Who wrote the rules for the Trans-Pacific Partnership?

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Abstract
Twelve governments recently signed the much-anticipated Trans-Pacific Partnership (TPP), sparking heated debate about its merits. As a primary motivation for this first “mega-regional” agreement, US President Barack Obama argues that the TPP is a way for the USA, and not China or someone else, to write the global trade rules of the future. This begs some important questions, namely which country or countries really did write most of the TPP and thus whose agenda for 21st century trade might it advance? To answer these questions, we compare the recently-released text of the TPP to the language in the 74 previous trade agreements that TPP members signed since 1995. Our text-as-data analyses reveal that the contents of the TPP are taken disproportionately from earlier US trade agreements. The ten preferential trade agreements (PTAs) that most closely match the TPP are all US PTAs. Moreover, the contents of controversial chapters, such as the one on investment, are drawn even more heavily from past US treaty language. Our study and findings apply power-based accounts of international institutions to a landmark new agreement, and portray a more active, template-based process of international diffusion.

Keywords
Trade, preferential trade agreements, international negotiations, text analysis

The newest rules for global trade
After years of opaque negotiations, the Trans-Pacific Partnership, or TPP, was signed on 5 October 2015 by twelve Pacific-Rim countries. The TPP represents a notable development in global trade and has attracted much attention, but it is far from the first preferential trade agreement (PTA) for any of the dozen signatories. Indeed, each country has signed multiple other PTAs over the past decade. Thus we set out to compare the TPP to the many agreements signed before it in order to reveal where the contents in the TPP come from and which member(s) played the greatest role in crafting the agreement.

As the most high-profile trade agreement in years, the TPP could establish important guidelines for global trade moving forward. This agenda-setting rationale is emphasized by leaders across the membership, including President Obama, who professes the following logic: “...the TPP means that America will write the rules of the road in the 21st century...if America doesn’t write those rules—then countries like China will” (Obama, 2015). This raises an important but thus far unanswered question: whose vision for modern trade agreements does the TPP best reflect?
These findings provide an important new example of how powerful states use international institutions strategically to advance their interests (Drezner, 2007). They also suggest a more active global diffusion story (Solingen, 2012) – one in which countries have competing blueprints for what should be included in international agreements and work actively to insert their preferred rules into landmark treaties.

The evolution of the TPP

The TPP resulted from a decade-long process in which participation gradually expanded. The first major development was the signing in 2005 of the Trans-Pacific Strategic Economic Partnership Agreement by New Zealand, Singapore, Chile, and Brunei. In 2008 the USA entered into negotiations with these four, all of whom were joined later that year by Australia, Peru and Vietnam. Over the next five years the advancing TPP negotiations were joined by Malaysia (2010), Canada and Mexico (2012), and ultimately Japan (2013). The TPP is intended as a “living agreement,” meaning that any future TPP members – including China – would be asked to sign the agreement as is, thus accepting what the original signatories have specified. This makes the language in the TPP critically important for the future.

For years our knowledge of the TPP was based on conjecture, unofficial comments from participants, and the release via Wikileaks of controversial draft chapters. But since the negotiated text was released on 5 November 2015, the entire agreement has been publicly available to researchers and observers. Particularly notable are competing studies of the agreement’s macroeconomic effects, with the pro-trade Peterson Institute for International Economics concluding that the TPP would boost wages and exports (Petri and Plummer, 2016) and a study by Tufts University’s Global Development and Environment Institute predicting lower wages and significant job losses (Capaldo et al., 2016). Other studies emphasize the mostly-positive effects in selected sectors (Peterson Institute for International Economics, 2016) or negative effects in others (Powell et al., 2016). The investment chapter, particularly the section on investor-state dispute settlement (ISDS), has attracted considerable attention, nearly all of it negative and from organizations that have commented on these issues (e.g. Bernasconi-Osterwalder, 2015; Johnson and Sachs, 2015). We take a different approach toward answering our question about the TPP, by analyzing the entire agreement using a novel and unbiased methodology.

