1 Introduction

Why do states participate in covert, as opposed to public, military alliances? The burgeoning literature on private diplomacy suggests that secrecy can be both informative and credible.[1] Mutual hostility is an essential prerequisite, as adversaries can leverage that condition to credibly signal intentions, particularly if conciliatory. Scholars argue that secrecy was essential to Communist China and the U.S. opening diplomatic relations, Israel and the PLO negotiating key parts of the Oslo Accords, and the USSR demonstrating its willingness to escalate conflict in Angola. This literature assumes that states' decisions to "go secret" are independent of one another. Washington and Beijing's hidden negotiations, for example, would not influence the publicity or secrecy of their discussions with Japan or North Korea, respectively.

But this paper assesses a different phenomenon – secrecy among friends – where mutual hostility is absent. Moreover, the paper highlights the cumulative, interdependent nature of covert military pacts. Once an ally goes secret (public), it maintains secrecy (publicity) in subsequent alliances. Indeed, hidden partnerships were once a dominant feature of the security system. From 1870–1916 (or broadly, the Bismarckian era), over 80 percent of interstate alliance ties were either partially or completely private. Outside that period, covert military treaties were nearly nonexistent.

An older literature points to regime type to potentially explain this cumulativity. Leaders use secrecy to avoid domestic policy constraints and blowback. For this reason, Small (1995), Baum (2004), McManus and Yarhi-Milo (2017), Gibbs (1995), and Schuessler (2010) hold that democracies are more likely to engage in hidden security partnerships. Yet, conservative autocracies dominated the 46-year Bismarckian

period.

To explain the empirical puzzle, this paper contends that "secrecy among friends" is a matter of consistency in international practice. Individual allies face a problem of *rank*: What priority does my alliance have within my partner's wider portfolio of security partnerships? Publicity mitigates this problem. All states can observe public pacts, their obligations, conditions, and constraints. Countries can mold subsequent partnerships around these boundaries, ensuring that obligations do not conflict across alliances. But states cannot do this with secret pacts. Even if they suspect their partners have hidden agreements with third parties, allies usually do not know these alliances' limits, whether they will divert necessary resources from their defense, or if they have conflicting commitments. Most importantly, if a state with secret partners were to suddenly create a public treaty, hidden allies will naturally question whether that state intends to honor its commitments, or under what conditions it will betray them in favor of this new partnership. Consequently, allies push for what I call "portfolio consistency," circumventing these questions of rank by offering all partners the same, hidden status.

I use a multi-method approach to test the theory. Statistical analysis evaluates the underlying mechanism, that secret alliances have a cumulative dynamic: participation in secret pacts makes states more likely to adopt secrecy in subsequent alliances. I subject the tests to robustness checks for the use of "unbalanced," observational data; unit interdependence; and estimation bias introduced by using dyads to model multilateral phenomena. The findings consistently support the theory. This effect increases the more secret pacts a state joins. With only six secret partners, a state's subsequent alliance has a 61.49 percent chance of also being covert. In addition,

the online appendix includes four additional statistical tests that further bolster the argument.

In addition, a brief case study demonstrates how the portfolio consistency mechanism leads to the empirical puzzle. Why do we see so many hidden alliances before World War 1? The answer lies in Imperial Germany's position as the central diplomatic actor in Europe. German Chancellor Otto von Bismarck placed a covert pact – the Dual Alliance (1879) with Austria-Hungary – at the center of his diplomatic strategy. As he expanded his alliance network, subsequent treaties maintained covertness to preserve Vienna's rank, foreclosing the opportunity for other states to create publicly declared alliances and creating social/network incentives further entrenching secrecy. I illustrate this dynamic by examining German-Russian negotiations over the Reinsurance Treaty (1887).

This article is organized as follows. Section 2 briefly reviews the existing literature and establishes the motivating puzzle, that secret alliances were only a common feature of the international security system from 1870–1916. Section 3 articulates my theory, while Section 4 provides supporting statistical evidence. Section 5 offers the case study, and Section 6 concludes with theoretical and policy implications.

2 Secrecy, Signaling, and Alliances

The historical pattern of secret alliances forms this paper's central puzzle. Using the Alliance Treaty Obligations and Provisions dataset, Figure 1 plots the percentage of alliance ties that are secret from 1815-2003. Only during the "Bismarckian" era

(1870–1916) did secrecy feature prominently, in some years characterizing more than 80 percent of security partnerships.[2] Outside of that period, however, secret alliances constitute a negligible, even non-existent, part of the international security system.

