin to occur. However, it is not until the Second World War that the United States begins to form its own 'foreign entanglements'. Since the United States represents such a large and important potential source of democratic alliance partnerships, the unusual American policy of isolationism effectively biases against support for our claims. At the monadic level, democracies are allying more over time, not less.

Secondly, alliance data contain four kinds of observations. States in dyads can be: (1) unallied ('0'), (2) newly allied ('1'), (3) ongoing allies ('1'), and (4) former allies ('0'). These data do not distinguish between new and old alliances, or between non-allies and former allies. While we are not fundamentally interested in these distinctions here, focusing instead on alliance status, there are potential pitfalls in ignoring these distinctions. In particular, regressions that fail to distinguish between old and new alliances will tend to overestimate the effects of regressors on alliance choice.

The easiest solution to this issue is to include a lagged dependent variable to distinguish between new and ongoing alliances. This is precisely the approach adopted by Lai and Reiter. However, a lagged dependent variable effectively means that the regressors are estimating *change* in alliance status; alliance onset and termination become equivalent in this type of regression. While not a critical problem – our theory is compatible with alliance change – we consider this less than ideal given our focus on the determinants of alliance *status*. For example, estimating alliance change would mean that we cannot say anything about the direction of alliance transitions.

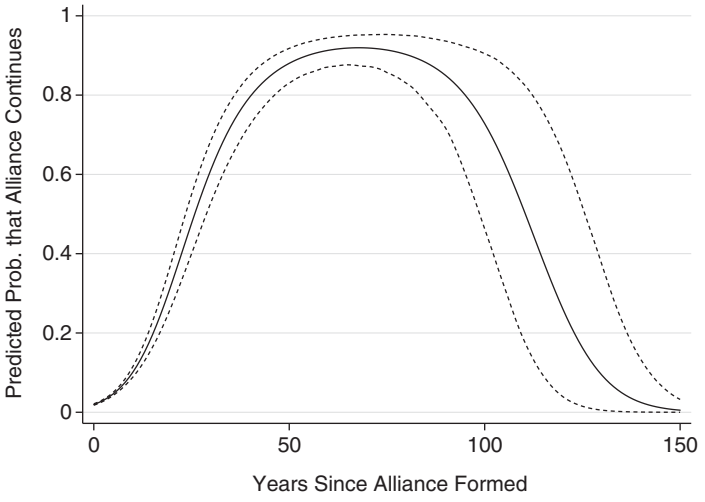

Fig. 6. The persistence and decay of dyadic alliance ties

Another approach to addressing dependence in the data is to include a count variable for annual observations of no alliance ('0'). A matrix of lagged dummy variables or splines can then be set up to capture complex dependence structures.[58] This approach works particularly well with episodic events, such as wars or crises, linked through non-event intervals. While it is conceivable that states, once allied, are more likely to ally again, the primary source of dependence in the alliance data are the persistence of alliance institutions themselves. Unlike the conflict data, long series of 1 s permeate the alliance data. We explored using 'peaceyear' counts, matrices or splines of the 0 s in the dependent variable, but as a practical matter these solutions to temporal dependence over-fit the data, preventing the estimator from converging on coefficient estimates.

Bennett and Tarry discuss the tendency for alliances to persist in terms of hysteresis, or institutional inertia.[59] This is a different process from that observed in episodic conflict. If path dependence in alliance time-series involves institutions, then it is best to address the biasing effect of the persistence of alliance ties. Carter and Signorino offer a practical technique for dealing with path dependence.[60] We created lagged linear, squared and cubed count variables of the number of years two states have been allies. Alliances tend to persist up to a point, and then the effects of change take a larger role, so that old alliances fail more often than medium-aged alliances.

Figure 6 reports the estimated effect of the linear and squared alliance count variables, based on regression Model 1.3 in Table 1 (other details are reviewed later). The figure is

[58] Neal Beck, Jonathan Katz and Richard Tucker, 'Taking Time Seriously: Time-Series-Cross-Section Analysis with a Binary Dependent Variable', *American Journal of Political Science*, 42 (1998), 1260–88.