The TPP needs to be placed in the context of the many bilateral and plurilateral trade agreements negotiated since the World Trade Organization (WTO) was established in 1994. Given the continued gridlock in WTO trade negotiations, preferential agreements like the TPP have become a way for states to advance trade cooperation with willing partners beyond their WTO commitments (Mansfield and Reinhardt, 2003). As the first “mega-regional” agreement, the TPP could become the new standard for all future trade agreements – and perhaps the basis for any future multilateral negotiations at the WTO. Therefore, the country or countries that had the greatest hand in writing the TPP could see their influence magnified if the contents of the TPP become the standard legal text and spread into future agreements. This dynamic suggests that countries like the USA can dictate future trade cooperation if they dominate emergent institutions like the TPP (e.g. Barnett and Duvall, 2005; Drezner, 2009).

Comparing the TPP to previous PTAs

Comparing the TPP to pre-existing PTAs is facilitated by the fact that WTO-era PTAs are structured similarly and typically address the same issues. The TPP is broad with its 30 chapters, yet nearly all existing PTAs involving TPP members also include chapters on issues such as dispute settlement, antidumping, safeguards, and general services. Most also include TPP-parallel chapters on electronic commerce, financial services, investment, and intellectual property, among others.

At the same time, we emphasize that the many PTAs signed by TPP members exhibit considerable heterogeneity – particularly from one country to the next – and there is scant evidence of a common template. As an important foundational step we compare the pre-existing PTAs of TPP members to one another using our primary text-comparison methodology, which we describe more fully in the next section. The heat map in Figure 1, which is organized by TPP members, depicts the relationships between each of these 74 PTAs. Most apparent is the overall lack of similarity among them – with the vast majority of the cells in the heat map indicating less than 25% shared content between pairs of PTAs. Also note that the few Chinese and European Union PTAs represented in Figure 1 have little overlap with the other PTAs, thus validating claims that the global economic powers have different visions for trade cooperation. The only areas in Figure 1 that exhibit significant similarity are those that compare PTAs including the same TPP member, which are clustered along the diagonal. US PTAs, in particular, have a high degree of internal consistency, indicating that the USA pursues its interests in negotiations by reusing preferred language. Thus we conclude that earlier PTAs signed by TPP members are quite distinct, with some individual TPP members inserting certain core contents in all of their PTAs.

That governments bring a preferred template with them to trade negotiations is a view held widely by scholars and practitioners (Allee and Lugg, 2016; Arbia, 2013) and is consistent with journalistic accounts of the TPP negotiations (DePillis, 2015). Therefore, we assume that on balance each TPP member’s previous PTAs represent its revealed preferences; that is, what it would like to see,
at a minimum would be comfortable with, in any new agreement. This assumption is bolstered by the earlier revelation that a country’s own PTAs often overlap significantly, and by existing research which holds that countries frequently use past PTAs as a model for future ones (Allee and Elsig, 2015). As a starting point we assume all of a country’s PTAs since 1995 could serve as a template, but later we prioritize selected agreements for each country as possible templates.

To determine which members had the greatest hand in writing the TPP, we evaluate the concordance between the language in each member’s past PTAs (over the past two decades) and the language in the final text of the TPP. Comparing texts in this manner is appropriate, since much of the TPP negotiations centered on whose preferred language would be adopted. Text analysis is increasingly used in the social sciences (e.g. Grimmer and Stewart, 2013) and we argue that it is particularly appropriate for analyzing deliberate, written content such as treaties – where precise wording and legal interpretation are crucial (Manger and Peinhardt, 2016, Spirling, 2012). It also allows us to evaluate the entire TPP text, which others have not done, and to measure the contents of particular TPP chapters in a more comprehensive way than can be done with numeric coding.4

Our central proposition is that past agreement language from the most powerful TPP members, particularly the USA, should be pre-eminent in the TPP. The USA is the largest actor in terms of market size, entered negotiations early, and has many past PTAs from which to borrow language. This expectation of US influence is inspired by a well-established literature which maintains that powerful states design international institutions in ways that serve their interests (e.g. Drezner, 2007; Gruber, 2000). In this
power-centered portrayal of international institutions, prominent examples of international cooperation, such as the TPP, occur because key actors view such initiatives as a means to advance their goals (e.g., Gilpin, 1987; Morgenthau, 1978). This was evident two decades ago with the establishment of the WTO (Steinberg, 2002; Stone, 2011), but has not been applied to recent trade institutions such as the TPP. Thus we investigate this prominent logic in a contemporary, relevant, and consequential context.

