

**Supplementary Material**  
for  
“The Credibility of Public and Private Signals:  
A Document-Based Approach”

## Appendix A: Document Sources

Declassified documents from the Department of State and the White House were collected at several separate libraries and archives, spanning the years 1958-1963.

### Dwight D. Eisenhower Presidential Library - Abilene, KS

Collection	Series	Box(es)
Papers as President (Ann Whitman File)	National Security Council	5, 7, 10-13
	Diary	37-45, 49, 51
	Administration	7
	ACW Diary	10-11
	Cabinet	14
	Dulles-Herter	9-12
	International	15-16, 24-25, 44, 50, 51-52
	International Meetings	4
	Eleanor L. Dulles	[Germany & Berlin, 1957-1959]
John F. Dulles	Chronological	17
	Gerard C. Smith	1-3
Christian Herter	[Chronological File, 1958-1959]	6-7
	[US Policy Toward Germany]	8
Lauris Norstad	[Germany & Berlin, 1956-1962]	24, 48-49, 61, 64, 72, 86, 88, 97, 103, 105, 112-113
White House Office, NSC	Executive Secretary's Subject File	7-11
White House Office, Office of the Staff Secretary	International	5-6
	Subject, State Department Sub-series	3-4

**John F. Kennedy Presidential Library - Boston, MA**

<b>Collection</b>	<b>Series</b>	<b>Boxes</b>
National Security Files	The Berlin Problem	81-98
	National Security Action Memoranda	11, 36, 41, 58-59, 62, 70, 78, 82, 93, 109, 116, 128, 158, 328-342

**National Archives II - College Park, MD**

<b>Collection</b>	<b>Series</b>	<b>Boxes</b>
Department of State Records	Central Files (RG 59)	1887-1889, 1902-1910, 3531-3535, January-December 1963

## Appendix B: Example Predictions

Below, we present several segments from our data. Their dates, predicted probabilities of statements conveying resolve (DOS and FBIS) and predicted probability that policymakers perceived or made an inference about Soviet resolve (WH) based on the balanced random forest model are provided.

### State Department Cables

*December 16, 1963*

Predicted probability: 0.603

SECRET

DEPARTMENT OF STATE

Memorandum of Conversation

DATE: Dec. 16 1963

SUBJECT: Alleged Military Incident in Berlin

PARTICIPANTS: Ambassador Anatoliy F. Dobrynin USSR

Llewellyn E. Thompson Ambassador-at-Large Department of State

The Soviet Ambassador told me he had been instructed to inform the United States Government through me of the following in confidence. The Ambassador made clear that the Soviet Government had no intention of publishing this oral statement.

“In the night of December tenth U.S. military personnel in West Berlin undertook on the Friedrichstrasse border checkpoint clearly provocative actions with regard to border guards of the German Democratic Republic. They threw stones and bottles at them reloaded their rifles and aimed them at the guards and one U. S. corporal crossed the borderline and laid hold of his pistol.

“Serious consequences were avoided only because of the self-control and caution displayed by the G.D.R. border guards. A legitimate question arises as to what this dangerous act of U.S. military personnel could lead to if the G.D.R. border guards wanted to give those responsible for it a good lesson and a kind of rebuff they deserved.

“It is not difficult to see that in this case the incident could escalate to a direct collision between armed men with all the ensuing consequences. And of serious concern is the fact that cases of clearly provocative behavior on the part of U.S. military personnel on the border between West Berlin...”

*September 14, 1962*

Predicted probability: 0.719

INCOMING TELEGRAM  
SECRET  
Department of State  
FROM: MOSCOW  
TO: Secretary of State  
NO: 672, SEPTEMBER 14, 1 PM

German Ambassador Kroll, after lengthy friendly conversation with Khrushchev, is convinced that latter plans to proceed with peace treaty shortly after US elections. Khrushchev said that he had been able to delay action since the really important difficulty, i.e. flow of refugees, was solved by the wall. He therefore prepared hold off until November. Meantime, he said, Soviets will begin to prepare public opinion for signature peace treaty, all details of which have been fully prepared. Terms of the peace treaty will make continuation of Western occupation Berlin quite impossible. Should Western powers undertake some action which leads to risk of war, Soviets will go to UN Security Council. Khrushchev said he fully informed on West's contingency planning. But Khrushchev reiterated that Western public opinion and Western leaders so anxious to avoid war they will find some way to live with situation.

*August 6, 1958*

Predicted probability: 0.579

INCOMING TELEGRAM  
Recd : AUGUST 6, 1958  
FROM : BERLIN  
TO : Secretary of State  
AUGUST 6, 3 PM. SENT PRIORITY BONN HQ  
REPEATED INFORMATION DEPARTMENT 116 BONN PASS INFO PRITY  
USAREUR 28 REFERENCE EMBTEL 69 TO BERLIN , DEPT 326 USAREUR  
82.

Following sent by General Zakharov August to General Rome in reply message same day from British Commandant protesting August enforcement new type truck-convoy Autobahn documentations

Begin text: With reference to your telephone message of the 5th August 1958, I have the honor to remind you that the question of the transport of freight on the Berlin-Marienborn Autobahn was raised in March month of this year on the level of our political advisers. Nevertheless, as you will recall this question was transferred, not at our instigation, to be settled by the commanders-in-chief, who indeed came to an agreement with regard to the introduction, on the 1st August

1958, of the control procedure. Therefore I can not accept your protest and regret that the responsible British military authorities were not sufficiently prepared for the new procedure, but I, as you will appreciate yourself, have not the right to change anything in the procedures laid down by the commanders-in-chief. End text.

Using simplified provisional version in English. British sent two convoys August 5 Berlin-Helmstedt. No delays encountered at checkpoints following showing ID card of convey commander plus provisional document. NAAFI truck, with similar document traveling Helmstedt to Berlin was delayed.

*February 20, 1962*

Predicted probability: 0.133

“...said he was familiar with Mr. Ulbricht’s statements and did not think any of them justified. Conclusion I had drawn. Gromyko said that if we were not prepared to respect GDR sovereignty then outlook was very gloomy. He made no reference to timing of continuation our talks nor in any way indicated desire to bring matters to a head. On contrary his concern appeared to be how we could keep talks going in view of current impasse. Thompson ELP.”

## Foreign Broadcast Information Service

*July 19, 1958*

Predicted probability: 0.737

GDR Delegates' Statement

Berlin, ADN, in German Hellschreiber to East Germany, July 19, 1958, 0757 GMT-L

(Text) Stockholm—The German Peace Council and the GDR delegation issued a statement on July 18 on the American-British aggression in the Near East. It sharply condemns the imperialist invasion, especially the aid extended by the West German Adenauer government. These events unmasked the true character of NATO and showed what it meant to be an ally of aggressors. Overnight West Germany was cooperating in an attack. The statement asks what is to become of West Germany if she remained the assembly point and springboard for wars of aggression.