[FIGURE 1 ABOUT HERE.]

This pattern suggests that secret alliances are cumulative (i.e. they can quickly proliferate within the international security system) and time-bound. The two existing approaches to secrecy cannot explain this pattern. One focuses on regime type. Small (1995), Gibbs (1995), McManus and Yarhi-Milo (2017), and Schuessler (2010) imply that democracies are more likely to engage in covert foreign relationships, as domestic challengers possess greater institutional means to obstruct or punish policies they do not like. Secret alliances should correlate with the increasing prevalence of democracy in the international system. Yet, only 17.8 percent of states were democracies at that time, and the global frequency of regime types changes slowly. Thus, the sharp disjunctures in covert alliances' social prevalence in 1870 and 1916 remain puzzles for this approach.

The second strand of the literature suggests that secrecy is idiosyncratic, driven by the specific dyadic relationship. Polakow-Suransky (2011) details Israel and apartheid South Africa's extensive military and nuclear cooperation, prompted by their shared international isolation. The recent literature on private diplomacy highlights mutual hostility as another dyadic feature. Conciliatory proposals under this condition can lower the costs of backing down,[3] raise the risk of escalation,[4], allow for damaging and autonomous revelation,[5] or leverage uncontrolled physical and biological reactions to demonstrate credibility.[6] But this research also fails to explain the motivating puzzle.

But it expects secrecy to be non-cumulative. Washington's decision to engage in covert diplomacy with China, for example, should not affect whether it pursued public or secret negotiations with other countries, particularly friendly ones. These studies suggest that covert pacts should be a consistent – although perhaps not prevalent – feature of international security, unlike Figure 1.

This literature provides little analytical traction because secret alliances are conceptually distinct from covert communication. Most obviously, mutual hostility – a prerequisite for Carson (2016), Carson and Yarhi-Milo (2017), and Yarhi-Milo (2013) – does not exist among "friendly" partners. The private diplomacy literature focuses on short-term engagements of limited coordination, where adversaries seek to avoid revelation and escalation to lend credibility to their signals. But revelation and escalation are typically the goals of secret alliances, which formalize and codify cooperative and often lasting relationships. As Bas and Schub (2016) highlight, a significant proportion of hidden pacts are offensive: they are designed to spread conflict. Even defensive pacts, as Ritter (2004) discusses, generate strategic uncertainty and surprise, causing allies to take less-compromising positions. Indeed, the hidden nature of covert pacts undermines deterrence, potentially making conflict more likely, in contrast to much of secret diplomacy.

This conceptual difference leads to different expectations concerning surprise. The diplomatic opening between the U.S. and China, Sadat's speech in the Israeli Knesset, and Israeli negotiations with the PLO leading up to the Oslo Accords: these events were striking precisely because outside observers did not expect cooperation between hostile actors. Secret diplomacy may result in strategic shock: sudden realignments that undermine other country's diplomatic and military strategies. The

actual cooperative actions themselves are relatively less important than the sheer fact of cooperation. Both Sadat and Israeli Prime Minister Begin's speeches to the Knesset in 1977 were uncompromising, blunt, and even harsh, sufficient to dim the optimism that Sadat's visit had created.[7] But, similar to Mercer's theory about strategic communication, the specific words did not matter as much as the very fact that these statements were being made in the Knesset by leaders who had recently fought a war.[8]

But we regularly expect friends – particularly close ones – to possess secret understandings and communications. As such, Ritter (2004) argues that friendly secrecy is never completely covert. At the least, outside states suspect that two friendly actors have hidden understandings or obligations.[9] Secret alliances generally create strategic uncertainty rather than shock, since the covert relationship is already suspected. Here, the partnership's contents are vital. Allies hide the exact resources they can draw upon, when, and under what conditions. Potential adversaries are left unsure what is needed to successfully deter or subdue a target, inviting greater caution.[10] Critically for the theory, *allies* are also uncertain what promises their partners have made to hidden third parties.

