**Globalization and Border Securitization in International Discourse**

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Abstract:

International borders have become a growing concern for international security. Moreover, they appear to be associated with a growing set of international concerns arising from transnational nonstate violence and criminality. Because IR scholars have been concerned primarily with globalization (with images of a borderless world) and territorial disputes (obsessed with border specification and legitimation), international relations scholars are missing one of the most central changes in global security orientation: toward a perceived need for *border control.* This paper documents the shift toward concerns with border control at the United Nations, explores its meanings, and offers an explanation for why this shift has gained purchase in security discussions in the world’s central security organs. We begin by identifying three feature sets - namely, *locations*, *sentiments*, and *policy content* - which offer plausible ways for states to express border-related policy concerns. Next, we develop a dataset consisting of all border-related discourse in the UNGA General Debate from 1970-2016. We then extract these features from the documents and discuss ongoing efforts to validate these data with human interlocutors. Finally, we offer some initial results and discuss their implications both theoretically and methodologically.

**I. Introduction**

For those who take open borders for granted, the last several years have provided a series of surprises. The United States endured the longest government shut-down in its history over the largely symbolic issue of funding construction of a “border wall.” The terms of Brexit and the future of the European Union have foundered in no small part on inspection and security at the Northern Ireland border. Physical markers of state authority in Saudi Arabia and elsewhere in the once-physically open Middle East have been constructed, violently challenged, and reinforced.

International borders, in short, seem to be making a comeback. As communication technology and trade networks have expanded, both academics and public commentators have treated international borders as increasingly irrelevant to the experiences of states and individuals alike. As a result, the increasing relevance of international borders has caught the academic study of international relations intellectually unprepared, with attention focused on territorial dispute settlement, border treaties, and the attendant promises of joint gains. Just as the world seemed on its way to peaceful territorial understandings, border anxieties have once again come to the national and international fore.

In this age of globalization, why are states so concerned about their borders? The purpose of this paper is to provide a fresh view of global concerns regarding international borders. We suspect that border anxieties and issues have changed noticeably in the past two decades away from traditional concerns about demarcation and toward problems of border management (Simmons forthcoming 2019). Although borders are mostly formally “settled” (Owsiak, et al. 2018) they continue to be a major – even growing – state concern. Despite globalizing trade and communications relationships, border control is near the top of the international agenda of many states.

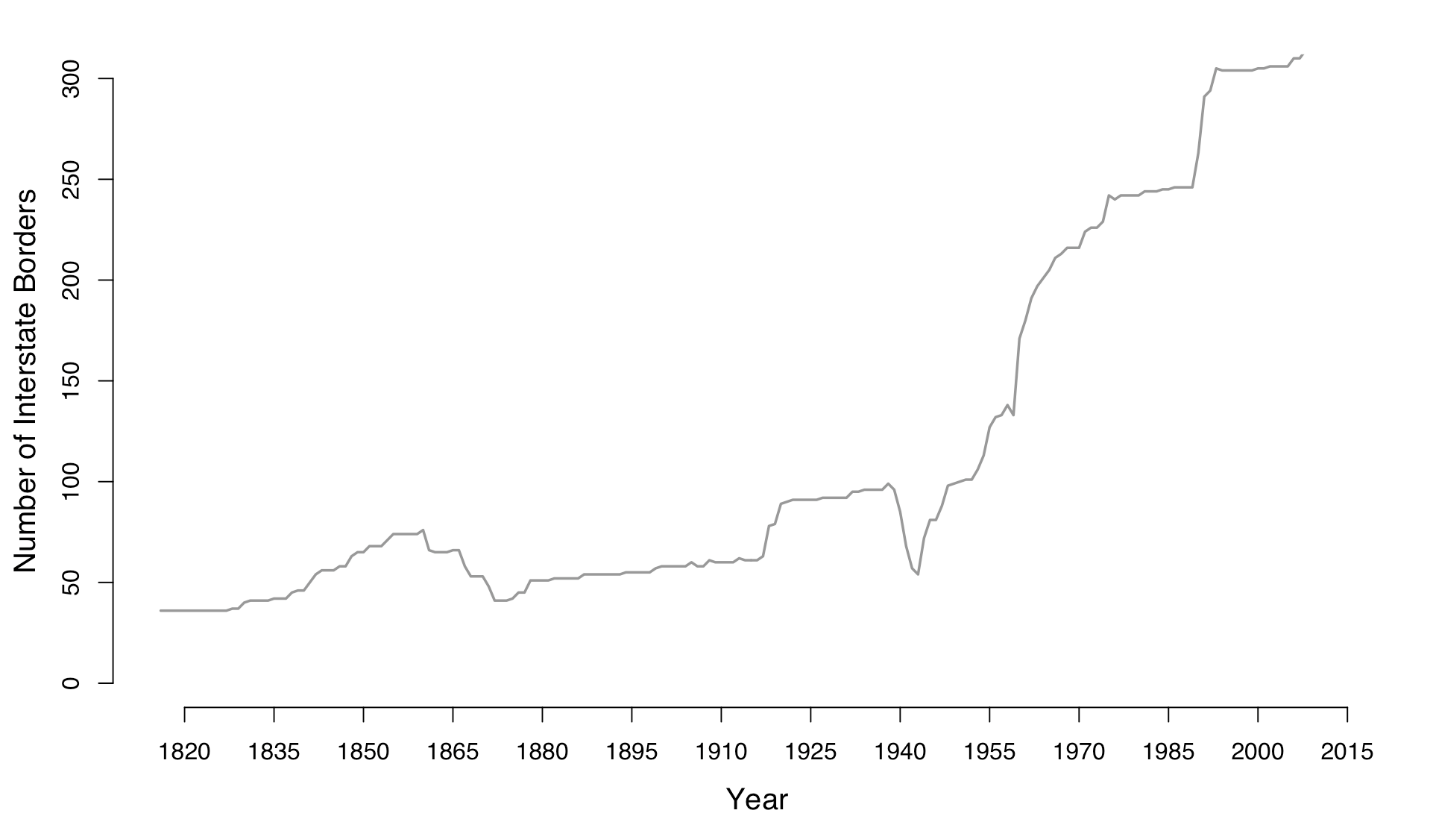
We document these claims using global official discourse, proxied by the annual opportunity all states have to voice their priorities on the international stage at the opening of the General Assembly of the United Nations each year. The UNGA is the world’s “talk shop.” Opening speeches are an *annual* opportunity for *every state* – large and small – to speak their mind about what should be on the world’s agenda, in an *unfiltered* fashion to an international as well as a domestic audience. These speeches are an unparalleled trove of messages about aspirations and anxieties of states the world over. They present a unique opportunity to explore border anxieties as reflected in official state discourse worldwide.