The delegation called on the citizens of the GDR to demand the immediate cessation of the assistance extended by Bonn to the aggressors and the immediate withdrawal of the interventionist troops from the Lebanon and Jordan. This also implied the immediate liquidation of U.S. military bases in the Federal Republic. The situation was revealing once more which of the two German states was a state of peace.

The statement was signed by the head of the delegation and president of the German Peace Council and by leading members of the Peace Council.

*March 17, 1959*

Predicted probability: 0.907

U.S. People's Will Disregarded

Moscow, Soviet North American Service in English, Mar. 17, 1959, 0310 GMT-L  
(Nikolai Andreyev commentary)

(Text) Statements by responsible officials of the Pentagon at the sittings of the Senate preparedness subcommittee were made public the other day. These statements cannot but cause grave concern. It is not because of the horrors that the Pentagon leaders threaten are in store for the USSR that I want to call your attention to those statements. It is because the political and military course outlined by these generals is fraught with imminent danger for all peoples, Soviet and U.S. alike, and for all mankind.

What does the U.S. military advocate? The keynote of the utterances of General Taylor Chief of Staff of the Army and of General White Chief of Staff of the Air Force is total nuclear war over Berlin. Just imagine: total nuclear war. Not long ago, Walter Lippmann remarked in the New York HERALD TRIBUNE that the intention to resort of force merely to prevent the East Germans from checking

papers of the Allied personnel on the road to West Berlin could start a war on an idiotic issue. It seems to me that some Pentagon leaders want to start a nuclear war on this idiotic issue.

One could laugh at the bravado of those gentlemen if it were not for the fact that they are high-ranking commanders speaking at official hearings in Congress and not to their youngsters at the dinner table. The public is allowed to read only the censored version of the Senate hearings, but even so one finds enough to question the mental soundness of those who made these statements. General White, for instance, in his global strategic deliberations, doomed whole nations of Europe offhand, dismissing the very real danger of...

*October 7, 1959*

Predicted probability: 0.065

GUINEA DELEGATION—A Guinea Government delegation arrived at Berlin Schoenefeld airport Oct. 7 to attend the GDR anniversary celebrations. The delegation consisting of Fode Papaou Toure, president of the Guinea Court of Appeal, Ahmascu Thiam, National Assembly deputy, and Camara, Rational Assembly deputy and general secretary of the foreign trade office, was welcomed at the airport by Sepp Schwab, deputy minister for foreign affairs, Carl Eckloff, deputy minister of foreign and intra-German trade, and Manfred Flegel, member of the Presidium of the National Council of the National Front. A guard of honor of the National People's Army was drawn up at the airport. (Berlin, ADN, German, Oct. 7, 1959, 2004 GMT-L)

*May 5, 1960*

Predicted probability: 0.397

#### KHRUSHCHEV SPEECH EXPOSES US POLICY

Berlin, Deutschlandsender in German to East and West Germany, May 5, 1960, 2307 GMT-L

(Albert Reiss commentary on Khrushchev Supreme Soviet Speech)

(Excerpts) I should like to challenge everyone to give the name of a single capitalist country where the premier submits such proposals to parliament. Is there a single capitalist country which is contemplating removing the burden of taxation from the shoulders of the workers or exempting the small Industrial producers from the pressure of taxes? Certainly not. Taxes are the panacea of the finance ministers in the capitalist countries. Whenever a hole arises in the state budget it is plugged by taxes, primarily from the pockets of the little men. The human tragedies caused by this are not considered important. In the Soviet Union and in all other socialist countries, the aim is the welfare of the workers.

If people can breathe more freely today than they could 8, 9, or 10 years ago, this is due to the initiatives of the Soviet Union. The path to an understanding



and coexistence is, however, obviously not an easy one. We experience relapses into the cold war on the part of the Western powers. Today, 11 days before the summit conference in Paris, Khrushchev had to comment once more on a series of extremely grave manifestations because they are calculated to place in jeopardy an understanding and the success of the summit conference. We learned from Khrushchev today that U.S. aircraft have flown over the Soviet Union twice very recently, the first time on Apr. 9 and the second time on May 1. The aircraft which violated the frontier of the Soviet Union on May 1 was shot down. Apart from these open provocations on the eve of the summit conference, which is to...

*April 20, 1963*

Predicted probability: 0.549

#### GREEN FLIGHT ACCENTS AIR CONTROL NEEDS

East Berlin ADM in German to East Germany 1244 GMT 20 April 1963-L

(Text) Berlin—"Those political circles which by provocation are endangering traffic to and from West Berlin and thereby want to create tension must be aware that they will have to bear full responsibility for all consequences arising from such disruptive actions," writes AUSSENPOLITISCHE KORRESPONDEZ, published by the press department of the GDR Foreign Ministry, By proper (ordnungs-gemaesse) transit arrangements, an effective stand could be made against the forces interested in a disturbance of peaceful West Berlin traffic. "Arrangements on this transit traffic, based on international law, are indispensable since this traffic is now taking place, for all practical purposes, without legal basis," says the article referring to air traffic to and from West Berlin which flies over GDR territory.

"If, as was the case in the very recent past, U.S. aircraft were to carry out circuit flights to West Berlin, and if a British private aircraft arbitrarily were to use GDR air corridors for a flight to West Berlin, such acts could only be regarded as an attempt to compromise (belasten) the recently resumed Soviet-U.S. talks about a peaceful solution of the West Berlin question. Every Western provocation in GDR air corridors only proves once again how urgent it is to create proper arrangements about the traffic to West Berlin."

AUSSENPOLITISCHE KORRESPONDEZ points out that the latest provocations are even in contradiction to those (former?) arrangements of the early postwar years, which the Western powers would like to invoke. Thus, a document, drafted in 1946 by the air force directorate of the former Allied Control Council, expressly forbade "reckless flights."

## White House Documents

*July 19, 1962*

Predicted probability: 0.660

7/19/62

MEMORANDUM 19-Jul 1962

SUBJECT : Soviet Intentions on Berlin

At Mr. Kohler's request, we have prepared an updated appraisal of Soviet intentions on Berlin taking account of your conversation with Dobrynin on July 12, the TASS statement of the same date, Khrushchev's interview with American newspapermen on July 13, and the Soviet note of July 14. We do not deal with the President's July 17 talk with Dobrynin. Although Moscow does not appear to have made either a final assessment of the probable outcome of the present bilateral talks or a decision on its own future course of action we believe that the Soviet Union intends to continue the talks for the time being. However, continuation of the Berlin crisis imposes a strain on the Soviet Union and Moscow appears to be considering as a possible alternative some form of scaled-down peace treaty i.e. one that could be delayed or that could be carried out in installments. Moscow will apparently use the current talks (1) to explore the possibility of a negotiated agreement (2) to obtain a clear estimate of the risks involved in implementing various forms of a separate peace treaty and (3) to prepare a favorable record for public use in case it decides to go ahead with a separate peace treaty. Dobrynin's latest proposal for removing Western contingents within four years is nothing more than an ingenious variant of the proposal which Khrushchev advanced privately to Salinger in May and publicly in his July 10 speech.