Overall, the literatures on regime type and private communication cannot account for the sudden rise and fall of hidden pacts. So *why do states participate in covert, as opposed to public, military partnerships?*

3 Portfolio Consistency and Secret Alliances

Generally, states can be forced into tradeoffs across their security relationships. For example, NATO allies consistently expressed concerns that American involvement in SEATO and other "out-of-area" alliance commitments was distracting Washington from European defense.[11] Similarly, Crawford (2003) highlights how a great power patron can leverage a pivotal position between conflicting allies to achieve foreign policy goals. The debilitating diversion of resources, the leveraging of asymmetric dependence, even outright abandonment: these are questions of what I call *rank*, of the priority a state receives within a partner's wider portfolio of security relationships. Under what conditions will my ally defect on our partnership in favor of other treaties? What are the limits of its commitment, and how can I ensure my alliance stands above my partner's competing obligations?

Secret alliances are particularly susceptible to these rank issues. Covert partners pay fewer sunk costs in establishing the relationship, raising *ex ante* reliability worries. In addition, public agreements benefit from reputational hands-tying mechanisms. These *ex post* costs lower the risk of abrogation.[12] Public partners can also bolster wavering allies through combined military exercises, basing troops on allied territory, statements of support, and other commitment devices. "Overt" pacts also clearly deter adversaries. Moreover, all states can observe a public alliance's obligations, conditions, and limitations. Partners and third parties can more easily craft subsequent treaties around these commitments to avoid conflicting obligations. Indeed, most alliances since World War 1 have included "saving provisions" stating that the pact does not violate existing agreements.

Covert alliances cannot use these mechanisms, and both adversaries *and* allies are unsure of a state's obligations in secret pacts. This can result in conflicting commitments. Nazi Germany, for example, violated secret non-aggression treaties with Estonia and Latvia in 1939 by signing the Molotov-Ribbentrop Pact only two months later. Even without contradictory promises, secrecy makes it difficult to know the limits of an ally's alternative obligations. What is their *casus foederis*, and will I be dragged into unwanted wars? Does my ally have sufficient resources to fulfill its promises to me, or must it divert essential capabilities?[13] Do these hidden provisions prevent my ally from fully implementing our treaty?[14] Foundationally, secrecy makes it difficult to know and ensure the prioritization of one's alliance against others in a partner's broader security portfolio.

Consequently, covert alliances disproportionately suffer from rank credibility issues compared to their public counterparts. Indeed, according to ATOP, they experience abrogation at higher rates (48.92 percent versus 10.46 percent for public pacts). In response, states push for "portfolio consistency" to ensure their alliances possess as high a prioritization as possible. They encourage partners to adopt or avoid adopting institutional features that would undercut the value and status of their own security ties. For covert alliances, this means pushing hidden allies to maintain secret relations with other states and not to join subsequent, public military pacts with third parties. If this pressure is effective, then once a state establishes a secret alliance, all its subsequent pacts with lower-ranked countries will also be secret, resulting in a "consistent" portfolio of secret military pacts.

Covert partners have both individual and network incentives to maintain secrecy across their alliances. For the former, suppose an existing, hidden ally creates a public

pact with a third party. This is a signal of increased prioritization over your alliance, as your ally paid *ex ante* costs for the third party's cooperation that it was unwilling to pay for yours, and it has activated reputational mechanisms as well. Moreover, following Levendusky and Horowitz (2012), it is now easier for that ally to disavow your alliance, talking its way out of *ex post* punishment by domestic audiences for secret behavior by supporting a publicly-affirmed and higher priority partner. And covert allies must be concerned that even seemingly public alliances may in fact possess secret provisions that further undermine a partner's commitment.

Furthermore, portfolio consistency is a form of network effect. The pressure to maintain secrecy scales with the number of hidden partners or obligations. A state may face only small costs from reneging on one secret ally. But when a state is embedded within overlapping covert alliances, it faces significant social pressure from several different actors to maintain secrecy in subsequent partnerships. Even a small number of hidden allies can constrain defection by raising the risk of wider network damage. Revelation of one set of obligations allows other partners and adversaries to identify the alliance's conditions, reducing its strategic utility and potentially disclosing the wider limits on an actor's foreign policy. Similarly, the extensiveness of hidden provisions can result in the same network effect. Assuming that states hope to avoid conflicting commitments, they must shape additional obligations around existing ones, creating an "inter-locking" set of provisions exclusive to each partner. Revelation of one allows partners and adversaries better insight into additional limits on the alliance's commitments or the conditions of other secret treaties.

