



The Democratic Peace Unraveled: It's the Economy¹

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Recent studies show that the democratic peace correlation is not significant once the potentially confounding variable that can cause both democracy and peace, contract-intensive economy, is considered; this pattern holds in analyses of wars, fatal militarized interstate conflicts (Mousseau 2009), and interstate crises (Mousseau et al. 2013). These studies rescind the primary evidence for democracy being a cause of the democratic peace and indicate that contract-intensive economy is the more likely explanation for it. This article addresses all recent defenses of the democratic peace correlation, reports results using a new measure of contract flows, and extends the investigation to all militarized interstate conflicts. Analyses of most nations from 1961 to 2001 show that there is no correlation of democracy with peace, and contract-intensive economy is one of the most powerful nontrivial variables in international conflict. The era of the democratic peace appears to be at an end, subsumed by an economic peace.

The democratic peace correlation—the observation that democratic nations rarely, if ever, fight each other, even though they often fight nondemocratic nations—is at the core of what is probably the most important research program in the study of international politics, with over three hundred books and articles published on the subject over the past two decades. For all the multiplicity of studies reporting the democratic peace correlation, however, we have precious little evidence that democracy is the cause of it. No theory to explain the correlation has accrued substantial and thus widely convincing evidence, and there is no logical basis for discounting the probability that some new factor may arrive at any time that accounts for both democracy and the peace.

In recent years, a new factor has surfaced in the democratic peace research program: contract-intensive economy. About a decade after the democratic peace correlation emerged as a stylized fact, I offered an explanation for it that pinpoints causation in impersonal contract flows within nations, and showed how these flows can cause both democracy within nations and peace among them (Mousseau 2000). In time, direct data on impersonal contract flows became available, and the initial supposition was corroborated in analyses of wars and fatal militarized interstate conflicts (Mousseau 2009), followed by interstate crises (Mousseau, Orsun, and Ungerer 2013; Mousseau, Orsun, Ungerer, and Mousseau 2013). This new economic peace not only appears to account for the democratic peace correlation, but is also far more substantial: While the democratic peace achieved fame with its claim of an absence of wars among democratic nations—with “wars” defined as militarized conflicts with at least one thousand battlefield-connected fatalities—the economic peace boasts an absence of wars and even *the absence of a single battlefield-connected fatality*

among nations with contract-intensive economies. Importantly, the accumulated evidence for economic norms theory is now quite strong, seeming to surpass other theories in the democratic peace research program.²

The implications of economic norms theory for the democratic peace research program are far from trivial: It seems that the democratic peace may at last have a credible explanation and that the source of the peace is not in governing but in economic institutions. This is a strong claim, and it is therefore appropriate that it be treated skeptically and examined thoughtfully. All of the challenging issues that have been raised so far in the literature have focused on the democratic peace correlation as the primary evidence for causation from democracy to peace, seeking to save this correlation by altering third measures, adding third variables, trying more precise tests of insignificance, and adopting more stringent measures of democracy (Russett 2010:201; Dafoe 2011:3; Dafoe and Russett 2013).

This article addresses all the recent efforts to save the democratic peace correlation and reports new analyses of most nations from 1961 to 2001, extending our grasp of the democratic/economic peace in four ways. First, all analyses are carried out with a new continuous measure of contract-intensive economy, thus solving a perfect prediction problem with the prior binary measure of impersonal contract flows in analyses of fatal militarized conflicts. Second, tests are performed with analyses of all

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² Beyond the economic peace, successful novel predictions include foreign policy agreement (Mousseau 2003) and cooperation (Mousseau 2002) among nations with contract-intensive economies, but not democracies; the complete absence of civil wars, rebellions, and lower levels of conflict within nations with contract-intensive economies (Mousseau 2012a); an almost perfect prediction of nations with contract-intensive economies being democratic, and these democracies *never* becoming autocratic (Mousseau 2009:70, 2012a); that, compared with other nations, contract-rich nations have more stable governments (Mousseau 2012a:480), higher rates of economic growth (ibid.:478), higher levels of state capacity (ibid.:479), are less dependent on the export of oil (ibid.:479); and are more likely to have states that respect human rights (Mousseau and Mousseau 2008); that contract-intensive economy, not wealth, predicts higher levels of impersonal trust within nations (Mousseau 2009:69); and that in contract-poor nations experiencing rapid urbanization, urban poverty is the most powerful variable predicting support for terror (predicted in Mousseau 2002–2003; subsequently corroborated in Mousseau 2011). No theory of democratic peace is even remotely close to this record of successfully-predicted novel facts.

militarized conflicts, not just fatal ones, to see whether the more stringent binary measure of democracy (Polity +10), put forward by Dafoe (2011), can save the democratic peace hypothesis. Third, key tests include control for differences along the democracy–autocracy dimension, to see whether this factor may explain the insignificance of the democratic peace, as suggested by Russett (2010:201). Finally, the impact of contract-intensive economy is examined in head-to-head tests with more recent economic variables (Gartzke 2007; McDonald 2009) that have been offered as alternative explanations for the developed democratic peace.

This article begins with a review of economic norms theory and its explication of democratic transitions and patterns of war and peace among nations. Next, the recent defenses of the democratic peace are addressed, followed by the setting up of the test conditions. The conclusion follows the test results: Once contract-intensive economy is taken into account, there is no apparent correlation of democracy or free markets with peace. Research on democratic peace has yielded a great deal of progress in understanding international conflict, but recent advances in this research program now indicate that the economic norms peace may be the next progressive step in the democratic peace research program.

The Economic Origins of Democracy

Economic norms theory (Mousseau 2000, 2009) starts with the observation, widely documented by economic historians (North, Wallis, and Weingast 2009), of two kinds of economies in history: impersonal and personal. Impersonal economies are contract intensive: Citizens normally obtain goods and services contracting with strangers in the marketplace, with trust in contractual commitments largely dependent on the credibility of third-party enforcement. Personalist economies, in contrast, are contract poor: Individuals are comparatively more dependent on personal relationships, as individuals give or withhold favors, or trust in contractual commitments, in light of prior interactions with individuals they know personally.

Contract-poor personalist economies have encompassed most of human history and characterize the economies of many nations today (Hicken 2011). A well-known historical example is European feudalism, where client serfs pledged loyalty, including military service, to patron vassals in exchange for economic and physical security, with vassals in turn pledging their loyalty to patron lords, and so on. Most contracting that did occur in feudal Europe did not require third-party enforcement mechanisms, as trust usually rested instead on personal ties or, among strangers, taking the form of spot trades and thus without any need for third-party enforcement (Kohn 2003).

Wealth in feudal Europe was based primarily on land; however, in many developing countries today, where the market remains comparatively peripheral to everyday life, personalist relationships tend to be clientelist in nature, with relationships centered on accessing state rents (Hicken 2011:303). Rather than manors and fiefs, clientelist-oriented groups take a variety of forms, including tribes, clans, neighborhood associations, gangs, mafias, labor unions, religious sects, and political parties. For instance, in an extended family, a cousin may do all the plumbing, an uncle may take care of carpentry, and an aunt active in a political party may find local government jobs for

various family members—all of whom are obligated in turn to take care of fellow family members, and all family members are obligated to serve her political party as asked, including showing up at rallies.

Economic norms theory assumes everybody, in all societies, seeks goods and services, highlighting that the way goods and services are sought differs according to socio-economy: in a contract-intensive economy, the dominant strategy is to contract with strangers located in the marketplace; in a contract-poor economy the dominant strategy is to nourish personal relationships and participate in group struggles over state rents. These divergent strategies for obtaining wealth create divergent individual-level interests, preferences, and outlooks, generating novel insights on the origins of liberal preferences, strong states, democracy, and, in anarchic systems, dyadic alignments and rivalries (Mousseau 2000, 2009).

First and foremost, only a contract-intensive economy, not a contract-poor one, requires a strong state. Individuals cannot automatically trust the commitments of strangers, so a contract-intensive economy cannot exist unless the commitments in contracts are widely credible. Third-party enforcement mechanisms can be private (for example, notaries) or public (government). However, the private enforcement of contracts is costly, so individuals dependent on an impersonal market have an interest in an authority that offers the enforcement of contracts as a public good. For an authority's commitment of contract enforcement to be credible, however, it must have the monopoly on violence over a fixed and declared geographic space. It must also build and maintain bureaucracies and court systems that are capable of reaching and protecting the contract rights of every actor in the marketplace. In this way, when exogenous factors render the benefits of the impersonal market greater than the benefits of personal ties, members of a society develop an interest in their state effectively and efficiently enforcing contracts.

