Presidential Address

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Dangerous bargains with the devil? Incorporating new approaches in peace science for the study of war

Sara McLaughlin Mitchell
University of Iowa, USA

Abstract
Two theoretical perspectives, *dangerous dyads* and the *bargaining model of war*, have dominated theoretical discourse and empirical analyses in the Peace Science Society community for the past 25 years. This article discusses what we have learned about war from these approaches to the study of interstate and intrastate conflict. More critically, the piece examines what perspectives have been absent from Peace Science research and how these missing gaps influence the quantitative study of war and the diversity of the Peace Science community.

Keywords
Bargaining model, conflict, dangerous dyads, presidential address, war

In 2010, I attended a conference at the University of Illinois hosted by John Vasquez that was designed to produce chapters for the second edition of his book, *What Do We Know About War?* (Vasquez, 2012) After a day filled with authors' presentations of draft chapters, a senior conflict scholar provided overarching comments about the chapters and conference theme. He lamented that we had not learned much about what causes war since Vasquez's first volume was published in 2000. In that moment, I had a strong reaction to the claim that we had not learned anything about the causes of war and I began to scribble down all of the things I had learned about war. I realized that my thinking on the topic was strongly influenced by my association with the Peace Science Society, a group which I had first encountered in 1991, my first semester in graduate school, and a conference I have committed to attending ever since.

I argue in this essay that two general conflict models have dominated the Peace Science Society community in the past 25 years: the *dangerous dyads* model and the *bargaining model* of war. Both of these models have been incredibly useful for advancing our knowledge about the causes and consequences of interstate and intrastate wars. However, these dangerous bargains with the devil have also come with costs as we have ignored other models that could

Corresponding author:
Sara McLaughlin Mitchell, University of Iowa, 341 Schaeffer Hall, Iowa City, IA 52242, USA.
Email: sara-mitchell@uiowa.edu

advance our understanding of war. It is time to take stock of the advantages these models provide for understanding violent conflict, but also time to consider how these models may have led us down some paths, while forgoing others that could be useful for thinking about the steps to war.

To help understand the influence of the dangerous dyads and bargaining model approaches, I collected data on the titles of papers presented at Peace Science Society annual conferences from 1993–2014, including words that appear three or more times on any single program.[1] I also compiled data from nine Journeys in World Politics conference programs from 2004–2015, to provide comparison with an organization focused on mentoring female international relations scholars.[2] The remainder of the article is organized as follows. First, I summarize the dangerous dyads and bargaining model approaches to the study of interstate conflict, focusing on what we have learned from each perspective. Second, I discuss how key insights from both approaches have been applied to the study of intrastate conflict. Third, I describe areas of research that are lacking in the Peace Science community for understanding war and I identify fruitful paths for future research in our vibrant community. Finally, I conclude with general thoughts about the diversity of the Peace Science Society.

Dangerous dyads

Around the time of my first Peace Science conference, Stuart Bremer published a (1992) paper called "Dangerous dyads". Bremer, the executive director of the Peace Science Society at the time, criticized war studies for focusing too much on major power conflict, for analyzing systemic or monadic conflict rather than considering strategic interactions between states, and for selecting on the dependent variable of war. Bremer argued that seven variables influence the chances for war in a given dyad-year: proximity (or contiguity), power status (major/minor), alliances, militarization, democracy, development, and power differences (e.g. parity). Maoz and Russett's (1993) article on the democratic peace the following year solidified the importance of studying interstate militarized conflict from a dyadic perspective. Bremer's and Maoz's connections to the Correlates of War (COW) research community helped to serve as a broader anchor for scholars conducting dyadic analyses of interstate conflict. The COW project's collection of data on war, capabilities, and alliances and the Polity project's data on regime type were richly analyzed to learn about the causes of war and lower levels of interstate conflict, such as militarized interstate disputes (MIDs) and interstate crises. As we see in Figure 1, many of the components of the dangerous dyads model (alliance, military(ized), democracy, economic, and arms) were predominant in papers presented at Peace Science from 1993 to 1999.