Of course, some states may want contradictory obligations, as Nazi Germany did. But maintaining secrecy then is even more important. Countries with conflicting com-

mitments will suffer strategic, reputational, policy, and other costs whenever any of its pacts are invoked. Avoiding these costs for as long as possible requires keeping all these obligations hidden. However, contradictory commitments should be relatively rare. The gains from "fooling" other countries would have be substantial to offset the reputational and strategic damage caused. In addition, extensive research in psychology finds that lying is cognitively more taxing than telling the truth, particularly if lies must also be mixed with truthful statements.[15] As secret policy contradictions proliferate, as the situations they apply to become more complex, and as the number of hidden partners increase, the cognitive load increases as well, making it much easier for diplomats to inadvertently disclose confidential information.

In total, once a state embarks upon a few secret agreements, portfolio consistency can quickly enmesh the country in a rigid, hidden web of security guarantees. "Enforcement" of secret partnerships is often a matter of social weight and network constraint, rather than the reliability or institutionalization of an individual pact. This increases the likelihood that new alliances will also be secret. In essence, secrecy begets more secrecy. The more secret alliances a state possesses, the greater the danger to its rank and its partnerships by any subsequent public alliance. This leads to the primary testable hypothesis:

Hypothesis The more secret alliances a state participates in, the more likely subsequent partnerships will be secret, *ceteris paribus*.

Lastly, to explain this paper's central puzzle, I argue that if the hegemon incorporates secrecy into its central military alliance, its core position in security networks incentivizes most other states to adopt secrecy through the portfolio consistency logic.

As international order theorists explore, hegemons create a core alliance with other great powers to manage their most pressing security challenges.[16] These allies are also the most attractive or only available security partners for many secondary states.[17] If this central alliance is covert, the portfolio consistency mechanism will ensure that lower-ranked alliances (i.e. all subsequent pacts) are secret as well. Because of their attractiveness as security partners, weaker states may struggle to find allies that are not part of this core network, preventing them from establishing public treaties that simultaneously satisfy their security needs. In this way, secrecy pervades the international security system.

Two assumptions drive the theory. First, that any secret pacts we do not observe are not systematically different from those we do. If secrecy is fully effective, we can never validate this assumption, nor determine whether missing data would lead to different theories about secret alliances and their cumulativity. However, this problem may not be as severe as it seems. World War 1 revealed many of the previous secret treaties, and the Interwar states actively prevented their re-emergence. Moreover, the secret diplomacy literature draws its cases from the post-World War 2 era. Burr and Kimball (2003) discuss Nixon's attempt to covertly signal the Russians in the Vietnam War, while Dingman (1998-1989) and Carson (2016) explore diplomacy during the Korean War. Yarhi-Milo (2013) examines Nixon's overtures to China, as well as secret negotiations between Israel and the PLO. It would be odd if secret alliances were the one class of hidden signaling that was *not* revealed during this period or was revealed at a far lower rate. While we cannot definitively rule out missing pacts, these conditions suggest that we should be able to make effective causal inference based the data we possess.

The second assumption is that secrecy is a viable option. The most compelling alternative explanation for cumulative secrecy is norms, that, from 1870–1916, states believed they *ought* to create covert pacts. But such an account only partially explains the empirical puzzle. Most importantly, there is no evidence of an injunctive norm favoring secrecy during this period, that states reaped some direct moral reward for creating specifically covert pacts. Indeed, in many social situations, secrecy and deception are punished, to the point that many actors do not consider them options.[18] Consequently, a normative story cannot explain the rise in secret alliances' social prevalence.

Where it is strongest is in explaining secrecy's decline. Deeks (2017, 730-5) highlights how the powerful, post-World War 1 norm against secret alliances inhibits covert agreements even today. But this account is compatible with portfolio consistency. For this paper's mechanism to work, secrecy – by its very nature – cannot imply bottom rank. If a powerful social injunction automatically links secrecy with lowest priority, then potential partners would discount the value and reliability of any covert alliance offers. Secrecy must be *potentially* credible. Indeed, we can view such an injunction as a powerful form of portfolio consistency favoring *public* alliances. When covert pacts automatically imply bottom rank, only the most peripheral or socially-isolated countries should create covert alliances, as they suffer lower marginal costs from violating social expectations (Israel and apartheid South Africa in the Cold War); other states may ally with them only if they can plausibly deny their cooperation (Malagasay Republic and France); or they may simply have few options against superior opponents (Serbia and Montenegro prior to World War 2).