*December 13, 1961*

Predicted probability: 0.453

12/13/61

OFFICIAL USE ONLY (MENSHIKOV SPEECH TO NATIONAL PRESS CLUB)

Menshikov's formulations were almost identical with the line taken by Khrushchev in his WFTU speech December 9. In some passages even the wording is the same. In essence the position on Berlin as he outlined it is a return to formulations used by the Soviets in stating their maximum position: a German peace treaty with the West Berlin problem settled on that basis, (Khrushchev had not used that phrase) confirmation and legalization of German borders in accordance with the Potsdam agreement elimination of the occupation status in West Berlin severance of the Berlin-Federal Republic ties and relationship and a regulation of the access question through an agreement with the GDR.... Khrushchev almost made the same statement in his WFTU speech one of the four authoritative Soviet references to this threat in the past several months.

*January 29, 1959*

Predicted probability: 0.517

...mobilize world opinion against the Soviet Union as a violator of agreements, a user of force and a threat to the peace. The situation could be taken to the Security Council and, in the event of veto there, to a special session of the General Assembly; b) Military preparations would be intensified and at this point could include measures which would be observable, as, for example, the evacuation of dependents from West Berlin, and possibly from Germany. 5. The decision to use additional force would be subject to governmental decision in the event that the double barreled effort mentioned above was not successful. (Consideration would be given to the possibility of the stationing of Western allied inspectors in lieu of the withdrawn Soviet inspectors at the check points.) 6. Concurrently with the development of the foregoing program an effort would be made to bring about around the middle of April a foreign Ministers' meeting with the Soviet Union on the various aspects of the German question. These talks might provide a cover which would facilitate the indefinite postponement or modification by the Soviet Union of their present ultimatum as regards Berlin. (It is assumed that allied agreement would be obtainable along these lines. If not the question of U.S. action would have to be considered in the light of the allied position.)

*October 6, 1961*

Predicted probability: 0.940

...access engaging ground origins of any interference. Extend size and scope as necessary C. Maritime control naval blockade or other world-wide measures, both for reprisal and to add to general pressure on Soviets. Use nuclear weapons starting with one of the following courses of action for continuing through C below if necessary: A. Selective nuclear attacks for the primary purpose of demonstrating the will to use nuclear weapons. B. Selective nuclear attacks to achieve in addition significant tactical advantage such as preservation of the integrity of Allied forces committed or to extend pressure toward the objective. Comment B. Opposing strengths probably will be roughly comparable. Military success locally not Impossible. As political operation, this shows Soviets visibly higher risks of nuclear war. Pace and volatility of extended air action raises risks of rapid escalation. C. Lacking direct relation to Berlin, may lock influence on access decisions and entail political liabilities. Exploits pronounced Allied naval superiority. Delayed impact on nuclear risks. Allies only partially control the timing and scale of nuclear weapons use. Such use might be initiated by the Soviets, at any time after the opening of small-scale hostilities. Allied initiation of limited nuclear action may elicit a reply in kind; it may also prompt unrestrained pre-emptive attack. C. General nuclear war...

*November 16, 1963*

Predicted probability: 0.306

ANNEX II The numbers which appear in parentheses after the various elements of the proposals in this Annex represent a rough attempt to quantify on an ascending scale of 1 to 10, the relative importance of each of these elements.

secret annex II A. Proposals for Negotiations Draft Principles Paper of June 12, 1962.

Advantages to West

1. Berlin : a. Facilitation of transportation of people and goods and regulation of public utilities and sewage between the two sectors of Berlin would be in interest of the West. (5) b. Communication between East Berlin and West Germany to be administered by International Access Authority. (8) c. Quadripartite Committee of Deputy Foreign Ministers to see to it that West Berlin should be free to choose its own way of life its social order respected its viability and prosperity maintained and its unrestricted communication with West Germany assured. (6)

Advantages to East

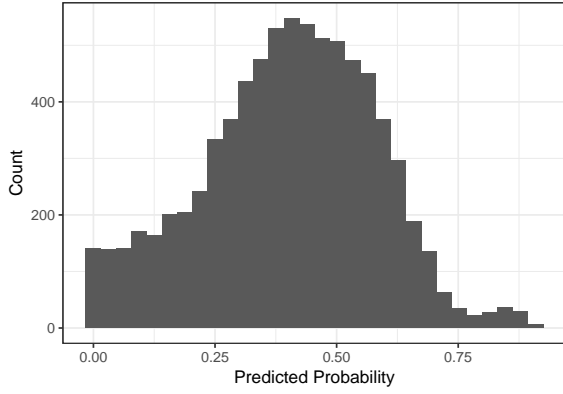
1. Berlin : Establishment by East and West Berlin of all-Berlin technical commission to facilitate transportation of people and goods and regulation of public utilities and sewage between the two sectors. (4) 2. Germany: a. Establishment of two mixed technical commissions in East and West Germany to promote economic exchanges and promote free cultural and technical contacts. (5) b. West would respect arrangements made with East Germany (8) d. Vital interests of each of the quadripartite powers in Berlin to be protected (4)...

## Appendix C: Random Forest Classification Results

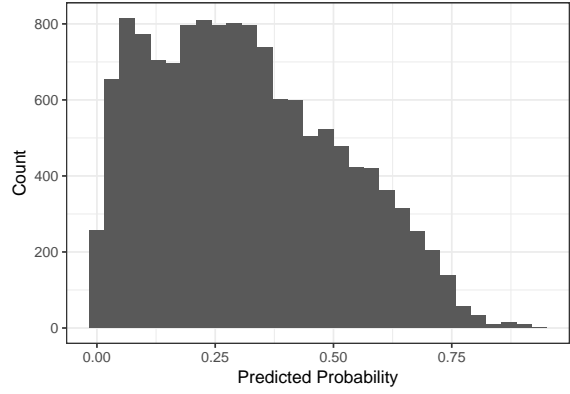
Table A1 provides an array of metrics through which to evaluate the balanced random forest model used to generate the predicted data. Figure A1 shows distributions of predicted probabilities for all documents.

Metric	DOS	FBIS	WH
$F_1$	0.810	0.878	0.822
$F_2$	0.766	0.865	0.793
Kappa	0.299	0.324	0.537
Accuracy	0.720	0.800	0.780
Sensitivity	0.739	0.857	0.776
Specificity	0.641	0.500	0.788

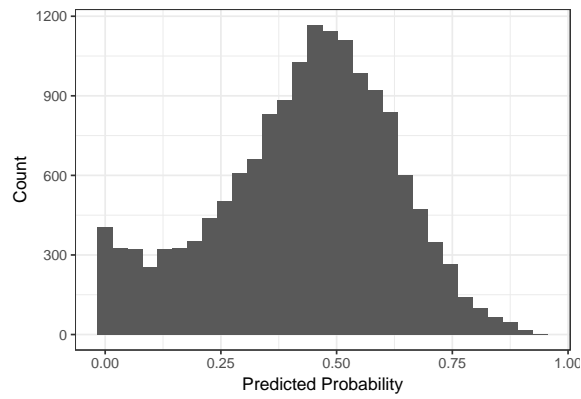
**Table A1:** Summary of metrics for the balanced random forest model.