[59] D. Scott Bennett and Scott E. Tarry, 'Self-Perpetuation or Rational Choices? A Model of Rationality and Hysteresis in International Alliances' (paper presented at the Annual Meeting of the Midwest Political Science Association, Chicago, 1996).

[60] David B. Carter and Curtis Signorino, 'Back to the Future: Modeling Time Dependence in Binary Data', *Political Analysis*, 18 (2010), 271–92.

important because it confirms a quadratic functional relationship in these data and also provides some evidence that our approach addresses the biasing effects of temporal dependence. The horizontal axis is a count of the number of years that have passed since the alliance was formed. The vertical axis measures the probability that an alliance will endure another year, given the current age of the alliance. The cubed term is omitted as this specification over-fits these data. As the estimated relationship reveals, the probability of an alliance in a given year is not independent of the presence or absence of an alliance in previous years. The functional form is clearly quadratic, first increasing and then declining in previous alliance status. While it is impossible to know how a statistical model conforms to the 'true' underlying relationship, the linear and quadratic alliance year count variables appear at least partially to address the non-independence of observations in these data.

DATA

Most of the variables for this study are generated using the EUGene software program.[61] Other sources are detailed where relevant. Data consist of dyad-year observations over the 1816–2000 period for all dyads in the international system. A STATA 'do' file is available from the authors that replicates the analysis. Methodologists also emphasize the value of keeping statistical models simple.[62] Therefore, we focus on variables that consistently appear in other relevant studies:[63]

— *Alliance Status*: *Alliance* codes the presence of a defence pact, neutrality pact or entente in a dyad using the COW Alliance Dataset.[64]
— *Democracy*: We measure democracy using Polity IV data.[65] We construct monadic values by subtracting Polity AUTOC from DEMOC, adding 10 and dividing by 2. *Democracy (Low)* reports the lower Polity value in the dyad in a given year, while *Democracy (High)* reports the higher Polity value in the dyad.

[61] D. Scott Bennett and Allan C. Stam, 'EUGene: A Conceptual Manual', *International Interactions*, 26 (2000), 179–204.

[62] Christopher H. Achen, 'Let's Put Garbage-Can Regressions and Garbage-Can Probits Where They Belong', *Conflict Management and Peace Science*, 22 (2005), 327–39; Kevin A. Clarke, 'The Phantom Menace: Omitted Variable Bias in Econometric Research', *Conflict Management and Peace Science*, 22 (2005), 341–352; James Lee Ray, 'Constructing Multivariate Analyses (of Dangerous Dyads)', *Conflict Management and Peace Science*, 22 (2005), 277–92.

[63] C.f. John R. Oneal and Bruce Russett, 'The Classical Liberals Were Right: Democracy, Interdependence, and Conflict, 1950–1985', *International Studies Quarterly*, 41 (1997), 267–93; John R. Oneal, Bruce Russett and Michael L. Berbaum, 'Causes of Peace: Democracy, Interdependence, and International Organizations', *International Studies Quarterly*, 47 (2003), 371–93.

[64] Melvin Small and J. David Singer, 'Formal Alliances, 1816–1965: An Extension of the Basic Data', in J. David Singer and Paul F. Diehl, eds, *Measuring the Correlates of War* (Ann Arbor: University of Michigan Press, 1990), pp. 159–90; Douglas Gibler and Meredith Reid Sarkees, 'Measuring Alliances: The Correlates of War Formal International Alliance Dataset, 1816–2000', *Journal of Peace Research*, 41 (2004), 211–22. Leeds *et al.* emphasize identifying the precise nature of alliance commitments when attempting to evaluate alliance reliability (Brett Ashley Leeds, Andrew G. Long and Sara McLaughlin Mitchell, 'Reevaluating Alliance Reliability: Specific Threats, Specific Promises', *Journal of Conflict Resolution*, 44 (2000), 686–99). This is less critical when the question is not what is being promised, but whether states have some type of understanding. As a precaution, we also examine the Leeds, *et al.* alliance data and find equivalent results.