Nevertheless, a normative account does point to critical scope conditions on this

paper. The theory explains the intra-Bismarckian growth of secret alliances, but not its sudden decline due to exogenous shock (i.e. World War 1). In addition, it does not explain why a state establishes the first secret alliance initiating the portfolio consistency dynamic. The article treats these bookending conditions as exogenous, instead contending that subsequent secrecy follows a unique social process of emulation and diffusion meriting its own explanation.

4 Quantitative Evidence

This section proceeds as follows. Section 4.1 will describe the data used in the statistical analysis, while Section 4.2 will provide baseline models using observational and matched data that verify the hypothesis. The matching process helps to correct for the influence of extreme values on covariates, which may bias the estimates of other coefficients. Section 4.3 will correct for unit interdependence. Standard regression assumes that units share no connection. This is obviously not the case with alliances, where multiple states can belong to the same alliance or a single state can belong to multiple alliances. Spatial econometrics directly models and accounts for that interdependence. Finally, Fordham and Poast (2014) contend that the use of dyadic data cannot accurately model multilateral phenomena. Alliances have had dozens of members, and splitting this network into constituent dyads overinflates the impact of certain partnerships on the statistical estimates. Consequently, Section 4.4 employs Fordham and Poast's k-adic procedure to correct for this potential source of estimation bias. Finally, Section 4.5 determines that the models are insensitive to omitted variable and selection bias.

Note that the online appendix includes four additional statistical tests omitted for space considerations. These include a two-stage model to further account for selection; determining the (negative) influence of previous public alliances on creating a secret pact; and checking that subsequent public alliances generate rank concerns and increase secret alliance failure. These are also subjected to many of the robustness checks just described. Overall, the theory finds significant and consistent support across all these tests.

4.1 Data

Data is drawn from the Alliance Treaty Obligations and Provisions (ATOP) dataset, a comprehensive catalog of interstate security partnerships from 1815–2003.[19] As we are examining security dynamics between states, the unit of observation is the non-directed security dyad. That is, all allied pairs of states from 1815-2003.[20]

The dependent variable for this section's tests is *Secret*, a dichotomous measure of whether a dyad's alliance features any secret provisions. To be clear, following the conceptual discussion in Section 2, this measure groups both completely and partially secret alliances together. A later robustness check will separate these two categories but finds no difference in substantive effect between them.[21]

The primary explanatory variable is *Secret Count*, measuring the total number of other secret alliances a dyad is participating in. If the portfolio consistency argument is correct, *Secret Count* should be positively and significantly associated with *Secret*. Most dyads in the dataset (86.92 percent) do not have secret provisions, but the remainder have 4.2 covert partners on average. 164 dyads have more, ranging to a

maximum of 24 additional secret partners.

It is possible that the incentives leading to a state's first covert pact prompt it to maintain secrecy in subsequent partnerships. I include controls from the private diplomacy and regime type literatures to account for this. *MID* captures the mutual hostility undergirding that first literature, measuring the number of ongoing disputes between a dyad that involve the use of force or outright war.[22] A higher incidence of conflict between two countries should indicate more divergent interests and enmity, thereby increasing the risk and cost of strategic revelation. For regime type, I include *Open*, which counts the number of states within the dyad that have open political competition. This variable ranges from 0 to 2, and is drawn from the Polity IV dataset.[23] Like *MID*, it should be positively correlated with *Secret*. Greater openness should provide political opponents with more information, incentives, and opportunity to leak the existence of secret agreements in contravention of public support/opinion, leading to greater secrecy. Similarly, McManus and Yarhi-Milo (2017) would find that partial openness (when one partner is democratic but the other is not) would also lead to greater secrecy.