Data and methodology
Because we are interested in the extent to which actors obtained their preferred content in the TPP, we first compile and prepare the texts of the relevant trade agreements, starting with the recently-released text of the TPP. Next we utilize the Design of Trade Agreements project and website (Dir et al., 2014) and WTO Trade Agreements Gateway to identify all PTAs signed by TPP members since 1995, a period that provides a sufficient time-window for comparison but also ensures that comparisons are among modern, new-generation agreements. There are 74 such PTAs, all of which have official versions in English. To facilitate consistent comparison, we eliminate idiosyncratic information at the beginning and end of agreements (signed dates and locations, pronouncements, etc.), convert all text to lowercase, and remove punctuation.

Several features of our study lead us to eschew the bag-of-words approach to analyzing speech and text, which disregards text order and is often deployed inductively. First, the structure of our analysis is dictated by theory and known to us ex ante, since we want to compare the TPP with a specific collection of possible source PTAs. Second, the order of text is important, since we are analyzing carefully-crafted agreement language that is laid out in a deliberate structure. Likewise, the precise wording of the text also matters because even small differences in text can have a profound effect on legal interpretation (Spirling, 2012).

Therefore, we adopt a methodology that computes textual similarity for any two documents—in our case the TPP and each of the 74 existing PTAs—by identifying perfectly-matching text in common word sequences greater than six words. Relying on common 6-grams or greater allows us to preserve important information contained in word order and ensures that simple, everyday phrases do not constitute a match. This approach, and these same metrics, have been used in other social-science applications (e.g., Corley et al., 2011; Ehbsbaugh-Soha, 2013). For each PTA–TPP pairing we generate the number of perfectly matching words, which we then divide by the total words in the PTA to produce a “percentage copied” number that is comparable across agreements. We also aggregate these agreement percentages at the country level, to see which of the 12 members was most successful in getting its preferred contents in the TPP.

The prominence of US language in the TPP
Our analyses reveal that US treaty language is pre-eminent in the TPP, suggesting that the USA had heavy influence in writing this important new agreement. Figure 2 depicts the existing PTAs of TPP members that have the most language replicated in the TPP. The prevalence of US agreements, highlighted with blue dots, is striking. The ten closest-match agreements all include the USA, with none of the other TPP members achieving anything close to the same level of “success” in penetrating the TPP. The US agreements at the very top of Figure 2, which include bilateral PTAs with Bahrain, Oman, and South Korea, each have about 50% of their contents that can be found verbatim in the TPP. TPP members Peru, Australia, and Chile enter into the top fifteen—but only by virtue of their agreements with the USA.

Moreover, large sections of TPP language are copied en masse from earlier US PTAs. The TPP text highlighted in the left column also can be found verbatim in the parallel US agreements on the right—which those with Bahrain and Colombia (intellectual property), Oman and Panama (investment), or Peru (telecommunications). By comparison, the non-US agreements share more limited (Malaysia–Pakistan, and Singapore–European Community) or incomplete (Peru–European Community–Colombia, and Peru–Japan) amounts of text in common with the TPP.