We learned a great deal about the causes of war and interstate conflict more generally from the dangerous dyads perspective. Bremer (1992) noted that land and sea contiguity were the strongest predictors of interstate conflict, empirical findings that were confirmed in many studies (e.g. Bennett and Stam 2003; Most and Starr, 1989). Vasquez (1995) sought to explain why contiguous dyads were dangerous by focusing on proximity, interaction, and territoriality. While neighboring states were more likely to have contentious diplomatic conflicts and could reach each other's territory more easily with military force, Vasquez concluded that disputes over land borders best explained why contiguous states fought wars. Holsti's (1991) analyses of the causes of wars over 500 years confirmed this pattern, as did later studies connecting territorial issues in MIDs to the escalation of war and recurrence of

Figure 1. Peace Science Society programs, 1993–1999.

militarized conflict (Hensel, 1996; Vasquez and Henehan, 2001). Subsequent research confirms that contiguous states have a higher risk for interstate conflict, that territorial disputes increase the chances for militarized conflict and war, and that territory that is more valuable because of natural resources, religious sites, or historical homeland claims generates more violence (Hensel and Mitchell, 2005; Toft, 2003). Wars also diffuse across geographic boundaries, explaining why contiguous states face higher risks for conflict, especially if they live in dangerous neighborhoods. In short, the strongest factor for conflict in Bremer's model is still a corner-piece of modern conflict theories.

The dyadic democratic peace hypothesis posited by Bremer (1992), Maoz and Russett (1993), and other scholars also received very strong empirical support in the past quarter century. So many studies have confirmed the absence of interstate war between fully democratic states that it has been called "the closest thing we have to an empirical law in international relations" (Levy, 1988: 661–662). While democracies experience militarized conflicts short of war with each other, they are more successful in engaging in peaceful conflict management (Dixon, 1994; Mitchell, 2002), especially through international organizations (Shannon, 2009).[3]

Extensions of the dangerous dyads approach sought to understand how interstate conflicts are related to each other. Leng (1983) found that the outcomes and bargaining strategies used in one interstate crisis influence the chances for future crises and wars.[4] Connections between interstate conflicts were further developed in the literature on interstate rivalry (Colaresi et al., 2008; Diehl and Goertz, 2000). Rivalry scholars show that the risks of recurrent conflict increase as the number of previous crises and wars increases (Colaresi and Thompson, 2002; Hensel, 1996). Interstate interactions within rivalry environments are also more escalatory. For example, diversionary uses of force are more likely in rivalry contexts (Mitchell and Prins, 2004) and in territorial claims (Mitchell and Thyne, 2010) when inflation is high.

Other aspects of the dangerous dyads approach have been more hotly contested. While a large number of dyadic studies show that power parity is more often associated with wars

and MIDs than power asymmetry (e.g. Hebron et al., 2007; Lemke, 2002), other studies have found conditions under which asymmetric dyads fight each other (e.g. Bennett and Stam, 2003; Kadera, 2001). The literature on alliances also disputes the relationship between security agreements and wars. Some scholars emphasize that defensive alliances help to deter potential attackers, while offensive and neutrality pacts can increase the chances for interstate conflict (Leeds, 2003). Others note that alliances are a realpolitik step taken by states in the overall steps to war process (Senese and Vasquez, 2008) and that once deterrence fails, alliances can increase chances for escalation to war, especially by widening the number of war participants (Leeds, 2005; Siverson and Starr, 1991).

The connection between arms races and war is also contested, with some scholars finding that arms races increase escalation of disputes or crises to war (Wallace, 1979), others finding little or no relationship (Diehl and Crescenzi, 1998), and still others showing limited conditions under which arms races may be dangerous, such as rivalry (Gibler et al., 2005) or power parity (Sample, 2002). Nuclear weapons, however, can reduce escalation in serious crises (Asal and Beardsley, 2007). Finally, empirical studies connecting economic development, trade, and conflict have also produced mixed results, with some scholars showing Kantian peace effects for trade (Russett and Oneal, 2001) and others finding the possibility of conflict between trade partners, especially in asymmetric interdependence conditions (Barbieri, 1996). While some aspects of the dangerous dyads model are disputed among Peace Science scholars, it is clear that Bremer's vision helped to clarify an important set of risk factors that can help us understand the outbreak of MIDs, crises, and wars.

Bargaining model of war

As dyadic empirical work on war in the COW and Peace Science communities expanded significantly in the 1990s, the community also witnessed a proliferation of game theoretic and differential equation models.[5] Bruce Bueno de Mesquita's (1981) decision theoretic model in *The War Trap* was expanded to the dyadic level in his book with David Lalman, *War and Reason* (Bueno de Mesquita and Lalman, 1992). Further research in *The Logic of Political Survival* (Bueno de Mesquita et al., 2005) connected domestic and international politics more explicitly by focusing on the size of states' selectorates and winning coalitions. The mid-1990s also witnessed the publication of James Fearon's "Rationalist explanations for war", a piece that has become a cornerstone for theorizing in the quantitative conflict community. Fearon (1995) argues that given the resource destruction that results from war, there should always exist a negotiated settlement that leaders prefer to fighting wars. War occurs because of information asymmetries (about the enemies' capabilities or resolve), commitment problems (peace agreements signed today could break down in the future), or issue indivisibilities (there may be no agreement that both sides would accept). What these perspectives share is an emphasis on dyadic strategic interactions, with ideas that domestic politics can influence states' incentives to fight wars. Figure 2 shows that many components of the bargaining model of war (domestic institutions, bargaining, political, politics, strategic, and model) were frequently used in Peace Science paper titles from 2000–2009.[6]