Furthermore, Carson and Yarhi-Milo (2017) argues that more powerful states are better able to observe "backstage" events and correctly interpret hidden signals. Similarly, Siverson and King (1980) and Leeds (2003) find that more powerful countries prefer fewer policy constraints from their alliances, as they require less outside security assistance. Secrecy, following Lipson (1991), should facilitate this. I therefore include the Correlates of War's Composite Index of National Capability – *CINC* – to capture this effect. Similarly, Mearsheimer (1994) argues that institutions and norms only mask power politics, but do nothing to subvert it. Great powers in particular

establish the systemic conditions that all other states must respond to. I therefore include *Major*, a count of great power status, to control for this possibility.

In his study on secret alliances, Ritter (2004) contends that the great powers typically assumed that their counterparts were engaging in hidden partnerships. They therefore participated in their own to offset the strategic and military advantages these pacts provided, usually with countries facing the same enemy. Drawing upon Klein, Goertz and Diehl (2006), I include *Rival*, a count variable of the number of common rivals two states share. Presumably, the higher the overlap in common rivals, the more aligned are these two states' interests. They should therefore be more likely to turn to each other in case they suspect their rivals of harboring hidden military agreements. I also include *Defection*, the sum of a state's alliance defections in the past five years. Countries frequently look at policy histories to determine partner credibility, and those with a recent history of reneging on their promises should face considerable skepticism about their intentions. Crescenzi et al. (2009) finds that states with poor reputations have a more difficult time securing new alliances, while Mattes (2012) and Miller (2003) separately argue that those states typically face higher costs (in the form of greater institutionalization and other costly signaling mechanisms) within those bodies. We would imagine that states with a history of defection would have particular difficulty trying to establish secret partnerships, as this could convey even less commitment.

Although potentially compatible with portfolio consistency and rank concerns, I control for the influence of international norms by including *IGO*, a measure of the number of international governmental organizations the dyad's members participate in. Prior studies have linked IGO membership to norm diffusion and enforcement

or socialization, specifically using the COW data.[24] Insofar as these bodies institutionalize behavioral expectations, greater membership in them should indicate deeper acceptance of interstate norms. If there is an injunction for or against secrecy that operates independently of portfolio consistency, this measure should help to isolate that effect.[25]

Finally, I include two variables intended to capture the effect of changing technology. Although not perfect measures, we would expect that improvements in communications technology and transportation facilitate the creation and operation of secret security agreements. By contrast, surveillance technology should inhibit it. As proxies, the Correlates of War's primary energy consumption measure (*Energy*), as well as its industrial production measure (*Production*), are included to capture more capital- and labor-intensive military technology and capabilities.

4.2 Baseline Models

Because *Secret* is dichotomous, I use logistic regression. With these variables, the baseline model for this first set of tests is:

$$\ln\left(\frac{p(\text{Secret}_i)}{1 - p(\text{Secret}_i)}\right) = \alpha + \beta_2(\text{Secret Count})_i + \beta_3(\text{Open})_i + \beta_4(\text{MID})_i + \beta_5(\text{CINC})_i + \beta_6(\text{Major})_i + \beta_7(\text{Rival})_i + \beta_8(\text{Defect})_i + \beta_9(\text{IGO})_i + \beta_{10}(\text{Energy})_i + \beta_{11}(\text{Production})_i + \epsilon_i$$

where i indexes alliance-dyads and ϵ_i is a stochastic error term. The results of this initial model are presented in Table I, and the hypothesis receives initial support. *Secret Count* has a positive and significant association with *Secret*. Participation in covert pacts makes it more likely that a state's subsequent partnerships will also be

hidden from other actors.

[TABLE I ABOUT HERE.]

For the other variables, great powers are more likely to establish secret agreements, in line with findings that such states possess sufficient capabilities to ignore reputational costs arising from revelation.[26] By contrast, *MID* is significant but negative, suggesting that, contrary to Yarhi-Milo (2013), interstate enmity actually reduces the likelihood of a covert military agreement. Also, *Open* is insignificant, though negative. Together, the coefficients and significance of these two variables suggest that the causal mechanisms laid out in Yarhi-Milo (2013) do not hold for secret alliances, although it can operate for other types of covert communication. As a robustness check, I substitute two replacements for *Open* to see if this has any effect. The first is the standard *Polity2* measure. As it comes from the same source as *Open*, it is unsurprisingly also insignificant. The second substitution draws from the Change in Source of Leader Support (CHISOLS) dataset. This collection records when an executive leader comes into office with a different set of societal supporters than his/her predecessor.[27] Presumably, leaders in this situation should be more concerned about the power of the political opposition, particularly if several of these transitions occur within a short period of time. However, CHISOLS only dates until 1919, meaning it misses much of the variation in secret alliances that motivates this paper. Nevertheless, this measure is not significant, again calling into question the findings of Yarhi-Milo (2013).