The paper proceeds as follows. First, we contextualize discourse patterns on international borders, with a focus on twentieth-century discussions in the international arena. Second, we define the scope of “border issues,” and use this definition to extract border-relevant discourse from Baturo et al. (2017)’s United Nations General Debates corpus. We then use this dataset to study patterns in *locations, sentiment*, and *policy content* of United Nations border conversations. Though all of these studies are preliminary in nature, they offer a consistent set of findings; namely, that discourse on international borders is becoming more “local”, more negative, and more focused on issues of enforcement and policing rather than traditional concerns such as interstate competition or violence.

**II. The Rising Challenge of Border Management**

International borders have been sites of international conflict and nation-building for as long as the state system has existed. Modern states depend on territorial control, which supplies the essential resources for the consolidation of state power (Wilson and Donnan 1998, 9). Territorial delineation and nation-statehood were largely co-constitutive processes, and interstate borders defined, reflected and helped to solidify national identities (Atzili and Kadercan 2017). By the twentieth century, territorial control became a part of what it meant to be a state.[[1]](#footnote-1)

Territorial integrity and the inviolability of state borders were written into two of the international “constitutional” documents of the twentieth century: the Covenant of the League of Nations[[2]](#footnote-2) and the United Nations Charter.[[3]](#footnote-3) States as a form of political organization generally prospered under these rules. The number of independent states doubled over the nineteenth century, exploded as part of the post-World War 2 decolonization process, and leapt again with the breakdown of the former Soviet Union in the 1990s. Consequently, the number of land borders shared between states proliferated as well (Figure 1). Scholars have noted that territorial integrity delineated by clear borders has contributed to peace, economic prosperity and systemic stability (Hurrell 2003, Simmons 2005, Lee and Mitchell 2012, Schultz 2015, Clay and Owsiak 2016). By one count, about 90 percent of state borders today are defined by *de jure* international agreements (Owsiak, et al. 2018). To be sure, states occasionally contest territorial agreements, as Russia’s recent annexation of the Crimea from Ukraine illustrates, but few would disagree that by the mid twentieth century, the inviolability of states’ borders constituted a core norm of international relations (Zacher 2001).

The end of the Cold War and the intensification of globalization in the 1990s, however, revealed a more complex reality. The 1990s saw soaring trade, but also a sharp increase in transnational crime. The breakdown of the Soviet Union opened borders to the flow of people and goods, both legal and illicit, at unprecedented rates. New crime routes evolved and fueled networks involving trafficking in drugs, people and weapons, and involving associated crimes like money laundering, corruption, and possibly even terrorist financing (Thachuk 2007). Transnational crime – estimated to take in over $3 trillion per year, or “twice all military annual budgets combined”[[4]](#footnote-4) – was increasingly viewed as a threat to legitimate local economies with the potential to undermine law and order. Developing and transitioning states were particularly vulnerable to this wave as they often lack the capacity to police, prosecute or secure borders against large criminal networks (Simmons, et al. 2018). Concerns only intensified after the terrorist attacks of 9/11, and were heightened again by problems of transnational radicalism, wars in Iraq and the Middle East, and the rise in migrants and refugees these conflicts unleashed.

**Figure 1:** **The Proliferation of Interstate Borders, 1815-2015.** Total number of interstate land borders in ‘direct contiguity,’ generated from the Correlates of War Dataset. Available at <http://www.correlatesofwar.org/data-sets>.

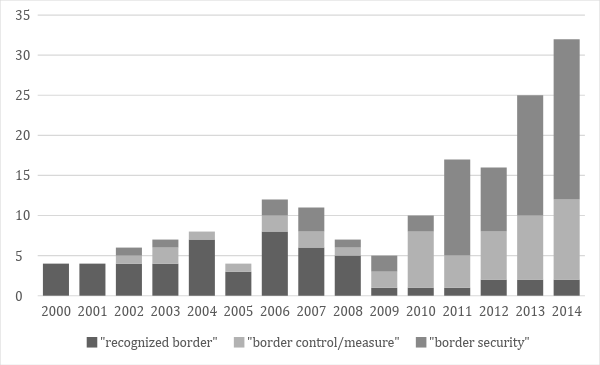
By the 2000s, borders were back on the international security agenda with a vengeance. For the first time, a multilateral agreement was negotiated and widely ratified that created obligations not of border settlement and recognition, but of security, control and management.[[5]](#footnote-5) New kinds of non-state threats were addressed in Security Council debates, and eventually passed, unanimously, starting in 2004 as obligatory resolutions. For example, the UNSC’s concerns with non-state actors’ possession of weapons of mass destruction (nuclear, chemical and biological weapons) called on states, for the first time, to secure their borders.[[6]](#footnote-6) By 2014, the Security Council required states to prevent terrorist movement across borders by cracking down on fraudulent documents and other evasions.[[7]](#footnote-7) A series of resolutions increasingly called for follow up.[[8]](#footnote-8)