The bargaining model of war has increased our understanding of war onset and duration significantly. The notion that states fight more often when they have incomplete information about each other's capabilities helps explain why wars occur frequently in conditions of power parity, as these are conditions in which enemies jointly calculate that they can win

Figure 2. Peace Science Society programs, 2000–2009.

conflicts (Fearon, 1995). The bargaining model also helps us understand why we observe long periods of peace following costly wars with decisive victories (Blainey, 1973), such as the long peace among European major powers after the Napoleonic Wars. The bargaining model suggests that combatants are more likely to return to the battlefield if capabilities are more evenly matched, thus decisive wins clarify who will win if conflict ensues (Werner, 1999). Several models also show how wins or losses on the battlefield influence the duration and outcomes of fighting (Filson and Werner, 2002; Smith and Stam, 2004). Because commitment problems are acute in wars (Powell, 2006), the design of post-war agreements is essential for preserving peace (Fortna, 2004; Walter, 2002).

An emphasis on commitment problems helps us understand why changes in relative capabilities, regime type, or leadership can increase the chances for interstate conflict or violations of treaty commitments. Leeds (2003) finds that alliance treaties are more likely to be violated in wartime if signatories experience changes in capabilities or regime type. Werner (1999) shows that peace is less durable following interstate conflicts if countries experience changes in capabilities or leadership. Mattes et al. (2015) note that even if regime types are stable, changes in leadership that draw upon different winning coalition groups can also alter incentives for states' foreign policy behavior. Focusing on leaders more explicitly also allows us to better understand the timing of conflict decisions (Wolford, 2007).

Work on leadership connects more broadly to game theoretic work on domestic institutions and international conflict. Schultz (2001) argues that democracies can use threats more effectively and are less likely to back down in interstate crises because their leaders face higher audience costs for foreign policy failure. Colaresi (2014) finds that variation in secrecy institutions, such as freedom of information acts or legislative oversight panels, influences democratic states' success in wars. Weeks (2014) shows that we can understand variation in autocratic countries' conflict behavior by unpacking institutional differences between authoritarian regimes. Democracies are also more successful in war owing in part to their greater ability to garner economic resources from their population (Lake, 1992) and because they carefully select which conflicts to initiate (Bueno de Mesquita et al., 2005). By opening up the black box of the state and considering how information and commitment problems influence interstate bargaining, we have learned a great deal more about the causes of war.

Figure 3. Peace Science Society programs, 2010–2014.

Extensions to the study of intrastate conflict

The Peace Science Society has recently devoted more time to studying intrastate violence, including civil wars, terrorism, and one-sided violence (Figure 3).[7] This reflects a shift globally towards fewer interstate wars, yet a sustained number of intrastate conflicts. While much of the civil war literature focuses on factors internal to states to understand the onset of conflict (e.g. mountainous or forested terrain, GDP per capita, ethnic fractionalization), theoretical approaches derive ideas from interstate work on dangerous dyads and the bargaining model of war.

Let me being by connecting research on dangerous dyads to work on intrastate violence. The first major similarity is the focus on territorial disputes in the intrastate conflict literature. Research on civil wars, for example, distinguishes between center seeking and territorial (or secessionist) civil wars, identifying distinct causes of war onset (Buhaug, 2006). Successful secessionist conflicts such as South Sudan's independence can also increase the risks for interstate conflicts involving territory (Vasquez, 1995). Interstate war scholars focus on the resources that make territory valuable, such as oil or fisheries, something akin to the civil war literature's emphasis on lootable resources (Humphreys, 2005). The presence of lootable resources can increase the duration or severity of civil wars (Ross, 2004). The dangerous dyads approach also influences the way in which data on intrastate violence is collected. Civil war datasets have shifted from state-year units of analyses to state–rebel-dyad-years to better capture strategic interactions between insurgent groups and the state (Cunningham et al., 2009). Dyadic datasets have also been used to generate intrastate rivalry datasets (DeRouen and Bercovitch, 2008), with dispute density coding approaches that are very similar to the work on enduring rivalry. Transnational work on civil wars connects clearly to interstate research that looks at borders as transmission points for conflict (Toft, 2003). Rebel safe havens across borders and the movement of refugees can increase intrastate conflict risks (Salehyan and Gleditsch, 2006; Salehyan, 2007).