The evidence thus far indicates that the TPP draws heavily from US agreements, yet we investigate further from a country-by-country perspective. For each TPP member, we calculate the average percentage of its text that is replicated in the TPP across the various 74 PTAs to which it is a signatory. These country-averages appear in Figure 3. As expected, the USA leads by a substantial margin. On average, nearly 45% of the text of US PTAs from 1995–2015 can be found verbatim in the TPP. This far outpaces the percentages for those next on the list, Australia, Canada, and Peru, who see just over 30% of their past PTA contents in the TPP. Most others are in the mid-20% range, including Japan, which is somewhat surprisingly next-to-last on the list, and Mexico, which is at the bottom. Furthermore, the results of systematic statistical tests confirm that the USA is distinct from all other TPP signatories in terms of the amount of language from their previous PTAs that was copied into the TPP.

The country patterns in Figure 3, and the unique role of the USA, are robust to different methods of comparison (see Table 1). The country-level averages above compare...
all of a country’s past PTAs (since 1995) to the TPP, but now we utilize only those PTAs that might best reflect a country’s current preferences toward trade agreements. First we compare only each country’s most recent (since 2005) PTAs to the TPP. These overlap percentages with the TPP increase slightly for the USA and nearly everyone, as one might expect (Table 1, column 3). Next we consider three additional methods to isolate the PTAs that might best reflect each country’s trade preferences. We re-calculate the TPP-overlap averages for Peru, Chile, Australia, and Singapore after removing their bilateral agreements with the USA – and their averages drop by 2–3%. Next we eliminate any past PTAs that were signed with a fellow TPP member, where preferences could be conflated. These numbers (in the fourth column) remain largely stable, although they drop notably for Peru, Chile,

Figure 2. Percentage of text from previous preferential trade agreements of Trans-Pacific Partnership (TPP) members that is replicated in the TPP.
and Malaysia. Lastly, we include only those PTAs in which the country was the dominant partner; that is, had the largest gross domestic product among the PTA members. For most countries this pushes the TPP-overlap percentages modestly higher. Finally, we relax the requirement of perfectly-matching text and instead allow highly similar language to count as matching. The resulting comparison percentages (presented in the final column in Table 1) trend upward by 2–3%. Across the varied comparisons in Table 1, then, the rankings and intervals are stable and depict a strong US role in writing the TPP.

We also pursue more focused comparisons in which we compare chapters of the PTAs directly to corresponding chapters in the TPP. We conduct these comparisons for fifteen chapters commonly found in PTAs – all of which are included in the TPP. Table 2 lists these chapters and presents the findings for each of them. Once again, US supremacy is apparent. For 11 of the 15 chapters analyzed, US language is the most successful; that is, a greater percentage of content from US PTAs makes its way into the TPP. For the remaining four chapters, the USA has the second-highest percentage.

The six most-copied chapters in the TPP (investment, financial services, general services, telecommunications, and safeguards) draw particularly heavily upon past US agreement language. This includes some TPP chapters in which two-thirds or more of an earlier US PTA chapter is copied verbatim. Although substantially behind the USA, Australia tends to be next in line in terms of its agreements’ presence in various TPP chapters (highest percentage on environmental provisions, and second-highest percentage on several other issues). Peruvian PTAs are surprisingly present in the TPP, too (highest average percentage content on procurement and electronic commerce).

Interestingly, US content is most prevalent in the TPP in the areas of greatest importance to US political and economic interests. A Congressional Research Service (CRS) report claims that: “(a) high priority for the USA in its negotiations of bilateral and regional free trade agreements has been increased market access for services providers, especially financial services” (Fergusson et al., 2015: 17). Indeed, general services and financial services are among the chapters with the highest percentage of US content in the TPP, at 62% and 68% on average, respectively. In fact, 72% of the general services language in the 2006 US agreement with Colombia can be found in the TPP, and six US PTAs have more than 70% of their financial services content that is copied into the parallel chapter of the TPP. Furthermore, labor is another area highlighted in the CRS report (Fergusson et al., 2015: 38–40) and US agreements score highest in this area too (see Table 2). Importantly, many of the above are areas in which there is less consensus at the WTO, which makes the impact of writing the rules in these areas potentially greatest.

The most striking result in Table 2, however, concerns the agreement language on investment. As noted earlier, selected parts of the TPP’s investment chapter have attracted substantial attention and controversy. Investment is widely

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**Table 1.** Alternate comparisons of the average amount of previous preferential trade agreement (PTA) text replicated in the Trans-Pacific Partnership (TPP).