Based on patterns like these, our working hypothesis is that the international community no longer sees borders merely as territorial divisions among states to be recognized and demarcated. These spaces now are seen as a challenge to traditional state governance itself. [[9]](#footnote-9) The business of the United Nations Security Council reflects this development. The last 15 years of debate and decision-making in the UNSC has shifted from the *legitimation* of specific borders to their *security, control and governance* (Figure 2). But such a view is clearly influenced by the power and perspective of the permanent members of the Council, and especially in this case the United States and Western Europe. The products of the Security Council are clearly important – not to mention legally binding on members – but hardly capture the nature of the concerns of a broader swath of leaders from around the world. International institutions are not democracies, but as in domestic governance it is important to understand the interests and policy agendas of both leaders in international institutions and those of their broader membership. Does border control resonate broadly beyond the Security Council? If so, when did border security, control and management take root as a major issue in global discourse? Where do we see the clearest border concerns, and who participates in framing the issues? We can learn a great deal about the genesis, texture and substance of the apparent shift to border security by analyzing world opinion as expressed in the only forum in which every state’s representative has an annual right to speak – the United Nations General Assembly.

**III. Conceptualizing and Measuring Global Official Border Discourse**

*The United Nations and Global Official Discourse*

The United Nations is the premier forum for interstate discourse, with broad norms of inclusion and a tradition of multilateralism in discussing security issues. During the Cold War, scholars tended to view debates in the UNGA as little more than sham public relations, and even today criticisms of the UN abound. For our purposes, however, the UNGA is offers an excellent and relatively untapped source to understand “global official discourse,” at least as expressed by the leaders of countries from every part of the world. Understanding how and what the world “thinks” is itself critically important. Research shows that debates in the United Nations help to frame international issues, develop consensus, legitimate collective decisions and even influence major powers (Claude 1966).

Discussions held within UN chambers are particularly relevant to understand changing discourse patterns surrounding international borders and boundaries. Normatively, no other global institution is so clearly founded on the principle of territorial sovereignty and the inviolability of international borders. Its concerns run the gamut from social and cultural issues to human security to international stability. Granted, it is possible that many of the views expressed in this setting are strategic rather than “genuine,” but even strategic views contribute to framing, consensus development and legitimation internationally. The UNGA therefore offers one of the few venues in which states of all sizes are afforded the opportunity to raise policy problems and shape the world policy agenda.

**Figure 2: Shifting Border Concerns at the UN Security Council.** References to borders are on the increase, but attention has shifted from a call for recognized borders to aspects of border control and border security itself. Number of mentions of each phrase in the decisions and resolutions of the Security Council, by fiscal years, 2000/2001-2014/2015. Years 2001/2002 and 2002/2003 are estimated because the document are not searchable. No documents are searchable prior to 2000. Original documents are located at <http://www.un.org/en/sc/documents/volumes/>. (Accessed 10 July 2018).

For the purposes of this paper, we focus particularly on studying border discourse in Baturo et al. (2017)’s UN General Debates Corpus. This corpus consists of all speeches offered by member states from 1970-2017 during the UNGA’s yearly General Debate. These speeches - which are usually given by the head of state, head of government, or chief foreign minister of each state - are essentially unconstrained, allowing states to raise any topic or policy concern they wish to highlight in the international arena. This forum offers a rare - perhaps unique - opportunity for states to make any statement they wish, annually and unfiltered, to an audience of fellow member states. Since states rarely decline the opportunity to provide remarks in the General Debates (see Figure 3), these speeches offer a rare opportunity to identify the priorities and issues that each state would like to place at or near the top of the international agenda for the year. As such, they form the central corpus for our study.

[other points: political communication can affect politically relevant sentiments; speeches and their coverage are likely to affect voters subjective sentiments, which in turn can affect political behavior and policies (De Boef and Kellstedt 2004).

*Conceptualizing and identifying border-relevant discourse*

**Figure 3: UNGA Speeches and UN member states, by year.** Non-member states and organizations (e.g. the European Union) are occasionally invited to speak at the UNGA. As a result, in a few years there are more speeches than member states.

As with any text-based initiative, a key challenge in this project is to identify which texts are *relevant* to the underlying task. Because international borders represent such a central concept in international relations, almost any interstate policy dispute can be plausibly linked to international borders.[[10]](#footnote-10) This problem is particularly pervasive in a corpus like the UNGA transcript dataset, in which states are allowed (and even incentivized) to introduce a wide variety of ideas simultaneously.

To bound both the dataset and the underlying phenomenon of interest, we therefore begin with two key preprocessing steps. First, we segmented all speech transcripts included in Baturo et al. (2017)’s corpus into semantically coherent “pseudo-paragraphs”. Because UNGA speech transcripts are sourced from scanned images, line breaks, spaces, and other formatting elements are often not preserved in this corpus, making it difficult to identify when discussion of one issue begins and another ends. To address this problem, we first break each speech transcript into sentences,[[11]](#footnote-11) and use Hearst (1997)’s TextTiling algorithm to merge semantically similar sentences into paragraph-length chunks (*n* = 135,292).[[12]](#footnote-12)

Next, we identified all border-relevant pseudo-paragraphs. For our purposes, we define a document as *relevant* to international borders if (1) the document discusses a *specific* physical, non-metaphorical international border or collection of borders (e.g. a regional border compact), ***or*** (2) the document discusses a concrete policy problem with a clear impact on a physical, non-metaphorical international border. Documents with both attributes are most clearly “relevant” under our definition, but the presence of either attribute alone is sufficient for inclusion. For example, a document which discusses cross-border cultural initiatives in El Paso/Ciudad Juárez would be relevant under our definition because it clearly discusses a specific border, though the policy issue it discusses does not have a precise physical impact. Similarly, a document which describes Serbia’s general interest in building cross-border infrastructure would also be relevant because it clearly discusses a policy issue with a physical border presence, even though a specific border is not mentioned. By contrast, a document which only mentions “transborder” counterterrorism cooperation or the “disappearance” of physical barriers to trade would not be relevant under our definition, since it neither discusses a specific border nor a policy issue with precise physical consequences.