Standard economic theory (and thus political science theory) assumes that everyone always wants a strong state enforcing contracts, thus making the grave error of neglecting that in personalist economies—which encompass most of human history—the dominant strategy has been to pursue goods and services in personal ties. In personalist/clientelist economies, there is little benefit from a strong state, as utility is maximized primarily with loyalty to patrons who distribute economic and physical protection with partiality according to loyalty, rank, and service to the group. Patrons, having the loyalty of clients, have the capacity to wage violence; order in these societies is maintained with gift exchanges among patrons that reinforce paths of hierarchy and loyalty among them, as in European feudalism. For those not in groups that control the state, the state is an oppressive force to be evaded; for those privileged in groups with ties to the state, utility is maximized with loyalty to personalities, not the state. Prior research has corroborated that nations with contract-rich economies have stronger states than contract-poor ones (Mousseau 2012a:479).

A second change in preferences resulting from an exogenous rise in impersonal contracting is for legal equality. For a contract to be credible, all parties to it must be equally obligated to its terms. Therefore, states that wish to promote market-contracting must not only have the capacity to protect the contract rights of every actor in the market, but also do so with renowned credibility. States wishing to promote impersonal markets

must therefore construct bureaucracies and court systems that are not only effective and efficient, but also widely recognized as impartial. In contract-poor economies, in contrast, such credibility is irrelevant, since utility is normally maximized with personal ties and rankings in group hierarchies. For those in groups tied to the state, an impartial and transparent bureaucracy and court system is an economic threat that must be undermined.

In these ways, the impersonal state may be an epiphenomenon of impersonal economy: For the commitments of contracts to be widely credible, a state must first exist, and then, it must be widely respected as capable and impartial. Property rights theorists reverse this causation, claiming that the state enforcement of contracts is enough to promote contract flows (Clague, Keefer, Knack, and Olson 1999). Like neoclassical theorists (Hayek 1976), free market peace theorists (Weede 1996; McDonald 2009), and many in the modern discipline of Economics, property rights theorists assume that markets emerge spontaneously and, related with this assumption, that a dearth of contracting generally indicates a dearth of economic flows of any kind. Economic norms theory, in contrast, acknowledges the well-documented and uncontroversial fact of personalist exchange and therefore rejects the unsupported assertion that the propensity to contract is a universal constant. If a society already has contract norms, a change from a failed and partial state to effective and impartial one will enhance the credibility of contractual commitments and thereby promote contract flows; but if a society is characterized with personalist exchanges, any improvement in state enforcement of contracts is largely irrelevant, as most exchanges are personal in nature and thus third-party enforcement plays little role in the economy. In this way, economic norms theory places property rights theory, and even the mainstream assumptions that lie at the core of the modern discipline of Economics, as special cases of economic norms theory.

Once the contract intensity of an economy is correctly understood as a variable rather than a constant, it is easy to see the third way preferences can change with a rise in contract flows: A rise in impersonal economy can promote an interest in freedom. For anyone dependent on the impersonal marketplace, a larger market offers more opportunities than a smaller one. Individuals seeking wealth in the market thus have interests not only in their own freedom to contract, but also in the freedom of everyone else to contract. There is no apparent reason to limit this interest to one's own ethnic group, religious sect, or nation. Citizens in contract-intensive economies thus have interests not only in their states protecting individual rights at home, but in their states promoting the rights of others abroad (for corroboration, see Mousseau and Mousseau 2008). For individuals seeking wealth in personal ties, in contrast, there is a direct interest in opposing the freedom of strangers, because it is necessary to repress others in order to control and limit access to state rents. Nor can there be much evident interest in one's own freedom, since for tactical reasons the incentive is to at least appear to conform with alacrity to group norms and values, and a crucial part of personalist/clientelist political economy is the role representatives of patrons play in monitoring the behavioral loyalty of clients (Hicken 2011:292–93).

While the economic norms model as presented thus far has assumed instrumental rationality—that citizens identify their interests based on the information available

to them—the theory works just as well, perhaps better, with the recognition of bounded rationality. Bounded rationality draws on the fact that it is not rational to be rational: Many goals can be reached more efficiently by forming decision-making habits, or heuristics, for situations that arise routinely (Simon 1955). As applied here, individuals routinely dependent on trusting strangers in contract will develop the habits of trusting strangers and preferring universal freedom and rights, and strong and impartial states for protecting these rights. Individuals in contract-poor economies will develop the habits of trusting and caring for others within their in-groups, abiding by the commands of patrons, and distrusting those from out-groups, including their states. In this way, citizens in contract-intensive economies will perceive an interest in freedom and democracy and promoting these institutions for everyone, even though most, acting on bounded norms rather than on instrumental rationality, do not know why they have these universalistic liberal values. Individuals in contract-poor economies, in contrast, will be comparatively more susceptible to the appeals of those who offer strong in-group identities and warn against the threats of outsiders, even though most, acting on bounded norms rather than on instrumental rationality, do not know why they are susceptible to such fears or why they place such great value in loyalty to their groups and group leaders. In these ways, it is easy to see how a rise in impersonal contracting can moderate ethnic tensions and legitimate liberal democratic institutions within nations (for corroboration of these facts, see Mousseau 2012a); the following section explains how contract-intensive economy can also cause peace among them.

The Economic Peace

A convincing theory of peace must also explain why states fight. Recall that contract-poor personalist political economy is zero-sum-like: a gain in state rents for one group must always equal a loss for another. It follows that ruling groups in nations with contract-poor economies—whether they are democratically elected or not—have little incentive to produce public goods, preferring the distribution of private goods to supporters. In this way, foreign war can serve two purposes. First, it can be in the economic interests of the ruling coalition of in-groups, with its costs imposed on repressed out-groups. Iraq in the 1980s serves as an example: Hundreds of thousands from all groups died in its wars for territory (against Iran) and oil (against Kuwait and others), but the primary economic beneficiaries of these wars were to be the clans and tribes of the ruling coalition. A role for public goods provision in interstate conflict has been highlighted by Bueno de Mesquita, Morrow, Siverson, and Smith (1999), linking these provisions with democracy. While democracy might mitigate the constraints on public goods provision, economic norms theory predicts this constraint results from economic rather than democratic institutions.

The second motive for war for contract-poor nations is as a means for ruling group coalitions to stay in power. Because individuals are normally loyal to their groups, not their states, contract-poor states tend to lack widespread legitimacy and are thus less stable than contract-rich ones (for corroboration of this fact see Mousseau 2012a:480). In addition, the zero-sum nature of their political economies means that ruling groups must continuously seek wealth for supporters and, as a conse-

quence, repress out-groups which can be allotted few, if any, state rents. Yet, repression is costly. To reduce this cost, many state leaders have learned to play on personalist bounded norms by propagandizing the state as an in-group patron providing economic and physical security to all: That is, ruling groups have learned to foster nationalism. Nationalist identities, however, require an out-group. The most convenient and successful way to foster a nationalist identity is to maintain a quarrel with another state. Most borders have been adjusted at some point in history; therefore, border disputes are simple and convenient to concoct. In this way, economic norms theory predicts enduring rivalries among states with contract-poor economies that have some history of interaction, particularly if they share land borders.

Contract-intensive economy, in contrast, is positive-sum-like: Any improvement in the welfare of anyone else in the market increases the odds that one's own welfare will improve. Everyone in the market thus has a principal interest in the public good of ever expanding growth in the market. While some individuals might rank some other preference or preferences higher than market growth, most individuals rank market growth at or near the top of their preference ordering. As a result, the voter preference for market growth is Pareto optimal: In a contract-intensive economy, there is no other preference that a citizenry, as a group, will consistently rank higher. Since nations with contract-intensive economies are almost always democratic, successful political parties have learned that performance in fostering market growth, rather than the promotion of fears of others, is the better strategy for staying in power (for corroboration that contract-intensive economy promotes market growth, see Mousseau 2012a). While nationalist, religious, and other identity issues may at times exist, the dearth of collective bounded norms means that these issues are almost always outweighed by constituent demands for market growth. Economic norms theory thus offers what could be vital conditionality to diversionary theories of war making (Levy 1988): Nations with contract-intensive economies may be largely immune from this malady.