We also observe strong influences of the bargaining model of war in the intrastate conflict literature. A primary theoretical demarcation of civil war theories emphasizes greed vs grievance factors (Collier and Hoeffler, 2004). Both perspectives draw upon the bargaining model's concept of the costs of fighting and how actors value the issues at stake. Rebel groups can recruit fighters more easily in bad economic times because this lowers the opportunity costs for conflict. Really repressive regimes increase individuals' grievances against the government, lowering the costs for rebel recruitment and increasing the value to groups for overthrowing the regime. Strong states can also deter civil wars by better monitoring insurgent groups' activities, especially in remote terrain (Fearon and Laitin, 2003).

Commitment problems, one of the key components of Fearon's (1995) model, are also prevalent in many intrastate violence theories. The presence of multiple rebel groups makes peaceful agreements more difficult to strike because the potential for any one group to veto or spoil the agreement after it is signed is higher (Cunningham, 2006). Third-party mediators can play an important role in bringing combatants to the bargaining table through the use of carrots and sticks (Walter, 2002). Governments have incentives to eliminate rebel leaders when conflicts end, something that can be overcome by third-party commitments for monitoring peace agreements. Leaders can also tie their hands in the post-conflict environment by signing power-sharing agreements that provide political participation to their opponents (Hartzell and Hoddie, 2003) or by committing to an international institution like the International Criminal Court to open up the possibility of future prosecution for wartime acts (Simmons, 2009). United Nations peacekeeping forces can also help to reduce battlefield violence and increase the durability of peace after civil wars end by mitigating commitment problems, especially as the number of peacekeeping forces on the ground increases (Fortna, 2008; Hultman et al., 2014).

Research on intrastate violence also builds upon game theoretic models in the interstate conflict literature focused on domestic institutions. Civil wars and human rights violations are more likely to occur in countries that have more institutionally mixed or anocratic regimes (Davenport and Armstrong, 2004; Hegre et al., 2001). This is consistent with the democratic peace, but also similar to claims that the process of democratization may increase conflict risks (Mansfield and Snyder, 1995). However, democracies may face higher risks for certain types of civil wars, such as secessionist conflicts (Buhaug, 2006). Countries with recent regime or leadership changes are also more susceptible to intrastate conflict (Hegre et al., 2001), similar to findings in the interstate war literature (Enterline, 1998). Scholars have also begun to study rebel leaders in more detail (Prorok, 2015), connecting to the rich literature on leaders and conflict patterns in the interstate literature (Chiozza and Goeman, 2011).

In short, the two approaches that have dominated the study of war in the Peace Science community for the past three decades have significantly influenced the way we study intrastate violence. While the acute nature of the security dilemma and the asymmetric nature of combat are different in civil wars, actors' incentives to engage in violence are similar to those faced by states and their leaders.[8]

Dangerous bargains: what is missing?

The Peace Science Society research community has successfully developed compelling theories about war and subjected deductions from these models to rigorous empirical testing. This has produced the rich set of theories and findings reviewed in this piece. The

dominance of the dangerous dyads and bargaining model approaches has united our efforts and created connections between studies of conflict at different levels of analysis. Yet we must also ask questions about what perspectives we are missing. By buying into these dangerous bargains, what did we lose?

Temporal dynamics

I have spent a great deal of my career thinking about conflict dynamics and how the causes of war vary across time and space. It is typical in Peace Science to divide our data into historical epochs (e.g. nineteenth and twentieth centuries) and to separate our data into regions (e.g. Europe, Asia, Middle East). The alliance literature, for example, suggests that alliances could be conflict inducing in some eras (e.g. before the Second World War) and conflict reducing in others (e.g. Cold War), with the frequency of defense and offense pacts varying across centuries (Leeds and Mattes, 2007; Levy, 1981; Senese and Vasquez, 2008). My work on water conflicts shows that river treaties may be lacking in the most water-scarce regions like the Middle East but more frequent in water-abundant regions like North America (Hensel et al., 2006). Separating data into regional or temporal periods can be useful, but this prevents us from thinking more carefully about how theoretical relationships may be more dynamic.