(a) Department of State



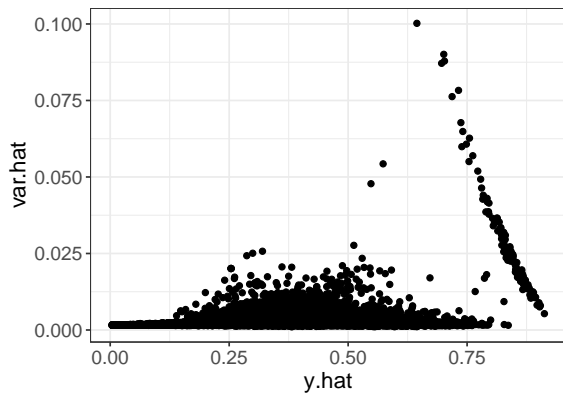
(b) FBIS



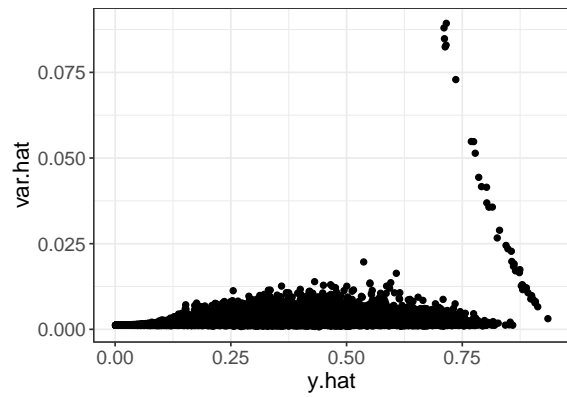
(c) White House

**Figure A1:** Predicted values.

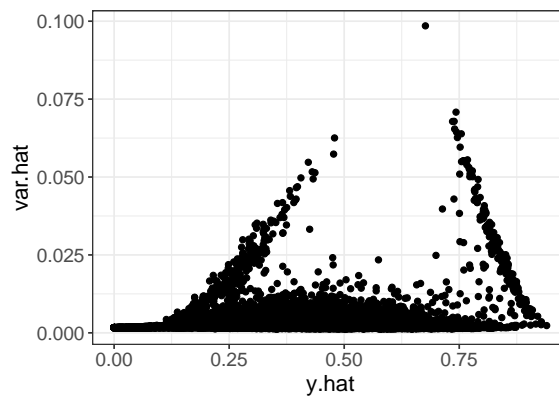
An infinitesimal jackknife bootstrap (Wager et al. 2014) is used to generate standard errors for random forest predictions. Figure A2 displays these for all segments from the three sets of data.



(a) Department of State



(b) FBIS



(c) White House

**Figure A2:** Predicted values and associated standard errors.

## Appendix D: High-ranking Officials

White House elites probably do not pay attention to all private or public statements with equal weight. It is likely that statements from prominent figures or decisionmakers receive greater attention. Most of our analysis is therefore based on counts of DOS and FBIS documents indicating perceived resolve, but only when they are from prominent officials and sources.

In Table 2 of the article, two negative binomial models use “governmental” sources. The entirety of Table A3 is used to filter documents for this measure. Most entries involve Politburo members. “High-ranking” officials are those with a checkmark in the third column. Note that the key difference between governmental and high-ranking sources is that governmental sources include periodicals and statements generically attributed to the Soviet government.

Table A2 shows the number of relevant documents for each level of source.

	<b>All</b>	<b>Governmental</b>	<b>High-ranking</b>
DOS	4,012	N/A	530
FBIS	10,714	4,559	2,617

**Table A2:** Number of relevant documents according to level of speaker.



**Table A3:** List of governmental and high-ranking officials used to filter DOS and FBIS data.

<b>Name</b>	<b>Position</b>	<b>High</b>
Aristov, Averky	Politburo member	✓
Belyaev, Nikolay	Politburo member	✓
Brezhnev, Leonid	Premier of USSR	✓
Bulganin, Nikolai	Premier of USSR	✓
Dobrynin, Anatoly	Ambassador to US	✓
Fedorenko, Nikolai	Permanent UN representative	✓
Furtseva, Yekaterina	Politburo member	✓
Gromyko, Andrei	Foreign Minister	✓
Grotewohl, Otto	Prime Minister of GDR	✓
Ignatov, Nikolay	Politburo member	✓
<i>Izvestiya</i>	Newspaper	
Khrushchev, Nikita	Premier of USSR	✓
Kirichenko, Alexei	Secretary of CCCP	✓
Kirilenko, Andrei	Politburo member	✓
Kosygin, Alexei	First Deputy Premier	✓
Kozlov, Frol	Politburo member	✓
Kuusinen, Otto	Politburo member	✓
Menshikov, Mikhail	Ambassador to US	✓
Mikoyan, Anastas	First Deputy Premier	✓
ministry		
Molotov, Vyacheslav	Soviet delegate to IAEA	✓
Mukhitdinov, Nuritdin	Politburo member	✓
Pervukhin, Mikhail	Politburo member	✓
Pieck, Wilhelm	President of GDR	✓
Podgorny, Nikolai	Politburo member	✓
Politburo	Executive committee	
Polyansky, Dmitry	Politburo member	✓
<i>Pravda</i>	Official newspaper	
Saburov, Maksim	Politburo member	✓
Shelepin, Alexander	Chairman of KGB	✓
Shelest, Petro	Politburo member	✓
Shvernik, Nikolay	Politburo member	✓
Sobolev, Arkady	Permanent UN representative	✓
Soviet government		
spokesman		
Suslov, Mikhail	Politburo member	✓
TASS	News agency	
Ulbricht, Walter	Chairman of GDR	✓
Voronov, Gennady	Politburo member	✓
Voroshilov, Kliment	Chairman of Presidium	✓
Zhukov, Georgy	Politburo member	✓
Zorin, Valentin	UN Security Council representative	✓

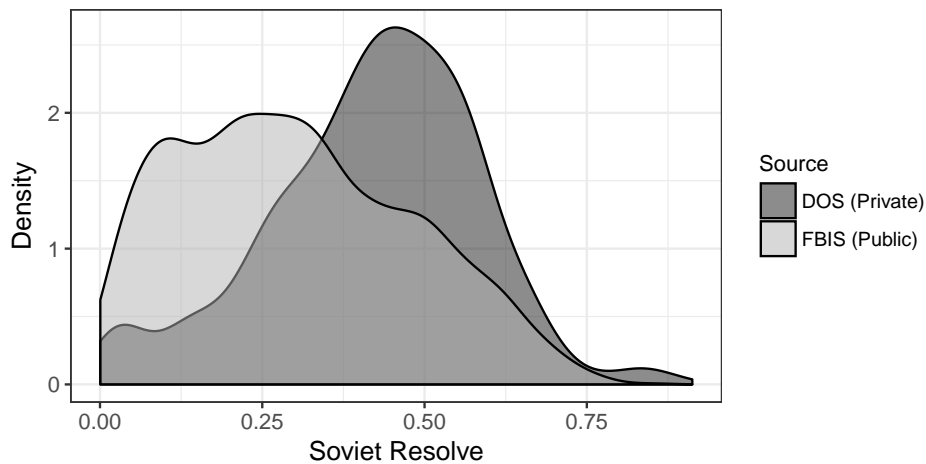
## Appendix E: Analysis Using All Documents

Much of the article's main analyses rely on DOS and FBIS measures that are limited to only high-ranking officials. This is done to avoid biasing results in our favor, since using all DOS and FBIS statements may introduce unnecessary noise.