It follows that among neighbors with contract-intensive economies, the main purpose of borders is not to distinguish national or cultural identities, which can cross borders, but to determine which state is tasked with enforcing contracts in the disputed region; the settlement of border disputes is thus more akin to the settlement of trade disputes. Since the leadership of both states desire foremost economic growth, a peaceful resolution is always reached in any kind of dispute, as there is always a set of negotiated settlements that both sides prefer to fighting. Nor are disputes of any kind allowed to linger: Among neighbors and non-neighbors, uncertainty inhibits market growth, so when disputes among contract-rich states do arise they are predicted to be resolved not only peaceably, but also quickly. Rationalist theories of war making also predict that as long as the issues at stake are divisible a peaceful resolution should always be reached as there should always be a set of negotiated settlements that both sides prefer to fighting, and are thus puzzled by the existence of war (Fearon 1995). By endogenizing national preferences, economic norms theory offers a solution to this puzzle: The cost of war is always greater than its benefits in *relations among contract-rich states* because they, *more than contract-poor ones*, consistently prefer foremost growth in their markets.

The economic peace is more than just a dearth of conflict; contract-rich states also have common foreign policy interests. Successful political parties have learned to promote exports to enhance market growth, and in this way, nations with contract-intensive economies share a common interest in the vitality of the global marketplace. The leaders of contract-poor states, in contrast, are more interested in the distribution of private goods to supporters than they are in the public good of market growth. As a consequence, leaders of contract-poor states are comparatively less interested in the global market.³

Once we grasp how economic norms affect interests in the global market, two important implications follow. First, to enhance the credibility of contractual commitments a market requires law and order, which is vital for contractual commitments to have credibility. Any actor, state or nonstate, that threatens global order unchecked thus poses an immediate threat to global markets, as the ensuing uncertainty in the credibility of contractual commitments increases the risk of global divestment and economic contraction. It follows that states that care about global markets—most reliably those with contract-intensive economies—have deep-seated interests in opposing any threats to the market and, since a marketplace depends on law, have essential interests in the enforcement of global law and order. While contract-rich states may have differences in tactics and can squabble over the collective goods issue of which one of them enforces the global order, they are in a fundamental natural alignment against any threats to it, for the most basic reason that for all of them the preservation of the global marketplace, and therefore global order, is at their highest strategic interests. Power transition theory (Kugler and Lemke 1996) has long divided states into status quo and revisionist camps but has lacked a consistent and compelling explanation for how states select their camps; by endogenizing national preferences, economic norms theory offers one such explanation.

The second implication is even more sweeping: Because growth in the global market is a public good for everyone in the market, there can be few relative gains concerns among nations with contract-intensive economies. As was previously observed, market norms are positive-sum-like: Any improvement in the welfare of anyone else in the market increases the odds that one's own welfare will improve. This means that contract-rich nations have direct interests in the economic health of any nation that imports. It follows that there can be no concern with relative economic gains among these nations, since comparatively rapid growth in any nation that imports has the result of promoting market growth in the others. For leaders interested in their political party's electoral fortunes, market growth in another nation in the global market cannot be perceived as a threat because it is *preferred*. Moreover, no leader wishing foremost to promote exports in the global marketplace can have any

³ Some contract-poor states have some interests in the global marketplace if their economy relies on exports, but the dearth of market norms means that these cases almost always involve primary or secondary exports that are tightly controlled by elites, such as cotton in the U.S. South in the nineteenth century or oil for Saudi Arabia today. In these cases, personalist leaders are mostly concerned narrowly on the specific market for their particular export, not the general vitality of the global market.

interest in threatening disorder or harming another importing state's economy; even the perception of such a threat harms the global marketplace and is steadfastly avoided. The result is a perfect peace and even something close to harmony in formal anarchy, since among contract-rich nations war is literally unspeakable.

Efforts to Save the Democratic Peace Correlation

By offering a single account for both stable democracy and peace among nations, economic norms theory has the potential to render the democratic peace correlation spurious. As mentioned, this correlation is itself the primary evidence for democracy causing the peace, since no prior theory of democratic peace has accrued substantial corroborative evidence (Dafoe 2011:14). The pursuit of knowledge thus compels us to examine the four crucial ways offered in the literature that the correlation of democracy with peace may still be significant and substantive after consideration of economic norms.

Measuring Political Distance

Ray (2003) has cautioned against including variables that are endogenous or mathematically related to test variables, so when I first directly showed the democratic peace spurious (2009), I did not include consideration of regime difference, or the difference in democracy scores of the two states in a dyad, since this variable is related to contract-intensive economy because it also predicts democracy. Afterward, Russett (2010:201) suggested that inclusion of regime difference might make democracy significant, so after that Mousseau et al. (2013) included *Regime Difference*, measured as the absolute value of the difference in Polity2 regime scores (Polity IV data set) for two states in a dyad (Marshall and Jaggers 2003), as recommended in the literature (Werner and Lemke 1997). After that, Dafoe and Russett (2013) responded that their preferred measure for regime difference is *Democracy_H*, with *H* meaning the *higher* democracy score in the dyad.

The choice of measure here is important, as the literature has established that *Democracy_H* inflates the significance of *Democracy_L*, which is the *lower* democracy score in the dyad and the standard measure of democratic peace (Henderson 2002:32–33; Choi 2011). Mousseau, Orsun and Ungerer (2013) also show substantial epistemic error in *Democracy_H*. Dafoe and Russett (2013) acknowledge that *Democracy_H* inflates the significance of *Democracy_L*, but nevertheless advocate for it on the grounds that Regime Difference also has a mathematical relationship with *Democracy_L*.

Of course, *Democracy_H* is not the only alternative to Regime Difference, so it is a simple matter to solve this controversy by adopting a new measure of regime difference that is not mathematically related to democracy. To be convincing, a concept must yield generally consistent results across divergent ways of measuring it, and the democratic peace correlation cannot be said to survive

only with the specific and faulty third measure *Democracy_H*. Below I follow Mousseau et al. (2013) and gauge regime difference with *Political Distance*, a measure developed by Werner (2000) that has the distinct advantage of having no mathematical relationship with the democracy measures.⁴

Assessing Insignificance

Dafoe and Russett (2013) correctly point out that to show democracy as insignificant one must determine if the difference in significance of the democracy coefficients, with and without consideration of a confounding variable, is itself significant (Gelman and Stern 2006). However, Dafoe and Russett (2013) did not carry out any such test: They just assumed that the insignificance of democracy reported in Mousseau et al. (2013) must be insignificant. Mousseau, Orsun and Ungerer (2013) carried out the test and found the difference in significance of the democracy coefficients, with and without consideration of confounding contract-intensive economy, to be *highly significant* ($p < .001$). This same result holds whichever way democracy is gauged (*Democracy_L*; *Democracy Binary*; *Democracy_L* squared), thus establishing that the democratic peace correlation is clearly not significant in analyses of interstate crises. In the tests below the democracy coefficient is in the *positive* direction in every model of fatal militarized conflict, so there is no need to test whether the difference in significance of the democracy coefficients is itself significant since, if anything, after consideration of economic norms, democracy appears to *promote* fatal militarized conflict among nations.

Changing Democracy to Binary +10

Upon analyzing my (2009) data, Dafoe (2011:3) reports that if a new and highly stringent binary measure of democracy is adopted, with democracies defined as only those at the highest possible democracy (Polity IV) score of +10, that it too, like the binary measure of contract-intensive economy, yields a perfect prediction of an absence of fatal militarized disputes. Since perfect prediction yields quasi-complete separation in the offending variable, it is difficult to tell from a regression which factor, contract-intensive economy or democracy, is the more likely cause of the peace.