[65] Keith Jaggers and Ted R. Gurr, 'Transitions to Democracy: Tracking Democracy's "Third Wave" with the Polity III Data', *Journal of Peace Research*, 32 (1995), 469–82.

TABLE 1 *The Effects of Systemic and Dyadic Regime Type on Alliance Status*

	Models				
Variable	1.1 Baseline	1.2 Sys. Dem.	1.3 Interaction	1.4 Controls	1.5 Autocracy
Democracy (Low)	0.0173	0.0127	0.131***	0.142***	
	(0.0116)	(0.0119)	(0.0368)	(0.0367)	
Dem. (Low) × Prop. Dem.			−0.360***	−0.398***	
			(0.0981)	(0.0982)	
Prop. Democracy		0.598*	1.334***	1.520***	
		(0.238)	(0.289)	(0.277)	
Democracy (High)					−0.115***
					(0.0275)
Dem. (High) × Prop. Aut.					0.152***
					(0.0465)
Prop. Autocracy					−0.867**
					(0.334)
Distance (ln)	−0.937***	−0.949***	−0.960***	−0.961***	−0.932***
	(0.0433)	(0.0444)	(0.0450)	(0.0451)	(0.0449)
Contiguity	1.165***	1.178***	1.195***	1.180***	1.150***
	(0.0763)	(0.0777)	(0.0785)	(0.0785)	(0.0782)
Capability (ratio)	−1.445***	−1.403***	−1.359**	−1.356***	−1.461***
	(0.243)	(0.244)	(0.243)	(0.245)	(0.244)
Maj. Power (either)	−0.497***	−0.455**	−0.439**	−0.340*	−0.372*
	(0.154)	(0.154)	(0.153)	(0.158)	(0.160)
Maj. Power (both)	−1.428**	−1.392**	−1.401**	−1.274*	−1.341*
	(0.519)	(0.521)	(0.518)	(0.554)	(0.566)
IIS†				2.488***	2.551***
				(0.342)	(0.347)
MIDs (Low)				−0.0909	−0.0809
				(0.0687)	(0.0699)
MIDs (High)				−0.00811	0.00124
				(0.0202)	(0.0201)
Alliance Count	0.189***	0.188***	0.188***	0.190***	0.191***
	(0.00981)	(0.00983)	(0.00981)	(0.00974)	(0.00965)
All. Count^2	−0.00138***	−0.00138***	−0.00138***	−0.00138***	−0.00138***
	(0.000135)	(0.000135)	(0.000135)	(0.000133)	(0.000132)

TABLE 1 *(Continued)*

	Models				
Variable	1.1 Baseline	1.2 Sys. Dem.	1.3 Interaction	1.4 Controls	1.5 Autocracy
Intercept	−2.886***	−3.057***	−3.301***	−3.264***	−2.123***
	(0.179)	(0.198)	(0.210)	(0.209)	(0.257)
N	628,898	628,898	628,898	616,961	616,961
Log-likelihood	−86258.645	−86222.846	−86129.751	−83742.571	−83777.819
$\chi^2_{(8,9,10,13,13)}$	1348.64	1387.23	1429.84	1475.16	1328.37

Notes: The dependent variable is the alliance status. Significance levels: * 5%, ** 1%, ***0.1%. All tests are two-tailed. † See Mark J. C. Crescenzi and Andrew J. Enterline, 'Time Remembered: A Dynamic Model of Interstate Interaction', *International Studies Quarterly*, 45 (2001), 409–31.

At the system level, *Proportion of Democracy* (*Prop. Dem.*) offers a ratio of the number of states surpassing a threshold democracy level (we use seven), divided by the total number of countries in the system in that year, using the Correlates of War list of system members.[66] A system with no democracies produces a *Prop. Dem.* score of 0, while having all states as democracies produces a score of 1. In our analyses, we also include an interaction term between *Democracy (Low)* and *Prop. Dem.* (and between *Democracy (High)* and the proportion of the system that is autocratic) to test the claim that the relationship between shared regime type and alliance propensity depends on the broader system environment.