<table>
<thead>
<tr>
<th>Country</th>
<th>All of the countries’ PTAs since 1995</th>
<th>Only PTAs in last 10 years</th>
<th>Drop PTA with USA</th>
<th>Only PTAs with non-TPP partners</th>
<th>Only PTAs in which country is dominant partner</th>
<th>Relax exact match requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>44.7</td>
<td>33.1</td>
<td>32.3</td>
<td>31.4</td>
<td>31.0</td>
<td>28.4</td>
</tr>
<tr>
<td>Australia</td>
<td>33.1</td>
<td>34.9</td>
<td>33.7</td>
<td>33.1</td>
<td>33.7</td>
<td>35.5</td>
</tr>
<tr>
<td>Peru</td>
<td>32.7</td>
<td>33.7</td>
<td>32.3</td>
<td>31.0</td>
<td>28.4</td>
<td>35.8</td>
</tr>
<tr>
<td>Canada</td>
<td>30.8</td>
<td>31.4</td>
<td>30.8</td>
<td>29.7</td>
<td>29.4</td>
<td>30.7</td>
</tr>
<tr>
<td>Chile</td>
<td>28.3</td>
<td>31.4</td>
<td>27.7</td>
<td>29.7</td>
<td>29.4</td>
<td>30.7</td>
</tr>
<tr>
<td>Singapore</td>
<td>27.1</td>
<td>28.1</td>
<td>26.0</td>
<td>27.0</td>
<td>24.0</td>
<td>26.8</td>
</tr>
<tr>
<td>Malaysia</td>
<td>25.9</td>
<td>27.0</td>
<td>26.0</td>
<td>27.0</td>
<td>24.0</td>
<td>26.8</td>
</tr>
<tr>
<td>New Zealand</td>
<td>24.6</td>
<td>27.0</td>
<td>26.0</td>
<td>24.0</td>
<td>24.0</td>
<td>26.8</td>
</tr>
<tr>
<td>Mexico</td>
<td>23.5</td>
<td>20.5</td>
<td>20.5</td>
<td>20.5</td>
<td>20.5</td>
<td>20.5</td>
</tr>
</tbody>
</table>
considered among the most important chapters of the TPP and long has been “a high priority for the USA in its FTA negotiations” (Fergusson et al., 2015: 36). We consider the contents of the entire chapter, not just the subset on ISDS, and find that a staggering 80% of the language from past US PTA chapters on investment is included in the TPP’s investment chapter, as depicted in the left side of Figure 4 (and also Table 2). This is by far the highest percentage for the USA or any other TPP member across any chapter. Indeed, more than 80% of seven US investment chapters are copied verbatim into the TPP’s investment chapter, as shown in the right side of Figure 4. One of the text illustrations in the Appendix, on minimum standards of treatment for investment, also shows this dominance. Furthermore, the amount of text being copied is significant: more than 7500 words from past US investment chapters are written directly into the TPP’s investment chapter – a final piece of evidence that the US “got what it wanted” in this controversial area to an extent even greater than is realized.

**Conclusion**

Text analysis is increasingly popular in the social sciences, and the methodology is particularly valuable when the text being analyzed is consequential and deliberate. The TPP is both. Our research represents a new approach toward studying
the TPP as well as international cooperation generally. It provides much-needed context by showing that the TPP is best thought of as a competition among members to insert their vision for trade cooperation into an important new agreement. The TPP and other PTAs are lengthy and wide-ranging documents, and we provide a new way to quantify them, and their most important parts, in their entirety.

Our findings regarding the sizeable US role in writing the TPP have implications for several literatures. To begin, we suggest that international diffusion is not always passive or due to mimicry, but instead can occur because governments actively champion a particular blueprint for international cooperation. Whose model prevails in negotiations is determined largely by bargaining power. Thus notable initiatives like the TPP cannot be separated from power politics and their geopolitical context. Looked at in this way, the TPP is best thought of as an attempt by the USA to shift trade cooperation away from the deadlocked WTO to a new venue where it can successfully write the trade rules for the future. This agenda-setting motivation is central to understanding the TPP, and it will be interesting to observe whether PTAs in the near future draw heavily upon the language in the TPP.