As far as I know, before Dafoe introduced it, the Polity+10 measure was not applied to the democratic peace; it is also an explicit post-hoc response to the economic norms challenge to the democratic peace. This is not to imply that changing a measure after-the-fact is necessarily improper; knowledge can sometimes progress with post-hoc adjustments to theories and measures. The weakness of theory informing us how to measure democracy—itsself an indication of the comparatively poor quality of many of the democratic peace theories—does encourage experimentation with the measure. Rather, my point here is that scientific procedure calls for recognition that post-hoc adjustments to measures can go on ad infinitum, ultimately rendering a theory or hypothesis unfalsifiable. This was the problem Lakatos ([1970]1978) sought to address as he developed a standard for gauging emendations to research programs. Using Lakatosian standards widely used in the field of International Relations (for example, James 2002; Vasquez and Elman 2002; Ungerer 2012), Dafoe's post-hoc adjustment in the measure of democracy is clearly degenerating, since he

⁴ Dafoe and Russett (2013) also make two mistakes in their advocacy of the *Democracy_H* measure. First, they argue on the grounds of their Google Scholar survey that *Democracy_H* is the "standard" measure. Mousseau, Orsun and Ungerer (2013) could not replicate this survey, but this does not matter: Even if a particular measure has been used a lot, repeated usage of a faulty measure does not make it right (see also Reuveny, Pollins, and Keshk 2011). Second, Dafoe and Russett (2013) advocate the usage of *Democracy_H* to gauge regime difference even without *Democracy_L*. But *Democracy_H* is an extremely poor measure of regime difference in the absence of its mathematical counterpart *Democracy_L*.

offered no excess empirical content obtained from the emendation, and his explicit motivation was to save the democratic peace hypothesis. A move to +10 democracy also brings with it the troubling question of whether all the studies of democratic peace over the past two decades would have obtained the same levels of significance if the +10 measure had been adopted, given that it would have left far fewer democratic dyads in the samples. For this reason, Lakatos would consider Dafoe's finding with Polity+10 democracy trivial and uninteresting (Lakatos [1970]1978:87–88).⁵ In the analyses below, I test the impact of the Polity+10 measure of democracy put forward by Dafoe (2011) in analyses of all militarized conflicts, not just fatal ones that yield perfect prediction, to see whether the new measure can save the democratic peace hypothesis.

Third Variables Can Make Democracy Significant

In their effort to make the democracy coefficients significant in Mousseau et al.'s (2013) analyses of crises, Dafoe and Russett (2013) introduced two new variables: an interaction of $CIE_L * Democracy_L$ and CIE_H (H for higher; CIE refers to "contract-intensive economy"). However, the interactive term shows that $Democracy_L$ is statistically insignificant for 68% of the sample (all dyads where $CIE_L < 1.3$), a striking limitation on the power of democracy to make peace (Dafoe and Russett 2013; Figure 1). The foremost problem with these new variables, however, is not empirical but theoretical: Dafoe and Russett (2013) offer no theory for them, and thus no explanation for how they make democracy significant. It is not always difficult to mine data and dredge up third variables that can help obtain the results one wants in a regression analyses. This is another reason why theoretical justification is essential for all variables (Thompson and Tucker 1997:434–435; Ray 2003), a point actually mentioned by Dafoe (2011:10) as a criticism of Gartzke (2007). Without theoretical guidance for how either of these variables affect democracy, their introduction appears to be no more than an ad hoc attempt to save a hypothesis (see Lakatos [1970]1978) and as such cannot be convincing and deserves no more attention.⁶

Setting the Test Conditions

There are a number of important issues that need to be investigated: Can the democratic peace correlation be revived with appropriate controls for political distance? Can it be revived with alternative measures of democracy? Can other economic factors explain the impact of impersonal economy? To answer these questions using historical data, I adopted standard procedures in the democratic peace research program: The unit of analysis is the nondirectional dyad-year, with militarized conflicts identified as the original (day 1) disputants in the conflict as codified in the Correlates of War Militarized Interstate Dispute data set (Ghosn, Palmer, and Bremer 2004), dyadic version 1.1 (Maaz 2005).

Following the general trend in conflict studies, to save space I primarily report results of analyses of fatal militarized interstate disputes, since nonfatal disputes are more likely than fatal ones to go unreported (Mousseau, Hegre, and Oneal 2003:291). Still, key analyses were repeated with all militarized disputes (fatal and nonfatal) with identical results. Data for most variables were obtained using the EUGene data generation program, version 3.204 (Bennett and Stam 2000). Like the dependent variables, most of the independent variables are conventional to the conflict studies literature, so to save space, their theoretical justifications can be reviewed elsewhere (Russett and Oneal 2001; Mousseau et al. 2003), and data sources and measures are listed in Tables 1 and 2. Also available on EUGene is the newer continuous measure for contract-intensive economy, which, like the prior binary one (Mousseau 2009), is based on life insurance contracts in force, only now measured as the natural log of U.S. dollars per capita with missing data imputed; I call it *Contract-intensive Economy (CIE)*. As discussed at length elsewhere (Mousseau 2012a:475–476), life insurance contracting is an ideal measure of CIE because, unlike other contracts, life insurance contracts must rely on third-party enforcement, since the commitment of the insurer can take place only after the death of the policyholder. All data are available for replication purposes, including all details in the construction of CIE, on my web page at <http://home.ku.edu.tr/~mmousseau/>.

Test Results

Model 1 in Table 1 reports the null model of democratic peace in analyses of fatal militarized interstate disputes as reported in multiple studies. As expected, the coefficient for $Democracy_L$ (−0.08) is negative and significant at the standard 0.01 threshold. Since this variable indicates the level of democracy in the state with the lower level of democracy in the dyad, high values mean both states are highly democratic and this coefficient corroborates the democratic peace. All remaining variables perform as expected, as in prior studies, and need not be reviewed here.

Model 2 presents new knowledge by adding the control for economic type. To capture the dyadic expectation of peace among contract-intensive nations, the variable $Contract-intensive Economy_L$ (CIE_L) indicates the value of impersonal contracts in force per capita of the state with the lower level of CIE in the dyad; a high value of this measure indicates both states have contract-intensive economies. As can be seen, the coefficient for CIE_L (−0.80) is negative and highly significant. This corroborates that impersonal economy is a highly robust force for peace. The coefficient for $Democracy_L$ is now at zero. There are no other differences between Models 1 and 2, whose samples are identical, and no prior study corroborating the democratic peace has considered contract-intensive economy. Therefore, the standard econometric inference to be drawn from Model 2 is the nontrivial result that all prior reports of democracy as a force for peace are probably spurious, since this result is predicted and fully accounted for by economic norms theory.

CIE_L and $Democracy_L$ correlate only in the moderate range of 0.47 (Pearson's r), so the insignificance of democracy is not likely to be a statistical artifact of multicollinearity. This is corroborated by the variance inflation factor for $Democracy_L$ in Model 2 of 1.85, which is well below the usual rule-of-thumb indicator of multicollinearity of 10 or more. Nor should readers assume most

⁵ I thank Jameson Ungerer for bringing this point to my attention.

⁶ Dafoe (2011:3), Russett (2010:201), and Dafoe and Russett (2013) all assert that Mousseau (2009) showed (at least) a conditional role for causality from democracy to peace with the interaction term $One State CIE * Democracy_L$, but they offer no theory for how democracy can be conditioned by impersonal economy. In fact, this interaction term tested a peripheral hypothesis derived from theory that credits *all* causation in economic norms; none in democracy (ibid:63–64).

TABLE 1. Contract-intensive Economy, Democracy, and Militarized Conflict, 1961–2001[†]

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Contract-intensive Economy _L	–	–0.80***	–0.85***	–0.83***	–0.29***	–0.84***
Democracy _L	–0.08**	0.00	0.03	–	–	–
Democracy _{Binary6}	–	–	–	0.63	–	–
Democracy _{Binary10}	–	–	–	0.48	–	–
Democracy _L ²	–	–	–	–	–0.41	–
Political distance [‡]	–	–	–	–	0.45	–
Relative capability [§]	–0.21**	–0.28***	–0.31***	–0.30***	–0.24***	–0.30***
Major power [¶]	0.08	0.08	0.08	0.08	0.05	0.08
Contiguity ^{**}	1.31**	1.73***	1.84***	1.84***	1.99***	1.83***
Distance ^{††}	0.41	0.36	0.36	0.36	0.19	0.36
Number of states ^{‡‡}	3.94***	3.77***	3.82***	3.83***	2.80***	3.83***
Intercept	0.47	0.44	0.42	0.41	0.20	0.42
Observations	–0.39**	–0.50***	–0.54***	–0.54***	–0.44***	–0.53***
Pseudo R-squared	0.12	0.12	0.11	0.11	0.07	0.11
Pseudo LL	0.00	0.00	0.00	0.00	0.00*	0.00
	0.00	0.00	0.00	0.00	0.00	0.00
	–3.74**	–1.71	–2.29*	–2.64*	–2.04**	–2.61*
	321,568	321,568	301,072	301,072	301,291	301,072
	0.38	0.40	0.41	0.41	0.39	0.40
	–1041.5	–1009.8	–924.6	–924.4	–3840.4	–924.9

(Notes. *** $p < .001$, ** $p < .01$, * $p < .05$, † $p < .10$.)