— *Geographic Distance and Contiguity*: It is important to include a measure of proximity and distance, given that regime type clusters geographically.[67] *Contiguity* is an ordinal variable for six categories of decreasing physical proximity, from shared land border to separated by more than 500 miles of water, either directly or through colonial possessions. *Distance* is the natural logarithm of the great circle distance between national capitals, or of the closest major cities for some large countries.[68]
— *Capabilities*: The realist emphasis on power as a motive for alliance mandates a measure of capabilities. We assess the balance of capabilities in the dyad using the COW Composite Indicators of National Capabilities (CINC) score. CINC is computed as the weighted average of a state's share of total system population, urban population, energy consumption, iron and steel production, military personnel and expenditures. *Capability (ratio)* measures the CINC owned by the least powerful state, divided by the sum of CINC's in the dyad: $CINC_{low}/(CINC_A+CINC_B)$.
— *Major Power Status*: Students of international relations often view major powers as different from other states. If in addition to superior capabilities, major powers are more or less likely to be influenced by regime affinities in their alliance choices, then this could bias our results. Using the COW criteria for major power status, we code two dummy variables for whether (1) either dyad member is a major power, or (2) both dyad members are major powers. Major powers are likely to behave differently with other major powers than with minor powers.
— *Threat*: Alliances are meant to affect security for participating states. There are two basic ways that threats can manifest. First, there could be a history of conflict within the dyad that interferes with co-operation. Nations that have fought should be less likely to consider each other allies. We follow Crescenzi and Enterline to produce an international interaction score (*IIS*) that is a summed, depreciated count of militarized

[66] Sara McLaughlin Mitchell, Scott Gates and Håvard Hegre, 'Evolution in Democracy-War Dynamics', *Journal of Conflict Resolution*, 43 (1999), 771–92; Lars-Erik Cederman, 'Modeling the Democratic Peace as a Kantian Selection Process', *Journal of Conflict Resolution*, 45 (2001), 470–502.

[67] Gleditsch, *All International Politics Is Local*; Lars-Erik Cederman and Kristian Gleditsch, 'Conquest and Regime Change: An Evolutionary Model of the Spread of Democracy and Peace', *International Studies Quarterly*, 48 (2004), 603–29.

[68] Research suggests that contiguity and distance are *not* measuring the same things (Paul R. Hensel, 'Territory: Theory and Evidence on Geography and Conflict', in John A. Vasquez, ed., *What Do We Know about War?* (New York: Rowman & Littlefield, 2000), pp. 57–84; Paul Senese, 'Territory, Contiguity, and International Conflict: Assessing a New Joint Explanation', *American Journal of Political Science*, 49 (2005), 769–79). Neighbours fight more often *either* because they are near (opportunity), or because they have more grievances (willingness). As is conventional, including distance at least partially separates the effects of proximity from preferences.

dispute behaviour in the dyad.[69] Secondly, conflict outside the dyad could influence security decisions within the dyad, intensifying incentives to co-ally. We again rely on Crescenzi and Enterline for a measure of the intensity of external threat using a moving average of the count of militarized disputes in which either state in the dyad is a participant. Separate variables for high and low external conflict indicate whether one or both nations are prone to dispute with other states.[70]

— *Alliance Years*: We construct linear, squared and cubic count variables representing the number of years two states have been allied as discussed in the research design section.

RESULTS

Our results appear in Table 1, consisting of five regressions, and in three figures that illustrate key findings. The first (baseline) Model 1.1 in Table 1 includes a measure for dyadic democracy and additional variables for distance, contiguity, capabilities, major power status and the count of pre-existing (lagged) alliance ties. At least initially, democracies do not appear to be any more likely to ally than are other types of dyads. These results are consistent with the most recent alliance literature showing that regime type has little direct impact on alliance decisions.