To identify all documents that meet this definition, we began by identifying all pseudo-paragraphs that contained any of a set of predefined border-relevant keywords, such as “border”, “boundary”, or “demarcate.” Next, we assigned a series of undergraduate researchers to read this set of documents, and code each document based on whether that document fit our definition of border relevance. As shown in Figure 4, this process left us with a total of 5,377 border-relevant pseudo paragraphs, representing approximately 4% of pseudo paragraphs in most years. This reduced dataset forms the basis for our analyses in the following sections.

Already this exercise reveals an insistent pattern of tremendous significance: states are increasingly talking about specific international borders *as a proportion* of all utterances in the annual General Debates. Interest in international borders is apparently on the rise in official discourse, and appears to intensify along with well-known forces of globalization. The uptick since the mid-2000s is especially strong. Moreover, it echoes the tremendous upward swing in border mentions in resolutions and decisions of the Security Council presented above, even though the UNGA and UNSC have different membership principles and different functional responsibilities. This pattern raises several issues: who is so concerned with bordering, and why? Does the strong trend in Figure 4 represent satisfaction or anxiety? If the latter, what are states so worried about?

**Figure 4: Proportion of border-relevant pseudo paragraphs** in all speeches made by United Nations member states from 1970-2017 during the UNGA’s yearly General Debate.**, by year.** The denominator is the total number of pseudo paragraphs in a given year.

**IV. Border Discourse in the UNGA**

To shed light on these questions, we used this defined corpus to distinguish three primary ways in which states can discuss border-related policy concerns:

(1) *Location*. Which states/locations does a given state mention in the context of international border discussions? Do states tend to focus on their neighbors or strategic allies? Or do they focus on locations and events further afield? We expect some significant reorientations in the geography of border concerns over time, largely related to reconfigurations in the structure of the international system. The bipolar world order of the Cold War period is likely to reflect fewer but very intense border rivalries. The zero-sum construction of security issues suggests that major powers are likely to take public positions on these conflicts, and that minor states are likely to mention such epic tensions in order to signal their alignment and political sympathies with the major powers, even when such conflicts are far afield. We expect the post-Cold war period to reflect a different geographic pattern. Global alliances are no longer – or at least much less – at stake. One consequence is the proliferation of localized, non-systemic conflict as major powers have become less interested in maintaining local alliances. Instead, concerns associated with globalization are likely to challenge territorial control of states around the world. Under these conditions, smaller states become more sensitive to local rivalries; moreover, border concerns should “telescope” as states become increasingly concerned with cross border challenges in their region and at their own borders. Compared with the Cold War, we expect more recent border mentions to be made by a *more varied group of states, and the average distance between speaker and subject should decline*.

(2) *Sentiment*. Sentiment analysis focuses on the positive or negative *tone* of a given document with respect to international borders: the extent to which a particular document is positively or negatively disposed towards border-related concerns. Sentiments are “a psychological state that relates to the opinion holder’s satisfaction and dissatisfaction with some aspect of the topic in question” (Li and Hovy 2017). We are especially interested in sentiments of (dis)satisfaction related to some kind of (dis)utility the agent associated with international borders – for example, that they are legitimate and stable (ensuring a secure sense of state sovereignty and control) or that they are contestable and dangerous (threatening the state and/or society in some way). Sentiment analysis is typically performed on expressions made by individuals, but here we conceptualize the utterance of a state’s UN representative as a signifier for a “corporate” attitude or opinion. That is, we assume the sentiment reflected is that of a relatively broad swath of politically relevant official actors, and not the diplomat him/herself. We are primarily interested in changing sentiment over time, for which two literatures make contrasting predictions. On the one hand, the traditional international law/international relations literature on international borders sees negotiation, settlement, legalization, formalization and the possibilities for peaceful interstate arbitration as sources of comfort and security (Huth, et al. 2011, Owsiak 2012, Schultz 2014), associated with positive sentiments. In contrast, a growing literature stresses the challenges of globalization as undermining a subjective sense of state sovereignty and control (Van Schendel and Abraham 2005, Brown 2010, Vallet and David 2012, Kinnvall and Svensson 2015), which would suggest sentiments should trend negative over time.

(3) *Policy language*. What is driving the prioritization of borders and an international issue? Here focus is on substantive policy problems that document raises. Examples might include border settlement, demarcation, cultural or economic exchange, security, migration, refugees, terrorism, rebel activities, or crime. Our primary expectation is that we should see a shift away from the interstate concerns typical of the Cold War years, and toward nonstate challenges associated with globalization. In addition, as the focus shifts from interstate concerns to the challenges of globalization, we should see less emphasis on where the borderline is to be located, and more concern with its management.

**VI. Changing Views of International Borders**

*Geolocating Border Discourse*

Much can be learned from border discourse by looking systematically at the *places* raised by states in the context of border discussions. To identify these place name mentions, we use a four-step process. First, we used a pre-trained named entity recognition model to identify all “geopolitical entities” from our dataset of border-relevant paragraphs.[[13]](#footnote-13) Here, “geopolitical entities” refer to named political entities with a clear geographic location, such as cities (e.g. “Jerusalem”; “Ciudad Juárez”), federal units (“Texas”; “Punjab”), states (“USA”; “Cambodia”), or regions (“Sinai Peninsula”; “Crimea”). Second, we associated each unique entity with a latitude/longitude point and a country using the Google Maps API.[[14]](#footnote-14) Third, we manually checked each extracted entity, and removed entities that were either erroneously identified as “geopolitical” or associated with clearly erroneous location data by Google Maps. Fourth, we supplemented this list by manually adding location data for defunct or outdated country names (e.g. “Yugoslavia”; “Soviet Union”). After excluding instances in which a country referred to itself or to a locality within its territory, this process left us with a total of 8,408 entity mentions and 533 unique entities.