[†]Standard errors, corrected for clustering by dyad, in second row of each cell; fatal militarized conflicts analyzed in Models 1–4 and 6; all militarized conflicts examined in Model 5. All independent variables lagged 1 year. Peace years and cubic spline variables, calculated separately for fatal and all disputes with consideration for disputes back to the start of the Cold War in 1947, not shown for reasons of space.

[‡] $\sqrt{[(x_{rcomp_i} - x_{rcomp_j})/3]^2 + [(x_{ropen_i} - x_{ropen_j})/4]^2 + [(x_{const_i} - x_{const_j})/6]^2 + [(p_{parcomp_i} - p_{parcomp_j})/5]^2}$ (Werner 2000); variables from Polity IV data (Marshall and Jaggers 2003).

[§]COW Index of National Capability, higher/lower (logged+1) (Singer et al. 1972).

[¶]At least one state is a major power (Small and David Singer 1982).

**States are separated by < 400 miles of water (Stinnett et al. 2002).

^{††}Intercapital distance (logged+1).

^{‡‡}Number of states in system.)

democratic dyads have both states with impersonal economies: While almost all nations with contract-intensive economies (as indicated with the binary measure for CIE) are democratic (Polity2 > 6) (Singapore is the *only* long-term exception), more than half—55%—of all democratic nation-years have contract-poor economies. At the dyadic level in this sample, this translates to 80% of democratic dyads (all dyads where Democracy_{Binary6} = 1) that have at least one state with a contract-poor economy. In other words, not only does Model 2 show no evidence of causation from democracy to peace (as reported in Mousseau 2009), but it also illustrates that this absence of democratic peace includes the vast majority—80%—of democratic dyad-years over the sample period.

Nor is it likely that the causal arrow is reversed—with democracy being the ultimate cause of contract-intensive economy and peace. This is because correlations among independent variables are not calculated in the results of multivariate regressions: Coefficients show only the effect of each variable after the potential effects of the others are kept constant at their mean levels. If it was democracy that caused both impersonal economy and peace, then there would be some variance in Democracy_L remaining, after its partial correlation with CIE_L is excluded, that links it directly with peace. The positive direction of the coefficient for Democracy_L informs us that no such direct effect exists (Blalock 1979:473–474).

Model 3 tests for the effect of Democracy_L if a control is added for mixed-polity dyads, as suggested by Russett (2010:201). As discussed above, to avoid problems of mathematical endogeneity, I adopt the solution used by Mousseau, Orsun and Ungerer (2013) and measure regime difference as proposed by Werner (2000), drawing on the subcomponents of the Polity2 regime measure. As can be seen, the coefficient for *Political Distance* (1.00) is positive and significant, corroborating that regime mixed dyads do indeed have more militarized conflict than others. Yet, the inclusion of this term has no effect on the results that concern us here: CIE_L (–0.85) is now even more robust, and the coefficient for Democracy_L (0.03) is above zero.⁷

Model 4 replaces the continuous democracy measure with the standard binary one (Polity2 > 6), as suggested by Russett (2010:201), citing Bayer and Bernhard (2010). As can be observed, the coefficient for CIE_L (–0.83) remains negative and highly significant, while Democracy_{Binary6} (0.63) is in the positive (wrong) direction.

As discussed above, analyses of fatal dispute onsets with the far stricter binary measure for democracy (Polity = 10), put forward by Dafoe (2011) in response to Mous-

⁷ Use of the Political Distance measure reduces the number of observations because, unlike the Polity2 measure of democracy, missing data in the subcomponents of Polity2 are not imputed in the Polity IV dataset.

TABLE 2. Contract-intensive Economy, Other Economic Factors, and Fatal Militarized Conflict[†]

Variables	Correlation CIE _L	Model 1	Model 2	Model 3	Model 4
Contract-intensive Economy _L	1.00	-0.70***	-0.68***	-0.67***	-0.72***
Wealth _L [‡]	0.56	-0.30 0.26	-	-	-
Trade _L [§]	0.31	-	-1.18 ^t 0.65	-	-
Capital openness _L [¶]	0.33	-	-	-0.06 0.07	-
Public _H ^{**}	-0.15	-	-	-	-0.02** 0.01
Political distance	-0.22	0.92*** 0.21	0.88*** 0.21	0.80*** 0.22	1.20*** 0.31
Relative capability	-0.01	-0.30*** 0.09	-0.34*** 0.09	-0.29** 0.09	-0.11 0.13
Major power	0.13	1.93*** 0.37	1.98*** 0.36	1.43*** 0.40	0.97 0.68
Contiguity	0.06	3.81*** 0.41	3.83*** 0.41	4.09*** 0.45	4.94*** 0.57
Distance	-0.03	-0.55*** 0.11	-0.56*** 0.10	-0.49*** 0.10	-0.32** 0.12
Number of states	0.11	0.00 0.00	0.00 0.00	0.02** -0.01	-0.02* -0.01
Intercept		-2.72*	-2.41*	-5.73***	-1.79
Observations		301,072	296,553	191,914	115,469
Pseudo R-squared		0.41	0.41	0.44	0.45
Pseudo LL		-924.5	-902.6	-547.0	-244.5

(Notes. *** $p < .001$, ** $p < .01$, * $p < .05$, ^t $p < 0.10$.)

[†]Standard errors, corrected for clustering by dyad, in second row of each cell. All independent variables lagged 1 year. Peace years and cubic spline variables not shown.

[‡]Energy consumption per capita logged, COW Index of National Capability (Singer et al. 1972).

[§](Exports_{ij}+imports_{ij})/GDP_i, lower (Gleditsch 2002).

[¶]Index of government restrictions on foreign exchange, current, and capital accounts, lower (Gartzke 2007:174).

^{**}Proportion of state revenue from non-tax sources, higher of both states in the dyad (McDonald 2009:79).

seau (2009), yields perfect prediction (as does the prior binary measure *Both States CIE*), causing quasi-complete separation and inconclusive results. Therefore, Model 5 reports the results with *DemocracyBinary10* in analyses of all militarized conflicts, not just fatal ones. As can be seen, the coefficient for *DemocracyBinary10* (-0.41), while negative, is not significant. Model 6 reports the results in analyses of fatal disputes with *Democracy_L squared* (after adding 10), which implies that the likelihood of conflict decreases more quickly toward the high values of *Democracy_L*. As can be seen, the coefficient for *Democracy_L²* is at zero, further corroborating that even very high levels of democracy do not appear to cause peace in analyses of fatal disputes, once consideration is given to contract-intensive economy. Models 3, 4, and 6, which include Political Distance, were repeated (but unreported to save space) with analyses of all militarized interstate disputes, with the democracy coefficients close to zero in every case. Therefore, the conclusions reached by Mousseau (2009) are corroborated even with the most stringent measures of democracy, consideration of institutional distance, and across all specifications: The democratic peace appears spurious, with contract-intensive economy being the more likely explanation for both democracy and the democratic peace.