Model 1.2 introduces the variable for systemic democracy. *Prop. Democracy* is modestly statistically significant, but in other respects the results in this second model are equivalent to the baseline. In particular, dyadic democracy remains insignificant as a predictor of alliance choice. However, adding the interaction term between dyadic and systemic democracy levels in Model 1.3 results in a dramatically different situation. All three democracy variables (dyadic, systemic and the interaction term) are now highly statistically significant. As anticipated, the effect of regime type on dyadic alliance choice is not fixed and exogenous, but instead evolves in response to the changing distribution of democracy at the system level. If one starts from a very low level of systemic democracy, a small increase in the number of democracies in the system actually *diminishes* the tendency for democracies to co-ally. Democracies are more likely to ally with each other when there are few democracies in the world, and less likely to do so as the number of democracies grows.

The dynamic, contextual nature of the ebb and flow of international friendships is illustrated by Figure 7, which graphs systemic and dyadic democracy and the probability of an alliance, based on Model 1.3 in Table 1. *Prop. Democracy* varies on the x axis from *3 per cent* (very few democracies) to *50 per cent* (at present, about half of the world's countries are democracies). The y axis contains the threshold dyadic *Democracy (low)*. On the far left, both states are democratic. On the right, *Democracy (low)* equals 0 and states are either heterogeneous in terms of regime type, or both states are autocracies. The vertical (z) axis indicates the probability that two countries ally.

The surface representing the probability of an alliance for a given dyad type forms a saddle, with high points at the rear of the figure and to a lesser extent at the front, and the

[69] Mark J.C. Crescenzi and Andrew J. Enterline, 'Time Remembered: A Dynamic Model of Interstate Interaction', *International Studies Quarterly,* 45 (2001), 409–31.

[70] This variable is an admittedly imperfect measure of common threat. An alternative approach would be to use the number of MIDs against similar actors, but this raises difficult questions about an appropriate time lag between disputes in different dyads consistent with the existence of a common threat. We leave this issue for future research.

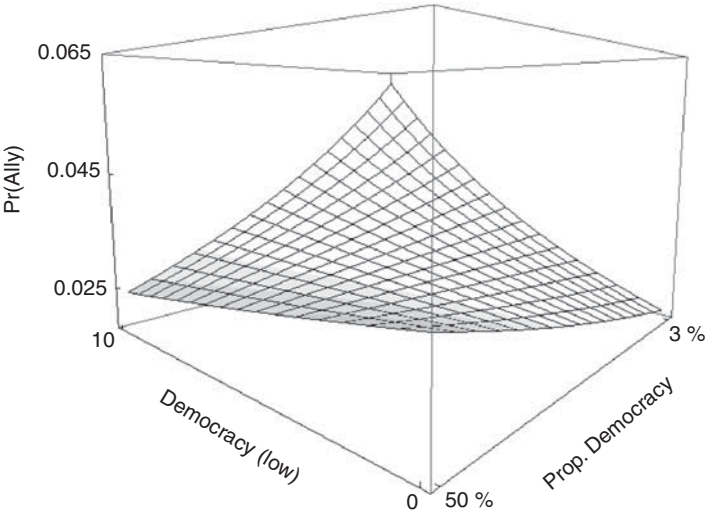

Fig. 7. Probability of alliance for values of systemic and dyadic democracy

lowest probabilities at the left and right corners in the figure, among democracies where the system is increasingly democratic and among autocracies in an autocratic system. Structural realist approaches suggest that alliance probabilities should be more or less uniform, creating a roughly flat plane. Conventional liberal explanations predict that democracies should consistently be more likely to co-ally, indicating a sloping surface higher on the left side of the figure, and lower towards the front and the right. Neither perspective anticipates a decline in democratic alliance formation with rising systemic democracy levels. A final possibility comes from the constructivist literature, which predicts that democratic alliance ties should grow with the size or strength of the democratic community. Again, this is not what we observe. Instead, as the figure shows, dyadic democracy is associated with a *reduction* in alliance ties as democracies become more abundant.