**Figure 5: Median distance (km) between speaker country and mentioned location, over time.** For both speaker and mentioned countries, the point location of that country is the country’s capital. For all other non-point locations, the point location is the centroid.



**Figure 6: Countries that mention Vietnam/Cambodia and Ethiopia/Eritrea** in border-relevant UN General Debate speech segments, by decade. Line thickness is proportional to the number of mentions by a given country in a given decade.

As Figure 5 shows, compared to the pre-Cold War period, the average distance between speaker and mentioned locality declined by approximately 25% following the end of the Cold War. This pattern is primarily attributable to a decline in the prevalence of “epic” border conflicts, which attracted substantial attention from across the international community. For example, consider the Khmer Rouge genocide and the Vietnamese invasion; as shown in Figure 6, the genocide and associated refugee flows into Vietnam helped make Vietnam and Cambodia two of the most-mentioned locations in border-related UNGA discourse during the 1970s and 1980s. However, by the 1990s, discussion of these countries largely faded. The Ethiopia/Eritrea border conflict, by contrast, offers a good example of patterns characteristic of the post-Cold War discourse, with a largely regional discourse pattern that peaked during the period surrounding active military hostilities.

To investigate these patterns more systematically, we fit a fixed-effects conditional logistic regression model to a binarized version of the locations data. Our unit of analysis in these models is the directed dyad-year, with our dependent variable a binary vector coded one if the speaker state mentioned the target state in a given year, and zero otherwise. Since few data sources offer comprehensive cross-national and cross-temporal data, we model these data using a logistic regression model with speaker- and target-country fixed effects, which accounts for unmodeled time-constant speaker- and target-country characteristics.[[15]](#footnote-15)

In line with the descriptive results presented earlier in this section, we broadly expect discourse patterns to become more “local” following the end of the Cold War. In all periods, we expect states to be more likely to mention places closer to their own borders than those further afield, but we expect this pattern to become stronger following the end of the Cold War. To capture this effect, we include a variable denoting the distance between dyad members in our model, which we interact with a post-Cold War indicator. We expect the coefficient on both the interaction and the base-level distance variable to be negative, and no strong expectations for the base-level Cold War indicator.

Besides these distance-related variables, we also control for a number of other factors likely to influence state proclivity to call attention to particular locations. At least in the United Nations context, non-democracies are often primarily concerned with expressing and protecting their sovereign rights against intervention, which leads to a more introspective pattern of discourse focused on “sovereignty talk”. As a result, we expect democracies to be more likely to mention specific places outside their borders than non-democracies, which we represent using indicator variables indicating the democracy/non-democracy status of dyad members.[[16]](#footnote-16)

We also include an indicator variable denoting the presence of a formal alliance between dyad members. Here, however, our expectations are less clear. If most location mentions occur in a negative context (e.g. conflict or human rights violations), we might expect states to be less likely to call attention to locations within their strategic allies’ borders. By contrast, if location mentions tend to occur in an approving or positive context, we might expect states to be more likely to mention their allies. However, because we do not attempt to identify the context in which a particular mention occurred, we cannot distinguish between these possibilities. [[17]](#footnote-17)

As additional control variables, we also included variables corresponding the presence of civil/interstate violent in the target country and variables corresponding to the ratio of GDP and population in the dyad. The former set of variables are designed to capture the “salience” of a given country’s borders in a given year, while the latter are designed to capture power asymmetries between members of the dyad. As a result, we expect the coefficients on the “target” civil/interstate conflict variables to be positive. Because larger and wealthier states are generally more involved in international affairs and less vulnerable to reprisal from other states, all else equal we expect larger and wealthier states to be more willing to discuss events in smaller and poorer states. We measure these concepts using speaker/dyad log-GDP and log-population ratio variables, and expect the coefficients on both to be positive.

The results of this comparison are given in Figure 7. First, the distance and distance/post-Cold War interaction coefficients are both significant and negative. In other words, states at all time periods are more likely to discuss their neighbors than countries that are further afield, but this relationship becomes noticeably stronger following the end of the Cold War. Similarly, for speaker-dyad greater than approximately 3000km apart, we also find a significant drop in mention probability following the end of the Cold War. Closer dyads, by contrast, show little to no difference in mention probability during the pre/post-Cold War periods. These results support our contention that border discourse has become increasingly “localized” since the end of the Cold War, with states becoming more likely to focus on locations in their own borders and local regions.

**Figure 7: Coefficient plots, directed dyad-year binary mentions data**. Dots represent point estimates, while lines represent 95% confidence intervals from a conditional logistic regression model. Speaker and target country fixed effects estimated but not shown. Democracy/Democracy is the held-out baseline for the government type variable.

Coefficients associated with most other predictor variables also largely match our hypotheses. Broadly, we find that states are more likely to discuss localities experiencing civil or interstate conflicts, and that larger and wealthier states are more likely to mention their smaller and less wealthy counterparts. We also find a strong and positive relationship between alliance presence and mention probability. *Ex ante*, if we suppose that states are less inclined to be critical of their strategic allies, this finding suggests that the modal mention of a concrete location in this context is likely to occur in a *positive* rather than a *negative* tone. However, further investigation is needed to confirm this contention. Finally, our “sovereignty talk” expectation – which suggests that democracies will be willing to take specific positions on international events, while non-democracies will focus on vague “sovereignty-promoting” language – is partially supported. Relative to a democracy-democracy held-out baseline, non-democracy speakers are indeed less likely to mention democracies; however, non-democracy speakers are about as willing to discuss one another as democracy speakers. Here, too, more work is needed to identify whether “sovereignty talk” is indeed the dominant mode of conversation for non-democracies.