The democratic peace literature illustrates clearly why temporal dynamics are important to consider. Adopting a systemic perspective, Mitchell et al. (1999) argue that the relationship between democracy and war is endogenous and evolutionary over time. The experience of warfare creates incentives for citizens to create democratic institutions, while those institutions in turn constrain leaders' ability to wage war. Using a time varying parameter Kalman filter model, we show that more war in the system leads to more democracies globally, that democracy in turn reduces conflict, but only significantly in the years after the First World War. The accumulating pacific effect of democracy is also found in a dyadic study by Cederman and Rao (2001) that uses a time varying logit model. Other legs of the Kantian tripod for peace, however, do not witness accumulating peaceful effects. Shared membership in international organizations, for example, had its strongest pacifying effect on militarized disputes in the two decades following the Second World War, with declining and even conflict-inducing effects in the post-Cold War era (Anderson et al., 2016).

These modeling approaches show us that static theories, very typically employed in our research community, face limitations for understanding how relationships change over time. We observe many major historical shifts, such as the decline in territorial conquest, the decline in state deaths (Fazal, 2011), the rise of "new wars" (Kaldor, 2012), or increases in democracies and international organizations. Yet our theories are poorly equipped to explain these major changes in history. How are information or commitment problems altered over time? Why has the leading cause of war (border disputes) become a rare event in recent decades? Peace scientists would benefit by returning to our systemic roots, at least theoretically, because power transition, power cycle, long cycle and other theories help us understand historical dynamics more fully.[9]

Sequencing of conflict and conflict management

While Peace Scientists have identified a number of factors that increase the risks for war, we do not fully understand why those risks increase or decrease across time and space. Work on

enduring rivalries, for example, shows dramatic changes in conflict propensities depending on a dyad's number of previous conflicts (Colaresi and Thompson, 2002). Typical bargaining model approaches would explain increasing conflict risks by focusing on changes in information asymmetries, commitment problems, or the costs of war, but we have a hard time understanding why these risks are so different for dyads with six previous conflicts vs those with nine prior disputes, even though both are enduring rivalries with potentially high costs for war recurrence. Furthermore, comparisons of the dynamic patterns of hostility within interstate rivalries reveal puzzling variations (Diehl and Goertz, 2000). Many rivalries seem to lock-in to a basic rivalry level and maintain that relationship, but others show increasing or decreasing patterns of hostility. It would be instructive to connect ideas from the bargaining model to the rivalry literature to account for these varying dynamic patterns. For example, do we witness increasing hostility levels in dyads because of increasingly acute commitment problems? How do changes in information about enemies' capabilities or resolve influence the dynamics of rivalry relationships? Our community would benefit by integrating our two major conflict approaches to help answer some remaining puzzles.[10]

Work on peaceful conflict management strategies raises more questions. Why do states use different types of conflict management tools to handle similar diplomatic issues? Disputes involving maritime areas, for example, are often resolved through international organizations and adjudication, while territorial disputes are settled with bilateral negotiations and arbitration (Mitchell and Owsiak, 2016). This occurs even though many of these conflicts (e.g. Falkland Islands, Spratly Islands) involve both territorial and maritime issues. Why do conflict management strategies vary across the life cycle of interstate rivalry relationships? Greig (2005) shows that mediation efforts may occur later in enduring rivalries even though such efforts are most effective at terminating conflict earlier in the relationships. While the dangerous dyads approach adequately connects conflicts over time, we do less well in connecting peaceful settlement attempts. States' win or loss records with peaceful tools, such as adjudication, influence their willingness to employ them again (Wiegand and Powell, 2011). Our research community would benefit from thinking through the dynamics of peaceful conflict management more carefully, especially given that even the most contentious issues like territorial claims experience militarization less than half of the time such disputes arise (Hensel and Mitchell, 2016). Other diplomatic issues experience militarized conflict less frequently than border disputes, thus we could learn a great deal by looking at these "dogs that don't bark" cases. Scholars in the dangerous dyads tradition have produced useful datasets focused on diplomatic conflict (e.g. territorial claims), approaches that would be usefully imported into the civil war context to help us understand why some potential rebel groups never use violent strategies (Cunningham, 2011).

Focusing on other levels of analysis

Our unified focus on dyads has been beneficial, but it has come at the expense of studying important conflict dynamics at the monadic, regional and systemic levels of analysis.[11] The democratic peace literature produces many important monadic findings connecting a single state's institutional features to conflict behavior, but we typically view these findings through a dyadic or directed dyadic lens. Huth and Allee (2002) find that the age of a single country in a territorial dispute dyad can influence the use of arbitration or adjudication; they also show that the presence of one democratic state in a dispute may be sufficient for more frequent peaceful settlement attempts. Maoz and Russett's (1993) initial work on the

democratic peace also distinguished useful monadic and dyadic effects for regime type, with older democracies more fully embracing peaceful conflict management norms. Some moves in this direction could be accomplished by connecting our research more carefully to the foreign policy literature which focuses much more explicitly on institutional and normative factors inside the state (e.g. bureaucratic policies, risk propensity, role theory). We talk about foreign policy substitutability, deviations from rational choice decision-making (e.g. prospect theory), and we adequately connect leadership characteristics to conflict, yet we could push our understanding of war forward by drawing upon more psychological, bureaucratic, or American politics approaches from our foreign policy brethren.