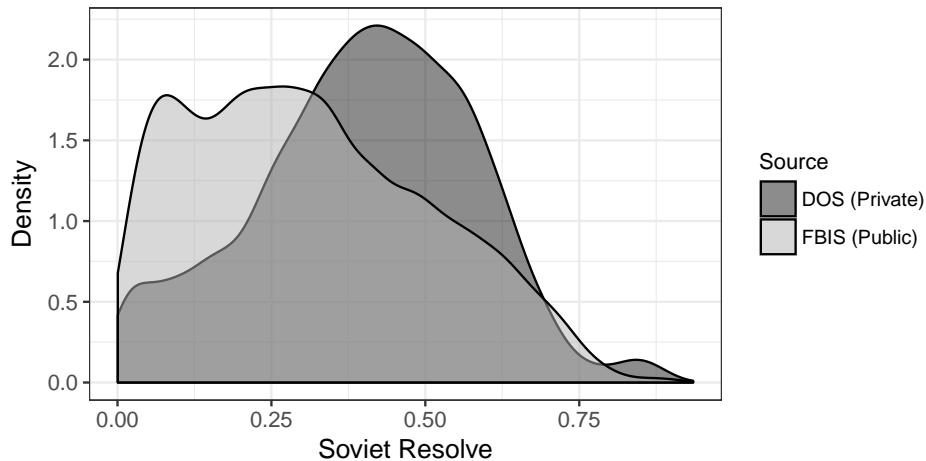
To be comprehensive, this appendix redoes the analyses using DOS and FBIS measures based on all documents.

### Variation Across Statements, Revisited

The main text provides information on the variances of all DOS and FBIS documents. Figure A3 is analogous to Figure 3 in the main text. The two figures are roughly similar.



(a) DOS and FBIS documents from high-ranking officials only. (Figure 3 from the main text.)



(b) All DOS and FBIS documents.

**Figure A3:** Predicted probabilities of Soviet resolve.

## **Diplomatic States' Small Effects, Revisited**

Table A4 displays results from negative binomial regressions with the inclusion of control variables used in the PAR(7) models. The main results are essentially unchanged.

**Table A4:** Results from negative binomial regressions, with controls.

	<i>Dependent variable: White House</i>					
	(1)	(2)	(3)	(4)	(5)	(6)
Private (DOS)						
<i>All cables</i>	0.033** (0.016)	0.031** (0.015)	0.030** (0.015)			
<i>High-rank</i>				0.158** (0.066)	0.151** (0.066)	0.129* (0.066)
Public (FBIS)						
<i>All statements</i>	-0.0005 (0.014)			-0.002 (0.014)		
<i>Governmental</i>		0.015 (0.026)			0.010 (0.026)	
<i>High-rank</i>			0.078 (0.052)			0.064 (0.052)
Actions (NYT)	0.211** (0.105)	0.203* (0.107)	0.220** (0.100)	0.218** (0.105)	0.210* (0.107)	0.227** (0.100)
Election Period	-0.122 (0.314)	-0.117 (0.312)	-0.116 (0.309)	0.016 (0.308)	0.015 (0.307)	0.011 (0.304)
US-USSR MIDs	0.058 (0.106)	0.065 (0.106)	0.091 (0.106)	0.052 (0.106)	0.058 (0.106)	0.082 (0.106)
Kennedy	1.911 (1.203)	1.864 (1.199)	1.767 (1.188)	1.988 (1.213)	1.948 (1.209)	1.861 (1.198)
Constant	-1.477** (0.372)	-1.503*** (0.371)	-1.584*** (0.374)	-1.544*** (0.381)	-1.561*** (0.379)	-1.609*** (0.380)
Lagged DVs	3	3	3	3	3	3
Year FEs	Yes	Yes	Yes	Yes	Yes	Yes
Observations	304	304	304	304	304	304
Log-likelihood	-509.836	-509.663	-508.231	-509.410	-509.343	-508.452
$\theta$	0.975*** (0.155)	0.979*** (0.156)	1.012*** (0.164)	0.972*** (0.153)	0.976*** (0.154)	1.000*** (0.160)
AIC	1,049.672	1,049.326	1,046.462	1,048.821	1,048.686	1,046.905