*Sentiment*

So far, suggestive evidence points to growing attention at the United Nations to international borders. We saw border references increase in Security Council resolutions and decisions, but we have also seen that the broader UN membership is increasingly seized of border issues. Moreover, border references are increasingly “close to home,” in that state officials are more likely than in the past to mention their own, their neighbors’ and/or their region’s border issues. We have argued that these patterns are suggestive of the loosening of Cold War polarity and the tendency to view border issues through much more localized lenses. But does this shift mean states have achieved their goals and are satisfied with the territorial order, or does it mean that the challenges, risks and frustrations have simply spread and moved closer to home?

In this section we are interested in *sentiment* – the extent to which a particular entity is positively or negatively disposed towards border-related concerns. In most studies, scholars study sentiment patterns like these using dictionaries of positive or negative words (Young and Soroka 2012) or general-purpose algorithms trained on “emotive” documents like movie or restaurant reviews.[[18]](#footnote-18) However, these approaches are unlikely to perform well in the context of diplomatic language, for at least three reasons. First, diplomats communicate in code, which is intended to signal meanings to other diplomats who know the code. To the general public or to a general-purpose algorithm, diplomatic language may therefore sound *ambiguous* (Jönsson and Aggestam 1999). Second, compared to ordinary language or movie/restaurant reviews, diplomatic language is *moderate*. It generally expresses “hostility with courtesy, indifference with interest, and friendship with prudence” (Satow 2009). To the general listener, it may therefore seem monotone compared to the extremes in ordinary communication. Third, diplomatic language is likely *biased* toward positive sentiment: “…diplomatic language is expected to consistently contain language that promotes mutual cooperation over conflict and divisiveness” (Burhanudeen 2006). These characteristics of diplomatic language require us not only to gather an appropriate corpus, but also to develop a meaningful scale for understanding sentiments in global official discourse.

To address these problems, we therefore opted for a supervised machine learning approach. First, to develop a ground-truth dataset, we asked human workers on Amazon Mechanical Turk to code sentiment values for approximately 10% of our corpus (*n =* 589).[[19]](#footnote-19) Throughout this process, we followed the pairwise comparison procedure proposed by Carlson and Montgomery (2017). Because rating documents on an abstract sentiment scale is cognitively demanding, rather than asking MTurk workers to code sentiment directly we instead presented MTurk workers with a pair of documents at a time, and asked workers to indicate which document was more “optimistic” regarding the international border issue it discussed.[[20]](#footnote-20) We then repeated this process such that each unique document was presented in twenty total comparisons, for a total of 5,890 comparisons submitted in five batches. We then used these rankings to fit a Bayesian latent variable model (as described in Carlson and Montgomery (2017)), which allows us to infer a continuous human-generated sentiment score for each individual document. This continuous, MTurk-generated sentiment score formed our ground-truth training set in our subsequent modeling work.

Second, using this ground-truth dataset, we trained a custom machine learning model to predict document sentiment given that document’s text. We used two types of features as predictors in this model. First, we used a series of off-the-shelf sentiment analysis dictionaries and algorithms to extract unsupervised sentiment scores for each document. Second, we augmented these dictionary sentiment values with a document-level vector embedding, which is designed to capture the overall substantive themes present in each document. As shown in Appendix A, we experimented with a variety of models and feature combinations, but found that a simple ridge-penalized linear model trained with all features performed best out-of-sample. Relative to a Google Sentiment baseline – the best-performing unsupervised approach – our method reduced out-of-sample RMSE by approximately 10% and increased out-of-sample correlation between predicted sentiment and the MTurk baseline from approximately 0.52 to 0.63.

Though these results leave substantial room to improve, the results from our current data are highly suggestive. As shown in Figure 8, sentiments associated with borders have generally improved worldwide since 1970, which likely reflects optimism associated with the end of prolonged conflicts in Indochina and (eventually) the Cold War. In particular, the 1980s saw steeply improving sentiments, which were for the most part sustained throughout the 1990s. However, starting in the late 2000s, this pattern began to reverse, with a noticeably decline from approximately 2010 to the present. Moreover, as shown in Figure 9, this decline was largely restricted to countries in the Global North, which coincides with increased anxiety regarding immigration and the rise of far-right populist movements in the United States and Europe during the period.



**Figure 8: Model-predicted sentiment,** aggregated by year and country and split by global north/south.

**Figure 9: Model-predicted sentiment,** aggregated by year and country.

*Content*

What policy topics have driven this decrease in sentiment? As a first look at this question, we identify a set of word stems that are associated with key border-related policy concerns – such as “crime”, “terrorism”, and “migration” – and track their prevalence of pseudo-paragraphs containing these tokens relative to a set of “standard” international relations-related baseline terms (e.g. “state”, “international”, or “war”). As shown in Figure 9, since 1970 terms associated with border-related policy concerns – like “criminal” or “smuggle” – are largely on the rise. Unsurprisingly, the rise in usage of these terms is largely associated with important focusing events in the time period; for example; “terrorism” increases markedly in usage following the 9/11 attacks, while “migration” became substantially more common following the 2015 Syrian refugee crisis. Moreover, “traditional” international relations words like “state”, “war”, “settle” and “international” broadly *decline* in usage over the same time period. Combined with the sentiments data shown above, these patterns suggest states are becoming more concerned about localized border policy concerns, as opposed to large-scale, interstate geopolitical conflicts traditionally highlighted by the international relations literature.

**Figure 10: Proportion of pseudo-paragraphs that mention specified terms, 1970-2017.** The top panel highlights growth in problem frames that tend to involve non-state actors (Crime, smuggling and trafficking, migration, terrorism), while the bottom panel suggests state-to-state relationship (demarca-, settle-, state, international, war).

**VII. Conclusions**

Important changes are taking place in perceptions associated with the peaceful maintenance of territorial sovereignty. Borders are not only in the very recent news; they constitute a growing priority for Security Council action and for discussion in the General Assembly of the United Nations. Over the past several decades, a growing and diverse set of states have increasingly devoted floor time on the world stage to discuss international borders. These references are not merely to abstract references to “inviolable borders” or other general principles; they signify obsession with specific and concrete policy problems with very clear geospatial referents. This finding alone is important: the age of globalization has demonstrably been accompanied by a discourse of border security.