While we peer into the black box of the state more fully, connecting dyads to their regional and systemic environments more explicitly would also be beneficial. We often utilize dyads or directed dyads as our units of analysis and then integrate monadic, regional, or systemic variables into our models. This approach fails to capture interdependence between units within specific levels of analysis, something that our colleagues in American state politics do more efficiently through the use of multilevel models (Boehmke et al., 2016). We observe a lot of regional variation in the causes of war, but typically we do not problematize it. Lemke (2002), for example, devotes an entire chapter to the African peace, namely understanding why dyads in the region did not go to war despite having conditions of power parity and dissatisfaction. Many other studies in the interstate conflict literature report differences in findings across regions, but we typically do not connect these patterns back to our theoretical approaches. Why are some causes of war universal while others are time bound or space bound? I like Most and Starr's (1989) idea of identifying domain-specific laws because it gets us out of our natural tendencies to think that our theories apply everywhere.

Members of our community are thinking about interdependence among states and dyads in more creative ways by using the tools of network analysis (Maoz, 2010). This is useful for thinking about direct ties, what we typically capture in a dyadic set-up (e.g. alliances or shared IGO memberships), but also indirect ties, whereby connections through a third-party state can influence interstate conflict. Network approaches can help us capture endogeneity between actor characteristics, yet we know less about where network ties come from or why indirect ties might promote cooperation more readily than direct ties (Dorussen and Ward, 2008). It is hard to understand why indirect connections between countries would have stronger influences on their conflict behavior than direct ties given our dangerous dyads and bargaining model theories. Temporal dynamics are also poorly understood in network analyses. Why do we observe network convergence in some areas and network divergence in others? Like our need to understand variation in rivalry dynamics more carefully, we also need to think about why regional or conflict networks have distinct temporal dynamics.

Engaging other theoretical and policy communities

In addition to the foreign policy literature, Peace Scientists do not frequently engage with research in the constructivist, feminist, security studies, and international political economy literatures. Constructivist approaches are useful for problematizing preference formation. Studying norm entrepreneurs can provide insights about why particular conflict management tools become used in specific issue areas (Mitchell, 2002). Research on gender and war (Hudson et al., 2012) provides an important dimension of variation across states (e.g. treatment of women in society) that we have generally ignored, going beyond institutional or economic differences between states. Some areas of security studies cross over into Peace

Science, such as work on nuclear weapons or deterrence, but other areas have less engagement such as cyber security, artificial intelligence, or military doctrine. We have adequately connected trade and foreign direct investment to interstate conflict, but we do less well in connecting economic treaties (e.g. regional trade agreements, bilateral investment treaties) to states' conflict patterns. Work on economic inequality has been studied in depth in the intrastate violence literature, yet interstate conflict scholars would benefit by focusing more on symmetries and asymmetries in economic relationships. In summary, we would learn even more about warfare by integrating approaches within our community and expanding our ontological lenses more broadly.[12]

Moving forward: diversifying peace science

The past 25 years of quantitative research on the causes of war have been extremely productive, spearheaded by research in the Peace Science Society community. The dangerous dyads and bargaining model approaches have generated fruitful explanations for the onset, duration, and consequences of interstate wars. We know that territorial disputes are a leading cause of war, that democracies are more peaceful in their dyadic interactions, that power parity can be dangerous, that regime changes or capability shifts can produce conflict, and that democracies are more successful in winning wars. While we have made incredible progress in understanding these conflict dynamics, we have also taken somewhat narrow perspectives by tying ourselves to these two major research traditions. We have spent less time understanding temporal dynamics in wars, sequencing between conflict and conflict management strategies, or connecting dyadic theories to other levels of analysis.