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

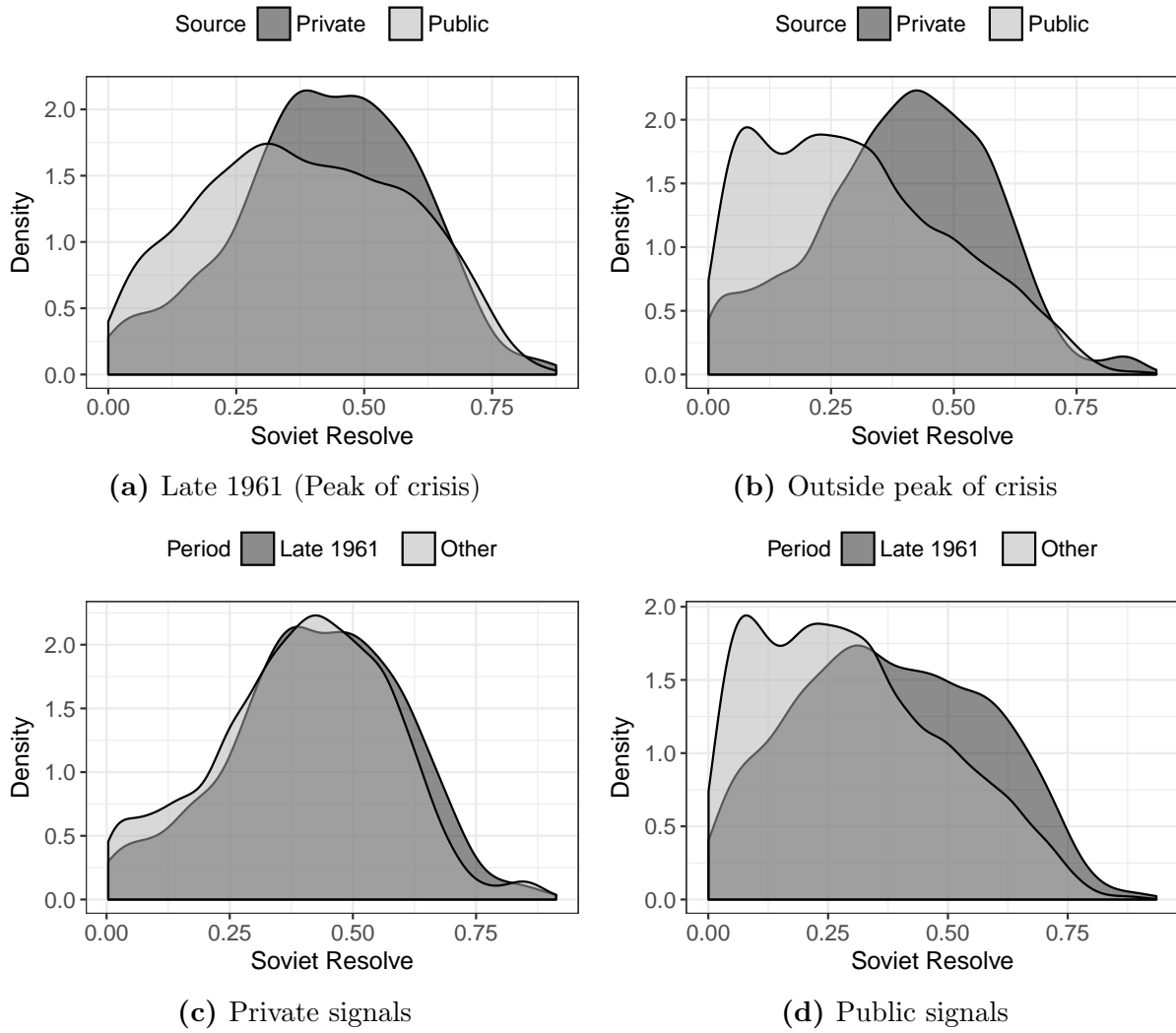
## The Core of the Crisis, Revisited

Figure A4 replicates Figure 4 of the main text. The two figures are roughly alike, except that using all documents leads to slightly wider variation in signals. This is true for both DOS and FBIS. As was the case in the article, the variance for private statements is not different at a statistically significant level during and outside of the main crisis.

As such, high-ranking Soviet officials appear to send more focused messages than other senders. This observation lends an additional level of support to our argument about how the choice of channel can influence the amount of noise introduced in the information. The choice of individual represents another manner to reshape the communication channel.

Interestingly, the decrease in variation by looking at only high-ranking officials is especially large for private statements; see Tables 5 and 6 of the article. Variance for DOS statements drops from 0.031 (all DOS) to 0.021 (high-ranking DOS only) during the crisis, and from 0.032 to 0.027 outside of the crisis. Meanwhile, variance for FBIS statements drops from 0.039 (all FBIS) to 0.035 (high-ranking FBIS only) during the crisis, and from 0.037 to 0.031 outside of the crisis. This further suggests that it is easier to refine signals using private channels compared to public channels, which again bolsters our argument about the noisiness of public diplomacy.

Tables A5 and A6 replicate the results in Tables 5 and 6 of the main text. One noteworthy change is that both the  $t$ -test and KS test produce statistically significant results for private signals (the first row of Table A5). Across the entirety of State Department documents, statements made during the crisis tend to reflect greater resolve than those outside of the crisis. This relationship is much weaker and teeters around statistical significance at the 10% level when only looking at high-ranking officials' statements. This suggests lower-ranking officials tended to communicate higher resolve during the peak of the crisis.



**Figure A4:** Distributions of Soviet resolve by diplomatic channel and time period, using all documents.

	<b>Non-Crisis</b>	<b>Crisis</b>	<i>t</i> -test	KS test
<b>DOS</b>	0.398	0.424	$p \ll 0.001$	$p = 0.006$
<b>FBIS</b>	0.300	0.383	$p \ll 0.001$	$p \ll 0.001$
<i>t</i> -test	$p \ll 0.001$	$p \ll 0.001$		
KS test	$p \ll 0.001$	$p \ll 0.001$		

**Table A5:** Mean levels of Soviet resolve by signal source and time period, using all documents. Results of *t*-tests and Kolmogorov-Smirnov two-sample tests are presented for each row and column.

	<b>Non-Crisis</b>	<b>Crisis</b>	FL test
<b>DOS</b>	0.032	0.031	$p = 0.576$
<b>FBIS</b>	0.037	0.039	$p = 0.001$
FL test	$p \ll 0.001$	$p \ll 0.001$	

**Table A6:** Variances in Soviet resolve across signals by signal source and time period, using all documents. Results of Fligner-Killeen tests are presented for each row and column.

## Appendix F: Additional Checks

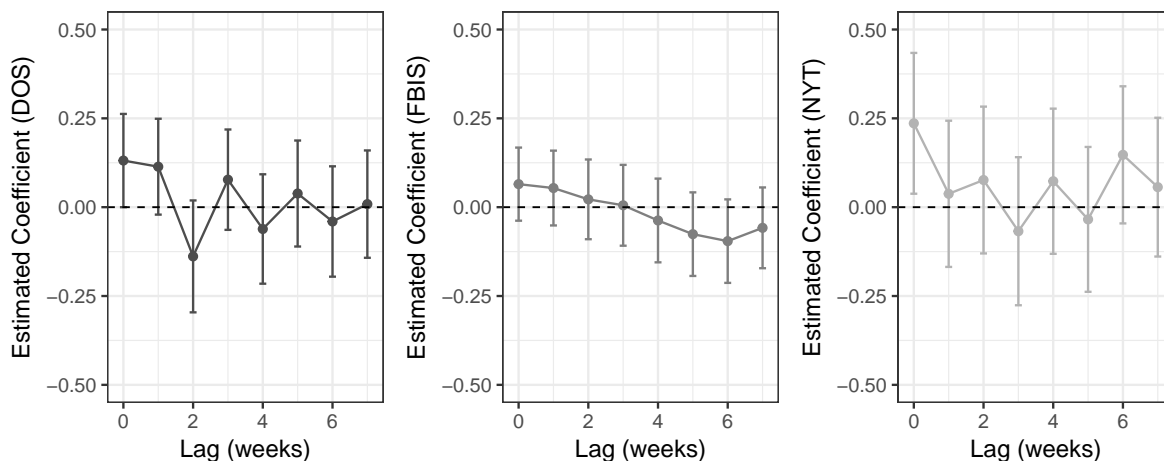
Here, we perform several supplementary analyses with the PAR(7) model, which are meant to help address potential concerns with the main text’s results.

### Addressing Spuriousness

As stated in the main text, we assume that temporal co-occurrence of signals indicates signal processing. Some may be concerned that this leads to spurious findings. Several additional results help to alleviate these issues.

On a conceptual level, note that all our time series data are stationary. When two sets of time series are data are stationary, it is exceedingly rare to find spurious statistical relationships (Granger and Newbold 1974).