The evidence suggests that concerns have shifted from the epic interstate conflicts and rivalries of the Cold War to the more local and widespread problems sovereign states face living with porous jurisdictional perimeters. The promise of the UN Charter – that peace and security can be realized through states’ mutual recognition of sovereign and inviolable territorial jurisdiction – has not put anxieties fully to rest. Even though states have agreed to formal treaties for some 90% of their shared borders, sentiments have recently trended negative. An analysis of the content of official discourse points to a fairly clear reason: while the salience of interstate border threats appear to wane, challenges from a host of non-state agents and forces are believed to be on the rise. These perceptions help explain why the Security Council’s business is less and less concerned with “legitimate borders” and has recently – for the first time – obligated sovereign members states to secure, control and manage their borders under Chapter VII of the Charter; that is, in the name of international peace and security.

These findings should prod a reorientation in border research among scholars of international relations. First, it is clear that not only should borders be “settled”, they should be *managed*. This is a complex and ongoing problem that will clearly engage domestic as well as international audiences. Second, it is also clear that borders delineate states, but they create incentives and opportunities for nonstate actors to challenge state authority, and these challenges are now firmly at the top of the security agenda for much of the international society of states.

Official global discourse offers a useful way to understand states’ publicly-expressed priorities and concerns. Once every year, state representative have a right to speak to the rest of the world about their priorities, concerns and aspirations. The record of these speeches is a trove of data on global sentiments ready for researchers to analyze. Features like location mentions, sentiment, and content all point to policy relevant attitudes. Examining patterns within these features offers insights into state anxieties about their security environment. Clearly, this research strategy should be complemented with a variety of data using different tools and approaches. But we believe that systematic textual discourse of positions taken on the world stage offers a promising direction.

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Appendix A: Mechanical Turk Sentiment Model

As mentioned in-text, we use a supervised machine learning approach to predict sentiment values for each document in our dataset. In this Appendix, we provide details on feature engineering, feature selection, and modeling choices used in this model.

*Feature extraction*

We use two types of features in our models. First, for each document, we extract unsupervised sentiment values using four off-the-shelf methods:

* [*Google AI sentiment predictor*](https://cloud.google.com/natural-language/). The Google AI API provides a pre-trained sentiment classifier. Given a document, the API returns a “sentiment” score and a “magnitude” score. Roughly, the “sentiment” score corresponds to the average sentiment of a given document, while the “magnitude” score corresponds to the frequency of “emotional” content in the document.
* [*Bing, Loughran, and NRC sentiment dictionaries.*](https://www.rdocumentation.org/packages/tidytext/versions/0.2.0/topics/get_sentiments)*.* Like most sentiment dictionaries, each of these dictionaries contains an expert-compiled list of words coded as “positive” or “negative” sentiment. For each dictionary, we counted all terms coded by that dictionary as positive or negative. We then combined these scores into a single value by calculating a normalized difference in counts, defined as .

As mentioned in-text, because of the challenges involved in analyzing diplomatic language, we do not expect existing sentiment dictionaries and prediction algorithms to perform well in our application. However, we do expect these features to be at least somewhat related to our sentiment conceptualization. As a result, these features offer a reasonable starting place in the feature extraction process.

Second, we created an aggregated word embedding vector for each document. As mentioned in-text, an embedding model is essentially an unsupervised dimensionality reduction tool, which converts a given word into a high-dimensional vector representation designed to represent the semantics of that word. For example, a particular element of an embedding vector might correspond to the “gender” of a word (e.g. “king” vs “queen”), or the “emotional” content of that word (e.g. “enraged” versus “concerned”). To capture a wide variety of semantic dimensions, embedding vectors are usually high-dimensional (50+ elements). However, when aggregated to the document level, high-dimensional word embedding methods are substantially lower-dimensional and denser than word-count matrices or other feature engineering methods designed to represent document content. Since we have a relatively small training set (*n* = 589), these latter two features are particularly attractive during model fitting.

To generate an embedding vector for each individual token, we draw on pre-trained 50-dimensional [GloVe embeddings](https://nlp.stanford.edu/projects/glove/), trained using the Wikipedia 2014 and Gigaword 5 corpora. For each word in each document, we extracted an embedding vector, and averaged the vectors pre-trained for each individual word in a given document. This process provided us with a 50-dimensional embedding vector for each document, which we used as an additional set of features in our downstream prediction model.

*Model selection*

Using these feature sets, we experimented with five modeling approaches: namely, a simple linear regression, a lasso-, ridge-, and elastic net-penalized linear model,[[21]](#footnote-21) and a random forest.[[22]](#footnote-22) For each approach, we trained model versions with dictionary features only, and both dictionary and embedding features, leaving us with a total of ten candidate models. For each modeling variant, we assessed out-of-sample RMSE and correlation via ten-fold cross-validation.

The results of this process are given in Figure A1. All approaches out-perform a baseline generated using the Google AI sentiment score, which was the best-performing of the unsupervised methods we examined. Models trained using both dictionary and embedding features performed best, suggesting that both feature sets indeed added to predictive performance. By contrast, choice of model mattered less, with the three penalized models slightly out-performing the linear model and random forest.

Based on these findings, for our analyses in-text we opted to use scores generated using the ridge-penalized linear model, with both dictionary and embedding features included. This approach offers a noticeable – though modest - performance gain over the unsupervised baseline, with approximately a 10% reduction in out-of-sample RMSE and an increase from approximately 0.51 to 0.63 out-of-sample correlation moving from the unsupervised Google AI sentiment scores to ridge-penalized model.



**Figure A1: Cross-validated RMSE and correlation.** Dots represent average cross-validated performance over 20 iterations, while lines represent 2.5th and 97.5th percentiles. Baseline is the Google AI sentiment algorithm.