Our ontological and epistemological choices as a community influence the diversity of our organization. We face a trade-off between theoretical coherence and diversity of our membership. In Figure 4, we see that female presenters constituted between 15 and 35% of all paper presenters at the Peace Science conferences between 1995 and 2012.[13] This is better gender diversity than some similarly sized organizations, such as the Society for Political Methodology, but worse than other organizations, such as the State Politics and Policy organization and the International Political Economy Society. Only two individuals have served as directors of the Peace Science Society in my time as a scholar (Stuart Bremer and Glenn Palmer) and these individuals have maintained sole control over which proposals are accepted or rejected for the annual conference. Glenn Palmer became director in 2002, increasing the representation of women in the organization. This also coincides with a trend towards more papers on intrastate violence, a field that seems to have better gender diversity.[14]

In Figure 5, I show the typical words in paper titles presented at the Journeys in World Politics workshops from 2004 to 2015. Given that Kelly Kadera and I have been involved actively in Peace Science our entire careers, it is not surprising that we see a lot of overlap between the two organizations. Yet our conference recruits only female participants (students or junior faculty). We have seen a very different ontological spectrum for papers presented at Journeys in comparison to Peace Science. There is a much greater emphasis on human rights, post-war peace, peaceful institutions, foreign aid, policy questions, and civil society groups by women who present at Journeys than by scholars in Peace Science more generally. We could consider these patterns along with gender participation in various sections of the International Studies Association (ISA) to create a plan for improving gender

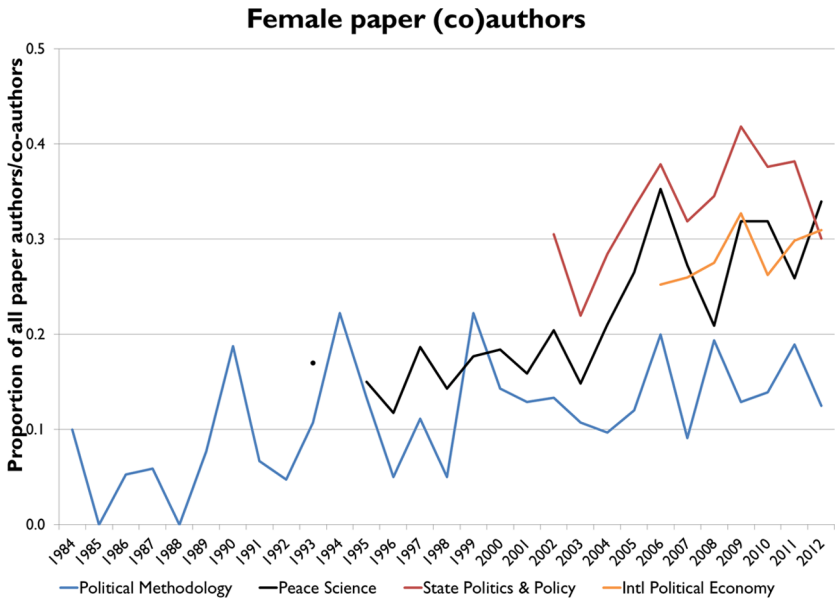

Figure 4. Female presenters at political science conferences (Dion and Mitchell, 2012).

Figure 5. Journeys in World Politics programs, 2004–2015.

and racial diversity in our community. Our quantitative and rationalist studies of war have given our general Peace Science project coherence, but they also create barriers for recruiting different voices and types of scholarship.[15]

Table 1. Citations to women authors in published Peace Science Society presidential addresses (1993–2015)[16]

Year	President	Percentage of female authors cited	Number of cited authors
1993	Michael Intriligator	8.7%	23
1994	Murray Wolfson	1.9%	51
1995	Randolph Siverson	6.9%	73
1996	Jacek Kugler	11.6%	95
1997	Russell Leng	2.6%	39
1999	John Vasquez	10.6%	47
2000	Soloman Polachek	22.3%	76
2001	Harvey Starr	2.0%	49
2002	James Lee Ray	4.0%	50
2004	Raymond Dacey	3.7%	54
2005	Paul Diehl	15.6%	90
2006	Jack Levy	4.5%	110
2007	Brian Pollins	10.7%	56
2008	Zeev Maoz	1.6%	61
2009	James Morrow	13.6%	22
2010	Scott Bennett	16.7%	24
2011	Cliff Morgan	0%	19
2012	Marc Kilgour	5.6%	18
2013	Patrick Regan	14.3%	77
2014	Will Moore	16.1%	31
2015	Sara Mitchell	27.6%	163

Someone might look at my reference list and notice how male dominated my references are too though! Thus even though I am a female scholar, I tend to highlight work by men as being most important when telling the recent history of our society. To check myself, I present data in Table 1 on citations to women scholars in all presidential addresses published by *Conflict Management and Peace Science* since 1993. The unit of analysis is the scholar being cited in a bibliographic reference and year indicates year of presidency rather than publication year. The average citations to female authors for published presidential addresses prior to my own is 8.65%, with a range from zero to 22.3%. That my own telling of important work in our community results in only 27.6% citations to female scholars is disheartening given that I have spent a lot of time mentoring women in conflict studies and studying gendered citation patterns. Yet I think the data on paper presentations suggests that we are moving in a more diverse direction. By recognizing how our ontological and epistemological approaches influence how we study warfare, I am confident that 25 years from now, we will know even more about war and our story will be told by a more diverse group of scholarly voices.