We now proceed to more specific statistical tests. First, we run negative binomial analyses where we regress the WH variable on  $n$ -week lags of DOS, FBIS, and NYT, where  $n$  ranges from 0 (the original model) to 7. Figure A5 displays the estimated coefficients with 95% confidence intervals. The effects of FBIS remain indistinguishable from zero. DOS and NYT have significant, positive, and immediate ties with WH, but these rapidly disappear.

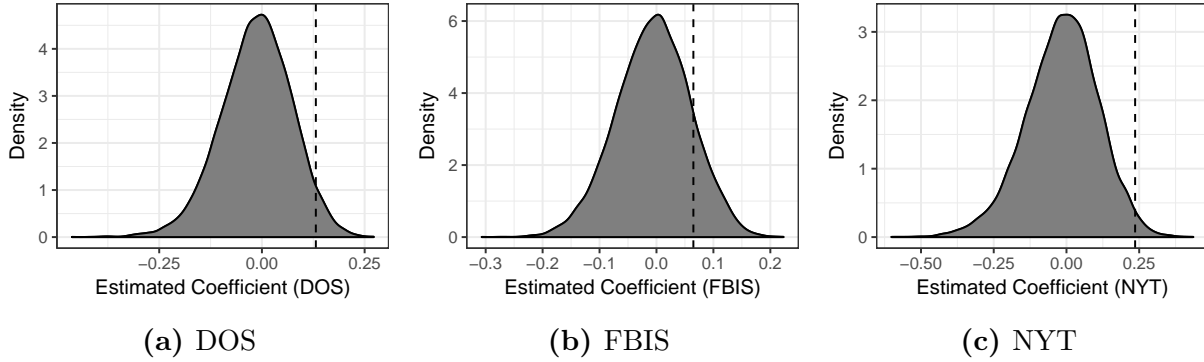


**Figure A5:** Shifting lag estimates.

Second, we perform a series of placebo tests where we randomly reorder the 307 observations of weekly measures and rerun the negative binomial regressions. We perform this 10,000 times. The output produces estimated coefficients indistinguishable from zero. See Figure A6. This is expected for the FBIS data, which had no meaningful estimates in the original analysis, but is also true for DOS and NYT data, where the article does have positive and significant results.

Third, Models 1 and 2 in Table A7 use a five-week weighted moving average of DOS, FBIS, and NYT measures (as opposed to a weekly total) in the PAR(7) model. The results are largely unchanged for DOS and FBIS. However, the positive effect of NYT becomes statistically insignificant with the inclusion of controls in Model 2. This is likely a byproduct





**Figure A6:** Density plots of estimated coefficients from 10,000 bootstrapped placebo tests using a negative binomial model with three weeks of lags and year fixed effects. Estimated coefficients from original negative binomial model (Model 6 of Table 2 in the article) illustrated with vertical dotted lines.

of the NYT data being relatively sparse. A five-week average severely dilutes variation in the data.

Fourth, Models 3 and 4 use a one-week lag on DOS, FBIS, and NYT with the PAR(7) model. This goes one step toward reinforcing the validity of Granger causality. Once again, DOS remains positive and significant, while FBIS remains insignificant. NYT keeps its significance in the simple model and disappears with the inclusion of control variables. This change in NYT may occur for two reasons. First, as mentioned before, the data is more sparse. Second, this may indicate that elites react to costly events very quickly, and that a one-week lag may force an impractical temporal disconnect between a material action and its perception.

## Public Signals

Some may believe that public statements and material actions could be considered as a single category of “public signal,” and that the distinction between words and deeds is not relevant. Models 5 and 6 in Table A7 address this by combining the FBIS and NYT variables to create a measure of “public signals,” without distinction between statements and actions. DOS retains its positive effect, while public signals also have a significant positive effect. Comparing these results to those in Table 3 of the main text, the strong impact of the NYT variable appears to overpower the insignificance of the FBIS data. This further justifies the value of disaggregating the “public signal” data into statements and actions.

**Table A7:** Results from PAR(7) models with various specifications.

	<i>Dependent variable: White House</i>					
	Five-week moving weighted average (1)	(2)	(3)	One-week lag (4)	Public statements + Actions (5)	Public statements + Actions (6)
Private (DOS)	0.152*** (0.050)	0.119* (0.066)	0.099*** (0.030)	0.077* (0.041)	0.113*** (0.029)	0.084*** (0.041)
Public (FBIS)	-0.173 (0.129)	0.055 (0.111)	0.016 (0.106)	0.070 (0.065)		
Actions (NYT)	0.449*** (0.155)	0.225 (0.151)	0.198*** (0.069)	0.106 (0.114)		
Public + Actions					0.119*** (0.036)	0.115** (0.045)
Election period		0.177 (0.252)		0.226 (0.236)		0.172 (0.263)
US-USSR MIDs		0.166* (0.095)		0.161* (0.092)		0.166 (0.096)
Kennedy		0.044 (0.191)		0.068 (0.188)		0.039 (0.195)
$\rho_1$	0.138*** (0.035)	0.134*** (0.034)	0.141*** (0.036)	0.137*** (0.034)	0.143*** (0.036)	0.138*** (0.034)
$\rho_2$	0.128*** (0.034)	0.124*** (0.033)	0.130*** (0.034)	0.126*** (0.033)	0.129*** (0.034)	0.126*** (0.033)
$\rho_3$	0.118*** (0.033)	0.116*** (0.032)	0.121*** (0.034)	0.119*** (0.032)	0.121*** (0.033)	0.118*** (0.032)
$\rho_4$	0.053* (0.030)	0.053* (0.030)	0.052 (0.032)	0.053* (0.031)	0.054* (0.031)	0.054* (0.030)
$\rho_5$	0.058* (0.030)	0.057* (0.030)	0.060* (0.031)	0.061** (0.030)	0.052* (0.031)	0.056* (0.030)
$\rho_6$	0.078*** (0.030)	0.077*** (0.030)	0.076** (0.031)	0.076* (0.041)	0.079*** (0.031)	0.079** (0.030)
$\rho_7$	0.034 (0.030)	0.036 (0.030)	0.034 (0.031)	0.037 (0.030)	0.034 (0.031)	0.037 (0.030)
Intercept	0.335* (0.177)	-0.070 (0.372)	0.328* (0.190)	-0.099 (0.347)	0.416** (0.165)	0.017 (0.329)
Observations	300	300	300	300	300	300
Log-likelihood	-506.303	-504.860	-511.261	-508.276	-509.280	-506.777
AIC	1,032.607	1,035,720	1,042.522	1,042.552	1,036.560	1,037.554

\*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$

## Appendix G: COPDAB Data

The Conflict and Peace Data Bank, known colloquially as COPDAB (Azar 1982), is an extant resource that contains information on international interactions between 1948 and 1978. Many of these include events in and around Berlin.