Tests of Other Economic Variables

At the start of the economic norms research program, direct data on contract-intensive economy were not available, and the interaction of development and democracy

was used as a proxy measure for it, giving rise to the economic conditionality to the democratic peace (Mousseau 2000).⁸ Since then, others have sought to explain the developed democratic peace: Gartzke (2007) offered that free markets in foreign direct investment can yield information advantages in crises; McDonald (2009) postulated that less government ownership of property can constrain the autonomy of governments, enhancing the credibility of their commitments. However, these new theories are unlikely to upend the democratic peace correlation for the simple reason that they lack theory for how free markets or less public property can cause democracy.⁹

Nor are these economic factors related to contract-intensive economy, theoretically or empirically. Theoretically, a contract can be highly regulated by a state; and a contract-intensive economy can coexist with a state possessing large amounts of public property. There is nothing in economic norms theory that suggests that government involvement in the economy impedes contract flows; in fact, nations with impersonal economies have higher rates of government spending than others (Mousseau 2012a:479–480). Not surprisingly, at the dyadic level, CIE_L only moderately correlates with free mar-

⁸ At my suggestion, Hegre (2000:23) also reported the development conditionality to the democratic peace, but only as an explicit test of the economic norms hypothesis.

⁹ Nor are these economic factors correlated with advanced economy or developed democracy (Mousseau 2012b:204–05). Gartzke (2007) reports an overturning of the democratic peace correlation despite lacking theory for it, but others report that his result is due to errors in sampling and specification (Choi 2011; Dafoe 2011).

kets in foreign direct investment (*Capital Openness_L* at 0.33) and even less so with private ownership of property (*Public_H* -0.15).¹⁰

The analyses below also consider two other factors related to *CIE_L*: wealth and trade. Starting with wealth, Granger tests of causality have previously corroborated the economic norms prediction that contract-intensive economy causes wealth, but wealth does not cause contract-intensive economy (Mousseau 2012a). We must thus expect some correlation of CIE with wealth, reported as a moderately strong 0.58 at the national level (*ibid*:477).¹¹ It is reasonable to surmise, however, that CIE could be acting as a mere proxy for wealth, and prior research has linked wealth with peace (Bremer 1992).

CIE_L could also be acting as a proxy for trade interdependence, a known correlate of peace (Russett and Oneal 2001). Economic norms theory clearly predicts CIE states to trade more than others. Trade interdependence at the dyadic level, however, is the extent at which the two economies are integrated (*Trade_L*); not the same thing as the extent at which both nations in a dyad trade globally. Still, *CIE_L* and *Trade_L* have a moderate correlation of 0.31, and it is thus conceivable that trade may weaken the correlation of contract norms with peace.

Given the moderate correlations with *CIE_L*, the models in Table 2 pose no problems of multicollinearity, as no economic factor yields a variance inflation factor above 1.60. As can be seen in Model 1, the coefficient for *CIE_L* (-0.70) remains negative and highly significant even when controlling for *Wealth_L* (-0.30), which is not significant.

In Model 2, we can see that the coefficient for *CIE_L* (-0.68) holds firmly with a control added for *Trade_L* (-1.18), which is significant at the lowest 0.10 level. This result is reasonable: There is nothing in economic norms theory that precludes a correlation of trade interdependence with peace among nations with contract-poor economies, or between these nations and contract-rich ones.¹²

Model 3 examines whether capital openness (Gartzke 2007) can account for the impact of contract-intensive economy.¹³ As can be seen in Model 3, the coefficient for *CIE_L* (-0.67) holds firm, while the coefficient for *Capital Openness_L* (-0.06) is not significant. Additional tests of this same model and sample without *CIE_L*, unreported, show *Capital Openness_L* to be significant. This result mirrors the Mousseau et al. (2013) analyses of interstate crises. It thus appears that CIE may account for prior reports linking capital openness with peace. It is possible that in prior studies, *Capital Openness_L* has served as a weak proxy for *CIE_L*, as during the period of data avail-

ability (1966–1992), influential Dependency and Marxist views shared by many leaders of contract-poor nations led many to restrict foreign direct investment.

As can be seen in Model 4, the coefficient for *CIE_L* (-0.72) holds firm, while the coefficient for *Public_H* (-0.02) is significant but in the wrong direction—indicating that states with large public sectors are less likely than others to engage in fatal conflicts. Additional tests of this same model and sample with *CIE_L* excluded, unreported to save space, show *Public_H* to be insignificant. This result mirrors the Mousseau et al. (2013) analyses of interstate crises.

Of the economic factors examined in Table 2, only *Trade_L* in Model 2 reaches significance in the predicted direction, so Model 2 appears as the best non-theoretically-driven estimate of the causes of fatal international conflict (a true theory-driven estimate would exclude *Trade_L*, which is partially predicted from *CIE_L*). Calculations of the coefficients in this model indicate that contract-intensive economy may be the most powerful factor in international conflict: a change from the 5th to 95th percentile of *CIE_L* appears to reduce the probability of fatal conflict in a dyad by a substantial 44.5%—even slightly surpassing changes from 0 to 1 in the powerful trivial dummies Contiguity (44.1%) and Major Power (38%); *CIE_L* is 31% stronger than the Realist variable Relative Capability, 26% stronger than Political Distance, and over 800% stronger than *Trade_L*. The analyses thus confirm economic norms as a powerful force shaping international conflict processes, and neither free-market capitalism nor democracy appear as compelling factors in this regard.

Lakatosian Next Steps

The economic norms challenge to the democratic peace research program is bold: That it is not governing, but rather economic institutions that account for the peace among nations. It is thus fully desirable that this claim be carefully scrutinized. Because no explanation of how democracy can cause peace has accrued substantial corroborative evidence, defenses of democracy as a cause of the peace have rested mostly on ways the democratic peace correlation can be saved in light of the confounding variable contract-intensive economy, and this article was aimed at examining these arguments.

Analyses of most nations from 1961 to 2001 show that, once contract-intensive economy is taken into account, there is no evidence of causation from democracy to peace, and contract-intensive economy is one of the most powerful nontrivial variables in international conflict. The use of the highest +10 measure of democracy does not revive the democratic peace correlation; nor does consideration of institutional distance. All data and measures are conventional to studies of interstate conflict processes, and the most likely cause of democracy's insignificance is consideration of contract-intensive economy, since key models are identical in every other way. Nor can the economic peace be explained by trade or wealth, and the free-market theories of capitalist peace—size of public sector (McDonald 2009) and capital openness (Gartzke 2007)—do not survive rigorous testing or the consideration of impersonal economy at standard levels of significance.

The results of this study must be made very clear: There is no justification for inferring or implying any evidence herein, direct or indirect, as corroborating the cau-

¹⁰ I thank Erik Gartzke and Patrick McDonald for kindly sending me their data. McDonald hypothesizes that the size of public sector in only one state in a dyad will increase the probability of militarized conflict (2009:84), an expectation that can be assessed at the dyadic level with the size of public sector of the higher state.

¹¹ Wealth is gauged using energy consumption per capita. Results below are identical using gross domestic product (GDP) per capita, but energy consumption is preferred because GDP and CIE are axiomatically related as GDP is partly constructed from data on contract flows reported to government agencies. We should refrain from including variables that are axiomatically-related in common regressions (Ray 2003). Also, because GDP is partly constructed from data on contract flows it is comparatively biased towards impersonal economy. As expected, CIE correlates with GDP a bit higher at 0.77 at the national level (Mousseau 2012a:477).

¹² In analyses of all disputes, *Trade_L* is not significant.

¹³ Choi (2011) and Dafoe (2011) report serious sample bias caused by listwise deletion of missing data in the variable *Capital Openness_L*. To lessen this bias, I follow the procedures of Mousseau et al. (2013): I first interpolated the known values of *Capital Openness_L*, and then, following Gartzke and Hewitt (2010), replaced all the remaining missing values with a zero.

sation from democracy to peace. Democracy is not merely insignificant: Standard measures of democracy were shown to have *positive* impacts on the odds of fatal militarized conflict in every model of fatal conflict that controlled for contract flows. In conjunction with prior related studies (Mousseau 2009; Mousseau et al. 2013), it is now clear that there is little correlational evidence of democracy causing peace, whether we gauge peace with wars, fatal and nonfatal militarized interstate conflicts, or interstate crises.