Lastly, our findings provide new information to inform long-standing debates about the trade regime and imminent debates about TPP ratification. We have shown that modern PTAs are quite heterogeneous. The TPP represents an interesting amalgam of its members’ priorities—since a certain amount of past language from each can be found in the new agreement. Perhaps this suggests some movement toward convergence of trade rules. Yet it appears that any future convergence will be on US terms. We can say with confidence that the USA took a lead role in writing these newest trade rules, both overall and on the most controversial and unsettled issues. What remains to be seen is whether the TPP is ratified and where global trade cooperation advances next.

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Supplementary Material

The replication files are available at: https://dataverse.harvard.edu/dataverse/researchandpolitics. The supplementary files are available at: http://rap.sagepub.com/content/3/3.

Notes

1. See the discussion in the ‘Data and methodology’ section for details on how the texts are compared to one another.

2. We organize the preferential trade agreements (PTAs) in the heat map by country, beginning with the Trans-Pacific Partnership (TPP) member with the largest gross domestic product (GDP) (the USA) down to the member with the smallest GDP (Brunei). In the cases where an existing PTA includes more than one TPP member, we include it for the member with the larger GDP.

3. The average similarity is less than 18%, and three-quarters of the dyads among these 74 preferential trade agreements contain less than 25% of overlapping text.

4. Efforts such as the Design of Trade Agreements project (Dür et al., 2014) represent a major advance because they unpack preferential trade agreements (PTAs) and code their contents with dozens of numeric variables. But even well-conceived numeric codings can be unavoidably blunt, capturing things such as whether a PTA has a particular chapter, without being able to distinguish the fine-grained details of what is in those chapters.

5. The Trans-Pacific Partnership (TPP) text is taken from the website of the New Zealand Ministry of Foreign Affairs and Trade, which has cleaned and verified the entire agreement (http://www.tpp.mfat.govt.nz/text). Since the TPP is presented by chapter, we also create a single document that combines the text from across the various TPP chapters and thus represents the “full text” of the TPP.

6. The bag-of-words assumption emphasizes the frequency with which terms appear across a set of documents and does not take word order into account. This approach is common in data mining and text analysis applications where the goal is topic modeling, sentiment analysis, or the inductive discovery of author ideal points (see Manning et al., 2008; Spirling, 2012).

7. To do so, we utilize Wcopyfind 4.1.4, a program written by Bloomfield (2014). The source code can be found at: http://plagiarism.bloomfieldmedia.com/wordpress/software/wcopyfind/

8. Most common phrases are shorter than six words and thus are not counted. However, even longer common phrases such as “This article is without prejudice to” would comprise only 0.006% (6/100,000) of a document containing 100,000 words, a typical length for a preferential trade agreement.

9. Although a detailed explanation of these other-country trends is beyond the scope of this paper, one possibility for Japan and Mexico is that their low percentages are due to them joining the Trans-Pacific Partnership late.

10. Results from analysis of variance (F = 16.067, p = 0.000) indicate a statistically significant difference between the average amount of text replicated across the Trans-Pacific Partnership signatories. Furthermore, post-hoc analyses using Tukey’s honest significant difference test confirm that the difference between the mean total of replicated text by the USA is higher than all 11 pairwise mean comparisons (all p-values < 0.02). See the explanatory note associated with our article at: https://dataverse.harvard.edu/dataverse/researchandpolitics

11. Brunei and Vietnam are omitted from Table 1 because their original percentages are unchanged across the different comparison criteria.

12. We allow up to 5 imperfections in the text as long as these imperfections do not account for more than 80% of the text in a matching sequence. For example, if a world is misspelled or pluralized it will be skipped over to match adjacent, perfectly-matching text.
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