Events in COPDAB are scored on a 1 – 15 scale, where 1 represents “voluntary unification into one nation” and 15 represents “extensive war acts causing deaths, dislocation or high strategic costs.” For this study, we look at events that indicate “diplomatic-economic hostile actions” (11 on the COPDAB scale) or higher in which the Soviet Union takes action regarding Berlin/Germany, or in which the East Germans take actions against West Germany or the United States. 112 events fit these criteria, and are shown on Figure A7. Although COPDAB also has weighted measures for each event category, they lack inherent meaning and make interpretation of any results troublesome. We therefore use raw counts of events per week as the event variable. Figure A8 compares the COPDAB events with the NYT data used in the main text.

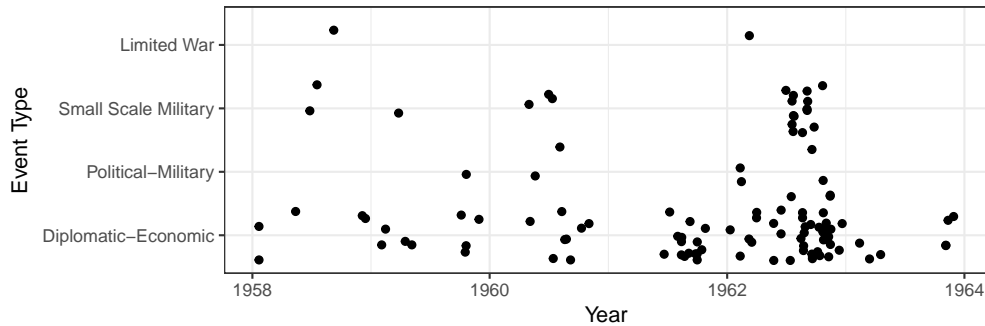


Figure A7: COPDAB events.

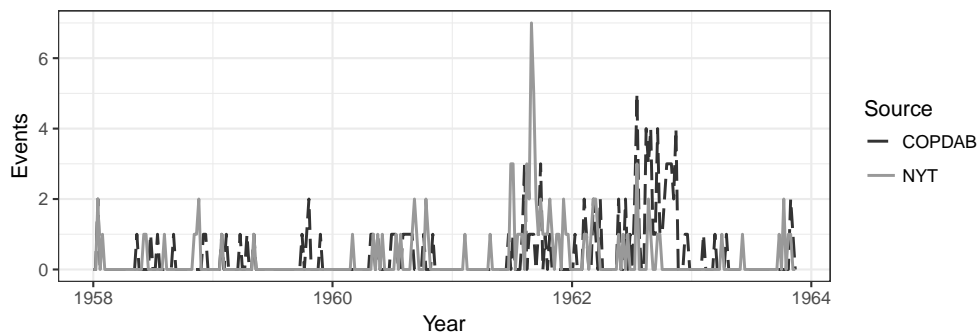


Figure A8: COPDAB vs. NYT data.

There are several potential issues with the COPDAB data, which motivated the collection and creation of new event data based on the *New York Times*.

First, COPDAB is four decades old and probably merits some review. Second, COPDAB does not source its data and descriptions of each event are not always self-explanatory, so it is not possible to reevaluate the events. Third, because events have very short descriptions

and COPDAB attempts to record incidents for 135 countries, but it is not immediately clear how to identify which events are related to Berlin versus other interactions between the Western Powers in West Berlin and the Soviet Union in East Berlin.<sup>1</sup> Fourth, for the purposes of our study, the “strong verbal expressions displaying hostility in interaction” category is troublesome, as actual COPDAB events with this label tend to blur the line between verbal statements and material actions. We want the event variable to capture only material events, since FBIS is meant to represent public verbal statements.

Lastly, COPDAB may be missing some important events. A noteworthy example is the 15-hour detainment of two U.S. Army convoys on October 10, 1963. As noted by the *Washington Post* on October 11, this act was “regarded as the most serious challenge to Western access rights since the Communists build the Berlin Wall.” This event is also reported in the *New York Times*, but COPDAB has no record of this incident.

All that said, Table A8 replicates the findings in Table 3 of the main article, using COPDAB. The main findings are regarding DOS and FBIS are effectively unchanged. However, the effect of actions becomes substantially attenuated and loses significance in some of the PAR(7) models.

---

<sup>1</sup>We look at the subset of events where the Eastern Bloc (the Soviet Union, East Germany, and East Berlin) acts against the Western Bloc (the United States, West Germany, and West Berlin) and the event description includes the term(s) “Berlin,” “Germany,” or “reunification.”

**Table A8:** Results from PAR(7) models, using the COPDAB variable.

	<i>Dependent variable: White House</i>			
	All DOS/FBIS		High-ranking DOS/FBIS	
	(1)	(2)	(3)	(4)
DOS	0.047*** (0.011)	0.031** (0.013)	0.133*** (0.030)	0.132*** (0.039)
FBIS	0.013 (0.014)	0.018 (0.014)	-0.017 (0.076)	-0.014 (0.066)
Actions (COPDAB)	-0.125 (0.178)	0.003 (0.161)	0.325*** (0.112)	0.248 (0.155)
Election period		0.115 (0.314)		-0.259 (0.406)
US-USSR MIDs		0.153* (0.090)		0.111 (0.107)
Kennedy		-0.084 (0.196)		-0.072 (0.179)
$\rho_1$	0.142*** (0.035)	0.139*** (0.034)	0.142*** (0.035)	0.137*** (0.034)
$\rho_2$	0.133*** (0.034)	0.129*** (0.033)	0.132*** (0.034)	0.127*** (0.033)
$\rho_3$	0.125*** (0.033)	0.120*** (0.033)	0.119*** (0.033)	0.116*** (0.032)
$\rho_4$	0.051 (0.032)	0.051 (0.031)	0.052* (0.032)	0.055* (0.030)
$\rho_5$	0.053* (0.032)	0.055* (0.031)	0.054* (0.031)	0.056* (0.029)
$\rho_6$	0.076** (0.031)	0.078** (0.030)	0.078** (0.031)	0.078*** (0.029)
$\rho_7$	0.031 (0.031)	0.036 (0.030)	0.039 (0.030)	0.042 (0.029)
Intercept	0.262 (0.191)	-0.056 (0.325)	0.256 (0.199)	0.541** (0.228)
Observations	300	300	300	300
AIC	1,039.381	1,040.275	1,039.814	1,044.492
Log-likelihood	-509.665	-507.138	-509.907	-509.246

\* $p < 0.1$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$

## References

- Azar, Edward E. 1982. "Codebook of the Conflict and Peace Data Bank (COPDAB)." Center for International Development, University of Maryland.
- Granger, Clive W. J. and Paul Newbold. 1974. "Spurious Regressions in Econometrics." *Journal of Econometrics* 2(1): 111-120.
- Wager, Stefan, Trevor Hastie, and Bradley Efron. 2014. "Confidence Intervals for Random Forest: The Jackknife and the Infinitesimal Jackknife." *Journal of Machine Learning Research* 15(1): 1625-51.