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Notes

1. Glenn Palmer shared these programs with me when Michelle Dion and I were comparing participation in Peace Science to several other organizations. I was able to obtain copies of all programs except for 1994, 2007, and 2013. I am grateful to Shuai Jin for scraping the text from these programs for use in the graphs presented in this article. The data presented in this article is available at http://www.saramitchell.org/research.html.
2. For more information, visit the Journeys in World Politics website at http://www.saramitchell.org/journeys.html. The conferences took place in 2004, 2006–2011, 2013, and 2015–2016; analyses exclude the 2016 conference.
3. The democratic peace hypothesis has been criticized from a wide variety of perspectives. For example, newer democracies may be more dangerous than older democracies (Mansfield and Snyder, 1995), democracies and war are both rare and thus could be related by chance (Spiro, 1994), the democratic peace may be a capitalist peace (Mousseau et al., 2003), and the settlement of territorial disputes allowed for the growth of democracy historically (Gibler, 2012). I do not have space to dispute these types of criticisms; I am merely claiming that the dyadic relationship between democracy and peace has been strongly confirmed in empirical studies.
4. See also work by Brecher and Wilkenfeld (1997) and others using the International Crisis Behavior dataset.
5. Some Peace Science Society members who heard my presidential address objected to the combination of game theoretic models focused on domestic politics with those derived from the bargaining model of war. While I recognize that these approaches are distinct, I think ideas from both strands of thought are often merged together in modern models. Some concepts like audience costs, for example, help us think about how the structure of the domestic polity influences the costs of war. Owing to space constraints, I do not review the literature on differential equation models, including work by Dina Zinnes, Bob Muncaster, and Kelly Kadera.
6. For an overview of the bargaining model of war, see Reiter (2003). Elements of the dangerous dyads approach were also prevalent in Peace Science in this era too. The early 2000s also included more studies on peaceful conflict management strategies, such as mediation.
7. We see a variety of terms connected to the intrastate conflict literature such as civil, conflict, rebel, leader, terrorism, and violence.
8. One reviewer pointed out that the lines between interstate and intrastate conflict have become increasingly blurred in recent decades given that many intrastate conflicts spread across interstate borders or become interstate conflicts. In this regard, the theoretical cross-fertilization that I describe in the piece is even more imperative today.
9. Intrastate violence research is even worse in terms of its consideration of temporal dynamics, with the exception of work on the repression–dissent linkage. Thyne (2006) notes that many variables in the standard civil war onset model do not vary over time and thus we have little leverage for forecasting when wars will occur. Moore et al. (1996) show that we incorrectly use cross-sectional evidence to infer a temporal relationship (e.g. effects of land reform).
10. Some recent work is moving in this direction (e.g. Owsiak and Rider, 2015).
11. For an interesting dialogue on the use of dyads in international relations research, see the 2016 *International Studies Quarterly* symposium on "Dyadic Research Designs: Progress or Postmortem?", http://www.isanet.org/Publications/ISQ/Posts/ID/5187/categoryId/102/Dyadic-Research-Designs-Progress-or-Postmortem
12. In my address, I also criticized our community for failing to criticize US foreign policy. Some members of Peace Science like J. David Singer pushed for activism alongside scientific research, yet few of our members today including myself take up that activist charge. Research on the success or failures of US military interventions, for example, could be communicated more fully to a wider policy audience.

13. This graph was part of a poster presentation that Michelle Dion and I presented to the 2012 Peace Science Society conference.
14. This is an anecdotal observation on my part, but I think it reflects the greater ontological and epistemological diversity in the study of intrastate violence which helps to attract a more diverse population of scholars. As a reviewer noted, many of the important contributions in the study of intrastate violence come from female scholars.
15. One reviewer of the piece noted that there are costs to diversity as well. While organizations like ISA can promote more cross-perspective and diverse research, it is also valuable to have organizations like Peace Science where scholars use similar language and perspectives to help build specific research agendas. I think we can maintain the distinct quantitative approach to the study of conflict that the Peace Science Society has always been known for while also diversifying our ontological lenses.
16. Walter Isard (2000) did not include a bibliography in his address. William Dixon (2003) did not publish a presidential address.

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