I do not expect this to be the last word in the democratic peace research program, but as this controversy unfolds, it would be useful for all of us to give careful consideration to Lakatosian insights on how research programs progress and degenerate (Lakatos [1970]1978). Dafoe has expressed the view that “as the number of studies supporting the descriptive inference of the democratic peace continues to grow, the probability of a future study overturning this finding becomes increasingly less likely” (2011:14; see also Dafoe and Russett 2013). This statement is not scientifically correct: As far as I know, Dafoe has no special powers in divining what future studies will show; and repeated studies with specification bias do not render a finding any more accurate than a single one. If it did, then the progress of knowledge would collapse into a race of competing viewpoints over publication numbers; editors, rather than evidence, would emerge as the arbiters of truth, and popular and academic culture and intuition would trump the progress of knowledge.¹⁴ While numerous studies have corroborated the democratic peace, most of these employed “almost similar statistical models, indicators, and data” (Reuveny et al. 2011:764), and not a single one controlled for contract-intensive economy, a proven powerful variable predicted by a new and highly corroborated theory. New ideas can always emerge, and there is no logic in resisting them simply because a prior view was widely accepted as fact: The world is not flat.

Lakatos ([1970]1978:72) also observed that “defenders of the defeated program” may offer “a shrewd *ad hoc* ‘reduction’ of the [new] program to the defeated one.” In response to the economic challenge to the democratic peace research program, defenders have already expressed the view that the world is one of “complex causal relationships with endogeneities where liberal influences interact and strengthen one another” (Russett 2010:203), and that “it is naive to think that we can easily parse out and estimate the effects of these many potential causes of peace” (Dafoe and Russett 2013:121). No one ever said it was easy, but it is not any harder to parse out democracy from economy now than it was a decade ago when democracy reigned unchallenged, and as discussed above, half of all democratic nation-years lack contract-intensive economies. More importantly, the mere existence of multiple uncorroborated theories offering multiple paths of causation among multiple liberal variables does not mean that these proposed multiple paths are correct: The progress of knowledge is not reached democratically, with every imagined theory automatically given a seat at the explanatory table. A seat at the table has to be earned with substantial corroborated evidence, and the wider stream of evidence at this writing strongly supports causation from market norms to both democracy

and peace, and comparatively far less support for most of the alternative potential causes of the peace.

The invocation of Lakatos is not meant to imply that ergo the economic norms challenge must be right—that too would be wrong. Rather, Lakatosian method is useful for directing us toward the next appropriate research tasks. First and foremost, as with all strong claims, the results here must be given careful scrutiny. Any error found is trivial, however, unless it is shown that, when corrected, democracy returns to significant and substantive, and this is achieved in a theoretically informed model (Ray 2003). More importantly, all research must be assessed in the larger context with which it is embedded (Lakatos [1970]1978:87–88). Compared with most theories of democratic peace, economic norms theory has a much larger repertoire of explanatory value and predictive successes, crossing multiple levels of analyses.¹⁵ Causation has also been traced in case studies, such as the Greek transition to contract-intensive economy, and related changes in its domestic and foreign politics, in the 1990s (Mousseau 2009:76–81); and Argentine and British motives to fight the Falklands/Malvinas War in this mixed-economic dyad (Mousseau 2012b).

Second, it would be useful to pit specific measures from the most promising democratic peace theories against contract-intensive economy. For instance, selectorate theory (Buono de Mesquita et al. 1999) may still be robust, when selectorates are measured directly, against contract-intensive economy. Also, settled borders and an overall secure environment may promote both democracy and peace (Rasler and Thompson 2005; Vasquez 2011), and these factors may yet be found robust after consideration of impersonal economy. A territorial peace may even promote contract-intensive economy—and thus has the potential to render the economic peace spurious. Finally, some other third variable could cause both impersonal contract flows and peace. All that can be said as of this writing is that the cumulative state of knowledge is that the primary evidence for causation from democracy to peace—the democratic peace correlation—appears spurious; all things considered, contract-intensive economy is the more likely cause of both democracy and the peace.

If the democratic peace correlation is not revived in a theoretically justified model, then the time-tested rules of scientific progress mandate that the democratic peace research program undergo a substantial transformation. In Lakatosian terms, the economic norms peace can be viewed as an emendation to the democratic peace research program, adding heuristic power through its explanation of the causes of both democracy and peace, while receiving both corroboration of its novel content and excess corroboration over previous explanations. Lakatos ([1970]1978) explicitly identifies examples of inconsistent theories being grafted onto existing research programs, eventually overtaking the original programs. This is constitutive of a progressive problem-shift, while in some interpretations it could even be conceived of as an ideal form (Ungerer 2012:23). With such a shift, there is potential for a great deal of progress, with a wide open frontier of promising research needed on the possible causes of both contract-intensive economy and its precise linkages with both peace and cooperation, within and among nations; the field is also wide open for modeling strategic interactions in various economic kinds of dyads

¹⁴ Of course, some of this is probably going on anyway, as highlighted by Kuhn (1960).

¹⁵ See footnote 2.

and, among nations with contract-intensive economies, collective action problems in their management and preservation of the global market order.

Finally, this study carries direct implications for public policy: If democracy is not a cause of peace, then there is no point in promoting democracy with the goal of achieving peace, as did both the Clinton and W. Bush US Administrations. Instead, peace follows from contract-intensive economy—the condition when most citizens in a nation regularly use the impersonal marketplace, rather than personal ties, for obtaining incomes, goods, and services. This means the contract-intensive democracies are best advised to go back to the policies the Truman Administration adopted intuitively for post-World War II Europe: helping most citizens obtain a stake in the impersonal market by making opportunities in it widely available. In this way, economic norms theory informs us that it is politics that drives economics, and it is up to political leaders to make the decisions to do whatever it takes to make sure most citizens can normally find jobs in the marketplace. Wherever this is achieved, the evidence informs us, democracy and peace will follow.