Model 1.4 extends the analysis of the interaction between dyad and system by inquiring whether the results can be explained away by threats within and outside the dyad. Curiously, dyads with a history of conflict are more likely to ally, perhaps because former adversaries need formal commitments to demonstrate credibility. Threats to either state from third parties does not appear to significantly influence alliance decisions, at least not in terms of changing alliance commitments. In other respects, the effects of regime type on alliance status are unchanged. The affinity of democracies for other democracies depends on the number of democracies in the system. As democracy becomes more abundant in the world, democratic states are less likely to choose democratic allies.

The substantive effect of this relationship can be seen in Figure 8, which reports the predicted probability that two democracies (each with a Polity IV score of 10) form an alliance for different values of the systemic democracy variable, based on Model 1.4 in Table 1. As the figure demonstrates, democracies are significantly more likely to co-ally when the proportion of democracies in the international system is small. Friendships between democracies appear to have been fading as the democratic community grows more numerous: capable, but perhaps also more diverse.

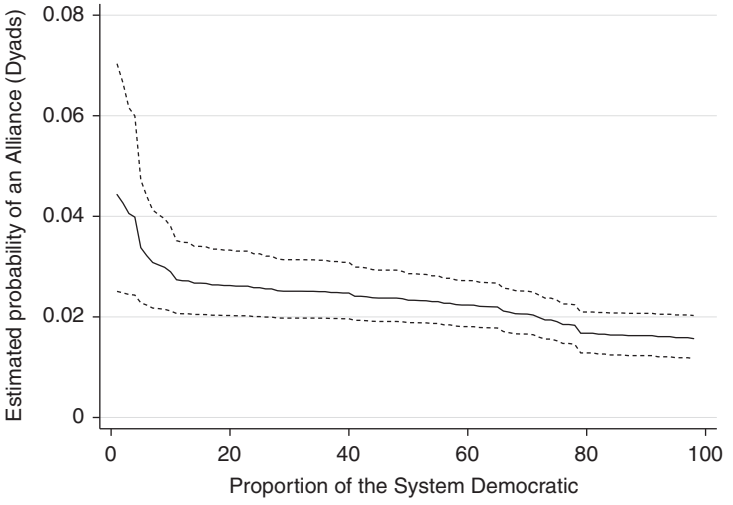

Fig. 8. Probability of an alliance in a democratic dyad for values of systemic democracy

Autocracies in contrast appear to have increased their preference for like regimes in response to the growth of international democracy. In order to test Hypothesis 2 more directly, Model 1.5 replaces *Democracy (low)* with *Democracy (high)*. The proportion of autocracies in the international system also supplants *Prop. Democracy*, while the resulting interaction term is *Dem. (high)* × *Prop. Aut*. Using the higher of dyadic democracy scores means that the model is now measuring differences between autocracy and non-autocracy (i.e. pooling democracies and heterogeneous dyads), rather than democracy versus non-democracy. The results in Model 1.5 mirror those in Model 1.4. The more autocratic the dyad (*Democracy (high)* is low), the more likely two states are to form an alliance. Furthermore, this effect is increasing in the 'democraticness' of the international system. As autocracies are becoming more scarce, their preference for autocratic allies is increasing.

Again, plotting the relationship is useful. Figure 9 illustrates the impact of dyadic and systemic regime type and their interactions on alliance choices in an autocratic dyad (i.e. both states possess a Polity IV score of 0). As the proportion of democracies in the system increases, reducing the number of autocratic states, the penchant for autocracies to co-ally increases.[71] The effect of the evolving distribution of regime types in world politics on alliance behaviour in autocratic dyads is thus generally the converse of that for democratic dyads. Together, Figures 8 and 9 paint a picture that closely parallels that depicted in Figure 4. Thus, despite its simplicity, the agent-based model appears to capture an important dynamic in world affairs. Affinities and animosities are contextual, evolving at the dyad in response to changes in salient attributes at the system level.