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1. Montevideo Convention on the Rights and Duties of States. Entered into force December 26, 1934. Article 1(b): “The state as a person of international law should possess the following qualifications: a) a permanent population; b) a defined territory; c) government; and d) capacity to enter into relations with the other states.” Available at: <https://www.ilsa.org/jessup/jessup15/Montevideo%20Convention.pdf>. [↑](#footnote-ref-1)
2. Covenant of the League of Nations, Article 10: “The Members of the League undertake to respect and preserve as against external aggression the territorial integrity and existing political independence of all Members of the League. In case of any such aggression or in case of any threat or danger of such aggression the Council shall advise upon the means by which this obligation shall be fulfilled.” Available at <http://avalon.law.yale.edu/20th_century/leagcov.asp>. [↑](#footnote-ref-2)
3. Charter of the United Nations, Article 2(4): “All Members shall refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any state, or in any other manner inconsistent with the Purposes of the United Nations.” Available at <http://avalon.law.yale.edu/20th_century/unchart.asp>. [↑](#footnote-ref-3)
4. Global Challenge 12, The Millennium Project, Global futures Studies and Research. Available at <http://www.millennium-project.org/challenge-12/>. [Accessed March 31, 2019.] [↑](#footnote-ref-4)
5. The 2000 Palermo Convention’s smuggling and human trafficking protocols require states to “strengthen border controls as may be necessary to prevent trafficking and detect smuggling, including…denial or revocation of visas for protocol violators…” and to “consider strengthening cooperation among border control agencies by, inter alia, establishing and maintaining direct channels of communication.” These provisions are basically identical for both protocols. See Protocol Against the Smuggling of Migrants by Land, Sea and Air, supplementing the United Nations Convention Against Transnational Organized Crime1 Adopted 15 November 2000 Entered into force 28 January 2004; available at <http://www.unhcr.org/en-us/protection/migration/496323791b/protocol-against-smuggling-migrants-land-sea-air-supplementing-united-nations.html>. (Accessed 5 August 2018.) [↑](#footnote-ref-5)
6. Resolution 1540 obligated member states to “Develop and maintain appropriate effective border controls and law enforcement efforts to detect, deter, prevent and combat, including through international cooperation when necessary, the illicit trafficking and brokering in such items [WMD: nuclear, chemical and biological weapons] in accordance with their national legal authorities and legislation and consistent with international law.” Available at <https://www.un.org/disarmament/wmd/sc1540/>. [↑](#footnote-ref-6)
7. UNSC resolution 2178 para. 2 provided “all States shall prevent the movement of terrorists or terrorist groups by effective border controls and controls on issuance of identity papers and travel documents, and through measures for preventing counterfeiting, forgery or fraudulent use of identity papers and travel documents…” See also articles 4 and 14. See also UNSCR 2195 (2014). [↑](#footnote-ref-7)
8. UNSCR 2396 mandates all UN Member States to step up implementation of Resolution 2178 (2014) and to adopt measures on border control, criminal justice, information sharing and prevent and counter violent extremism that leads to terrorism. [↑](#footnote-ref-8)
9. Scholars now describe borders as sites of social struggle that have been converted into the paradigms of law enforcement (Andreas 2003) and “management” (Andrijasevic and Walters 2010). [↑](#footnote-ref-9)
10. For example, any military dispute involving one or more states will necessarily involve one state’s troops or military assets penetrating an international border, or both state’s troops or assets entering territory whose borders are disputed. A “stretched” (Sartori 1970; 1984) definition of border relevance might therefore encompass all of these disputes, though few actually involve border security or border policy decisions. Any discussion of international trade, international finance, or even international communication and cultural exchange could be categorized as “border-related” using a similarly imprecise definition. [↑](#footnote-ref-10)
11. Using NLTK’s [sentence tokenizer](https://www.nltk.org/api/nltk.tokenize.html). [↑](#footnote-ref-11)
12. The TextTiling algorithm requires two researcher parameters, which roughly correspond to the average number of sentences in a paragraph and the average number of tokens in a sentence. Here, we use the empirical per-speech averages for both parameters, rounded to the nearest integer. [↑](#footnote-ref-12)
13. Using the GPE entity type as identified in [spaCy](https://spacy.io/). [↑](#footnote-ref-13)
14. For instances in which the named entity was a country, we use the location of the country’s capital as the point location. Otherwise, we used the centroid of the identified place name as the point location. [↑](#footnote-ref-14)
15. For example, Israel is a frequently-mentioned country throughout the dataset because of the ongoing salience of the Israel-Palestine conflict. Effects like these should be captured by target-country fixed effects. [↑](#footnote-ref-15)
16. Using the Polity IV data (Marshall et al. 2004), and defining a “democracy” as a country with a score of 6 or higher on the standard Polity IV scale. [↑](#footnote-ref-16)
17. As identified using the ATOP data (Leeds 2003). [↑](#footnote-ref-17)
18. For example, the Google Sentiment tool available through the [Google AI API](https://cloud.google.com/natural-language/). [↑](#footnote-ref-18)
19. Before participating, we required all workers to pass a 10-15 minute training and testing. Our testing module was designed to ban workers that answered one or more testing questions incorrectly; however, all participating workers passed the testing module. A total of 61 workers participated in the task, of which 4 were banned for low inter-coder reliability. [↑](#footnote-ref-19)
20. We paid workers $0.07 per comparison. For a simple ranking task of paragraph-length excerpts, this rate is a relatively high one. However, because of the challenges inherent in identifying intent in diplomatic language, we felt it was important to incentivize workers to read each document carefully. [↑](#footnote-ref-20)
21. With mixing parameter equal to 0.5 and lambda selected by cross-validation. [↑](#footnote-ref-21)
22. With 500 trees and the number of candidate variables at each split selected by cross-validation within the training set. [↑](#footnote-ref-22)