References

- BAYER, RESAT, AND MICHAEL BERNHARD. (2010) The Operationalization of Democracy and the Strength of the Democratic Peace: A Test of the Relative Utility of Scalar and Dichotomous Measures. *Conflict Management and Peace Science* 27: 85–101.
- BENNETT, SCOTT D., AND ALLAN C. STAM. (2000) EUGene: A Conceptual Manual. *International Interactions* 26: 179–204.
- BLALOCK, HUBERT M. JR. (1979) *Social Statistics*, 2nd edn. New York: McGraw-Hill.
- BREMER, STUART A. (1992) Dangerous Dyads: Conditions Affecting the Likelihood of Interstate War, 1816–1965. *Journal of Conflict Resolution* 36: 309–41.
- BUENO DE MESQUITA, BRUCE, JAMES D. MORROW, RANDOLPH M. SIVERTON, AND ALASTAIR SMITH. (1999) An Institutional Explanation of the Democratic Peace. *American Political Science Review* 93: 791–807.
- CHOI, SEUNG-WHAN. (2011) Re-evaluating Capitalist and Democratic Peace Models. *International Studies Quarterly* 55: 1–11.
- CLAGUE, CHRISTOPHER, PHILIP KEEFER, STEPHEN KNACK, AND MANCUR OLSON. (1999) Contract-Intensive Money: Contract Enforcement, Property Rights, and Economic Performance. *Journal of Economic Growth* 4 (2): 185–211.
- DAFOE, ALLAN. (2011) Statistical Critiques of the Democratic Peace: Caveat Emptor. *American Journal of Political Science* 55: 247–262.
- DAFOE, ALLAN, AND BRUCE M. RUSSETT. (2013) Does Capitalism Account for the Democratic Peace? The Evidence Still Says No. In *The Capitalist Peace: The Origins and Prospects of a Liberal Idea*, edited by Gerald Schneider, and Nils P. Gleditsch. London and New York: Routledge.
- FEARON, JAMES D. (1995) Rationalist Explanations for War. *International Organization* 49: 379–414.
- GARTZKE, ERIK. (2007) The Capitalist Peace. *American Journal of Political Science* 51: 166–191.
- GARTZKE, ERIK, AND J. JOSEPH HEWITT. (2010) International Crises and the Capitalist Peace. *International Interactions* 36: 115–145.
- GELMAN, ANDREW, AND HAL STERN. (2006) The Difference Between “Significant” and “Not Significant” Is not Itself Statistically Significant. *The American Statistician* 60: 328–331.
- GHOSH, FATEN, GLENN PALMER, AND STUART A. BREMER. (2004) The MID3 Data Set, 1993–2001: Procedures, Coding Rules, and Description. *Conflict Management and Peace Science* 21: 133–154.
- GLEDITSCH, KRISTIAN S. (2002) Expanded Trade and GDP Data. *Journal of Conflict Resolution* 46: 712–24.
- HAYEK, FRIEDRICH AUGUST VON. (1976) *Law, Legislation and Liberty*. Vol. 2. The Mirage of Social Justice. Chicago, IL: The University of Chicago Press.
- HEGRE, HAVARD. (2000) Development and the Liberal Peace: What Does it Take to Be a Trading State? *Journal of Peace Research* 37: 5–30.
- HENDERSON, ERROL A. (2002) *Democracy and War: The End of an Illusion*. Boulder, CO: Lynne Rienner.
- HICKEN, ALLEN. (2011) Clientelism. *Annual Review of Political Science* 14: 289–310.
- JAMES, PATRICK. (2002) *International Relations and Scientific Progress*. Columbus, OH: Ohio State University Press.
- KOHN, MEIR. (2003) Organized Markets in Pre-Industrial Europe. Working Paper. Dartmouth College.
- KUGLER, JACK, AND DOUGLAS LEMKE. (1996) *Parity and War: Evaluations and Extensions of The War Ledger*. Ann Arbor, MI: University of Michigan Press.
- KUHN, THOMAS S. (1960) *The Structure of Scientific Revolutions*, 2nd edn. Chicago: University of Chicago Press.
- LAKATOS, IMRE. ([1970]1978). Falsification and the Methodology of Scientific Research Programs. In *Mathematics, Science and Epistemology: Philosophical Papers*, Vol. 1, edited by John Worrall, and Gregory Currie. Cambridge: Cambridge University Press.
- LEVY, JACK S. (1988) Domestic Politics and War. *Journal of Interdisciplinary History* 18: 653–73.
- MAOZ, ZEEV. (2005) Dyadic MID Dataset (version 2.0). <http://psfaculty.ucdavis.edu/zmaoz/dyadmid.html>.
- MARSHALL, MONTY G., AND KEITH JAGGERS. (2003) POLITY IV PROJECT: Political Regime Characteristics and Transitions, 1800–2002, Dataset Users’ Manual. Center for International Development and Conflict Management, University of Maryland, College Park and Colorado State University.
- MCDONALD, PATRICK J. (2009) *The Invisible Hand of Peace: Capitalism, the War Machine, and International Relations Theory*. New York: Cambridge University Press.
- MOUSSEAU, MICHAEL. (2000) Market Prosperity, Democratic Consolidation, and Democratic Peace. *Journal of Conflict Resolution* 44: 472–507.
- MOUSSEAU, MICHAEL. (2002) An Economic Limitation to the Zone of Democratic Peace and Cooperation. *International Interactions* 28: 137–164.
- MOUSSEAU, MICHAEL. (2002–2003) Market Civilization and its Clash with Terror. *International Security* 27: 5–29.
- MOUSSEAU, MICHAEL. (2003) The Nexus of Market Society, Liberal Preferences, and Democratic Peace: Interdisciplinary Theory and Evidence. *International Studies Quarterly* 47: 483–510.
- MOUSSEAU, MICHAEL. (2009) The Social Market Roots of Democratic Peace. *International Security* 33: 52–86.
- MOUSSEAU, MICHAEL. (2011) Urban Poverty and Support for Islamist Terror: Survey Results from Muslims in Fourteen Countries. *Journal of Peace Research* 48: 35–47.
- MOUSSEAU, MICHAEL. (2012a) The Capitalist Civil Peace. *International Studies Quarterly* 56: 470–483.
- MOUSSEAU, MICHAEL. (2012b) Market-Capitalist or Democratic Peace. In *What Do We Know About War?* 2nd edn, edited by John Vasquez. Lanham, MD: Rowan-Littlefield.
- MOUSSEAU, MICHAEL, AND DEMET Y. MOUSSEAU. (2008) The Contracting Roots of Human Rights. *Journal of Peace Research* 45: 327–344.
- MOUSSEAU, MICHAEL, HAVARD HEGRE, AND JOHN R. ONEAL. (2003) How the Wealth of Nations Conditions the Liberal Peace. *European Journal of International Relations* 9: 277–314.
- MOUSSEAU, MICHAEL, OMER F. ORSUN, AND JAMESON LEE UNGERER. (2013) The Progress of Knowledge: The Market-Capitalist Peace Does the Market-Capitalist Peace Supersede the Democratic Peace? The Evidence Still Says Yes. In *The Capitalist Peace: The Origins and Prospects of a Liberal Idea*, edited by Gerald Schneider, and Nils P. Gleditsch. London and New York: Routledge.
- MOUSSEAU, MICHAEL, OMER F. ORSUN, JAMESON LEE UNGERER, AND DEMET YALCIN MOUSSEAU. (2013) Capitalism and Peace: It’s Keynes, not Hayek. In *The Capitalist Peace: The Origins and Prospects of a Liberal Idea*, edited by Gerald Schneider, and Nils P. Gleditsch. London and New York: Routledge.
- NORTH, DOUGLASS C., JOHN J. WALLIS, AND BARRY R. WEINGAST. (2009) *Violence and Social Orders: A Conceptual Framework for Interpreting Recorded Human History*. New York: Cambridge University Press.
- RASLER, KAREN, AND WILLIAM R. THOMPSON. (2005) *Puzzles of Democratic Peace: Theory, Geopolitics, and the Transformation of World Politics*. New York: Palgrave.

- RAY, JAMES L.. (2003) Explaining Interstate Conflict and War: What Should Be Controlled For? *Conflict Management and Peace Science* 20: 1–31.
- REUVENY, RAFAEL, BRIAN M. POLLINS, AND OMAR M.G. KESHK. (2011) The Perils of Doctrine: A Reply to Håvard Hegre, John R Oneal & Bruce Russett: Trade Does Promote Peace: New Simultaneous Estimates of the Reciprocal Effects of Trade and Conflict. *Journal of Peace Research* 47: 763–774.
- RUSSETT, BRUCE. (2010) Capitalism or Democracy? Not So Fast. *International Interactions* 36: 185–205.
- RUSSETT, BRUCE, AND JOHN R ONEAL. (2001) *Triangulating Peace: Democracy, Interdependence, and International Organizations*. New York: W.W. Norton & Company.
- SIMON, HERBERT. (1955) A Behavioral Model of Rational Choice. *The Quarterly Journal of Economics* 69: 99–118.
- SINGER, J. DAVID., STUART A. BREMER, AND JOHN STUCKEY. (1972) Capability Distribution, Uncertainty, and Major Power War, 1820-1965. IN *Peace, War, and Numbers*, edited by Bruce Russett. Beverly Hills, CA: SAGE.
- SMALL, MELVIN, AND J. DAVID SINGER. (1982) *Resort to Arms: International and Civil Wars, 1816–1980*. 2nd edn. Beverly Hills, CA: SAGE.
- STINNETT, DOUGLAS M., JAROSLAV TIR, PAUL F. DIEHL, PHILIP SCHAFER, AND CHARLES GOCHMAN. (2002) The Correlates of War (COW) Project Direct Contiguity Data, Version 3.0. *Conflict Management and Peace Science* 19: 59–67.
- THOMPSON, WILLIAM R., AND RICHARD TUCKER. (1997) A Tale of Two Democratic Peace Critiques. *Journal of Conflict Resolution* 41: 428–454.
- UNGERER, JAMESON. (2012) Assessing the Progress of the Democratic Peace Research Program. *International Studies Review* 14: 1–31.
- VASQUEZ, JOHN A. (2011) Paths to War: The Territorial Origins of War. In *Territory, War and Peace*, edited by John A. Vasquez, and Marie T. Henehan. New York: Routledge.
- VASQUEZ, JOHN A., AND COLIN ELMAN. (2002) *Realism and the Balancing of Power: A New Debate*. Upper Saddle River, NJ: Prentice Hall.
- WEEDE, ERICH. (1996) *Economic Development, Social Order, and World Politics*. Boulder, CO: Lynne Rienner.
- WERNER, SUZANNE. (2000) The Effects of Political Similarity on the Onset of Militarized Disputes, 1816-1985. *Political Research Quarterly* 53: 343–374.
- WERNER, SUZANNE, AND DOUGLAS LEMKE. (1997) Opposites Do Not Attract: The Impact of Domestic Institutions, Power, and Prior Commitments on Alignment Choices. *International Studies Quarterly* 41: 529–46.