The curvilinear relationship between dyadic and systemic democracy and the probability of an alliance helps to explain why previous research on the correlation between democracy and alliance propensity offered weak or inconsistent results. Democracies are more likely to

[71] The substitution of democracies for autocracies is not one-for-one, as many states fall into the middle ('anocracy') category. The point is not deductive, but simply an empirical one that democracies are 'crowding out' autocracies.

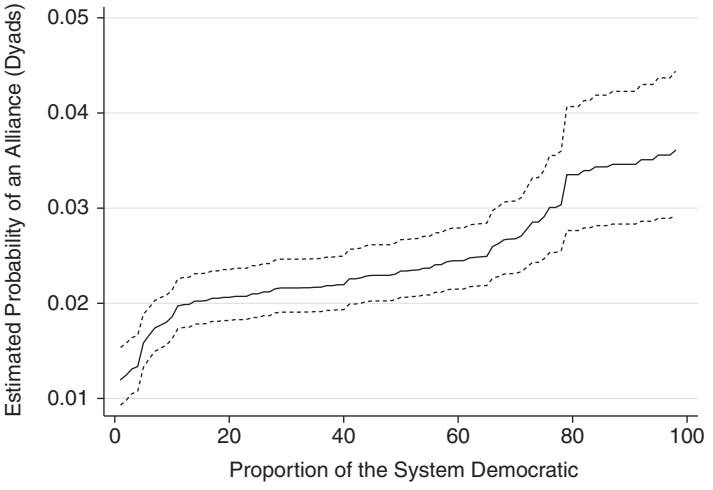

Fig. 9. Probability of an alliance in an autocratic dyad for values of systemic democracy

ally when the system contains relatively few democracies, but this relationship has decayed with the rise in the proportion of democratic states. More recent research that extended the alliance data into the final decades of the twentieth century unintentionally identified this weakening trend. Researchers assumed that later studies were more accurate because they applied more sophisticated estimation techniques, and better data, but these studies also included the time period where the pool of democracies in the system had increased. The apparent relationship between democracy and alliances was weakened because recent data contains a higher proportion of democracies, and because researchers had yet to realize that the effect of regime type as an identity may indeed vary in time.[72]

CONCLUSION

The world is a dynamic place. It stands to reason that relationships among nations are dynamic as well. Students of international relations have long treated alliance ties as temporary, though they have often failed to follow through with theories that embrace the temporal nature of security commitments. Realist theory highlights alliance choices as the key dynamic in international affairs, while simultaneously treating the causes of alliance formation as largely driven by static power relations or ubiquitous insecurity. The democratic peace exploded the myth of glacial international politics, even as it offered a new static orthodoxy of fixed relationships among regime types.

Relaxing the assumption that the causes of alliance ties are fixed also forces students of international politics to imagine that preferences themselves vary. Constructivists, in particular, embrace this possibility. The risk, however, is that making preferences entirely endogenous moves too far in the other direction, imagining that much (or all) of what

[72] This problem may occur in other contexts as well. It is common to extend datasets in international relations temporally. Any differences between older analyses using shorter time-series and more recent studies including this new data could either be the result of more or better data or temporal changes in underlying causal relationships.

actors prefer is subject to manipulation by context and community. A happy medium can potentially be had if we suppose that interactions change, though individual rankings over possible outcomes remain relatively stable and invariant. An alliance with another democracy may be better or worse than other alternatives, depending on what the alliance is likely to achieve, and what must be forgone for co-operation. We offer evidence that the appeal of that tradeoff has evolved as the world has become increasingly democratic. The appeal of alliances among democracies has declined as the security and heterogeneity of the democratic community has grown. Major struggles over regime type that dominated the twentieth century have largely been settled in favour of prosperous liberal regimes. With victory comes the sobering reality that differences among erstwhile allies remain, while the attractive power of tensions on other dimensions increases the incentives to pursue new conflicts with different friends and adversaries. Where these newly salient affinities and incompatibilities will take the world is as yet unimaginable, but they that will form the basis of international politics in the next century.