However, by its very nature, observational data prevents random assignment to treatment and control categories, leading to "unbalanced" samples possibly correlated

along a number of observed and unobserved variables. This can confound estimates, as extreme values on these other variables – if correlated with *Secret* – could in fact be driving the findings on that variable. I therefore use nearest neighbor matching (with replacement) to correct this problem, ideally obtaining cleaner estimates of *Secret Count*'s effects.[28] Compared to the observed data, this new dataset shows 71.81 percent less bias in favor of secret partnerships. I rerun the logistic regression including all covariates, resulting in Model 2 in Table I. Again, *Secret Count* is strongly significant and positive, supporting the portfolio consistency argument. Substantively, Figure 2 displays the likelihood that a dyad will adopt a secret pact, given its number of existing hidden agreements. It possesses the S-curve shape common to social diffusion dynamics.[29] With no covert alliances, a state has a 1.49 percent chance of opting for secrecy. But with six hidden partners, any subsequent pacts have a greater than 50 percent chance of being secret (specifically, 61.49 percent). Moreover, after balancing the data, *Open* remains insignificant.

[FIGURE 2 ABOUT HERE.]

4.3 Unit Interdependence

In addition to a lack of balance, the original data clearly violates the assumption of unit independence. As described, the unit of analysis is the alliance-dyad, with multilateral pacts broken down into their constituent state pairs. Each of these then enters the dataset as a discrete observation. Moreover, a state can appear in the dataset multiple times if it participates in several security partnerships. Consequently, certain units are related to each other through mutual membership in alliances or having the

same state or dyads appear in multiple pacts. This is exactly what we would expect if the literature on regime-type driven secrecy is correct, with dyadic democracy leading to cumulatively more covert pacts. In addition, we can alternatively specify the unit interdependence such that it acts as a fixed effect, helping to control for a dyad's idiosyncratic features that might lead to (non-cumulative) secrecy. In total, this should provide a sharper estimate of *Secret Count's* effects and more directly account for these other literatures. I use Klier et al's spatial logit model, with details found in the online appendix.[30]

Model 3 in Table I presents the results of this exercise. *Secret Count* remains statistically significant and positive. Moreover, it has roughly the same magnitude and substantive effect as in Model 2. This suggests that the variable stands on its own: unit interdependence (i.e. that a handful of large alliances were having an outsized effect on the estimates, or a small number of states partnering with lots of others) was not driving its significance. In addition, both *Open* and ρ (the coefficient on the spatial parameter) are positive but insignificant. Regime type and other mechanisms for secret cumulativity do not systematically explain covert alliance formation.

4.4 K-adic Correction

Alliance formation is a relatively rare event. Looking across all dyads from 1816–2003, just under eight percent are allied. This creates two problems. First, we cannot directly compare allied states to non-allied states. The latter may differ systematically from the former. Second, splitting up alliances into their component dyads over-inflates the effects of larger partnerships.

As an additional robustness check, I draw upon the k-adic correction developed by Poast (2010) and Fordham and Poast (2014). Fordham and Poast argue that all alliances are multilateral: even bilateral pacts are made in the shadow of possible larger combinations. However, using dyadic data to examine these multinational events fundamentally misspecifies the data-generating process, introducing estimation bias.[31] As the number of alliance members increase from a bilateral pact, to a triadic one, to 4-ads, 5-ads, and so forth, using dyadic measures fails to capture the multilateral dependencies inherent in these larger alliances. To solve this, Fordham and Poast follow King and Zeng (2001) in arguing that scholars should use choice-based sampling to compare multilateral events against a group of "non-events." Here, for each military pact, this would be a similarly sized group of states that did not create a secret alliance. Consequently, for every bilateral pact, I sample three politically relevant, non-allied dyads.[32] For every triad, I sample three non-allied triads, on up to NATO, with its 28 members, where I sample three 28-ads.

Using this new dataset, I run a logit model as before. Model 4 in Table I presents the findings of this k-adic approach. Again, *Secret Count* is strongly significant and positive, supporting the portfolio consistency argument. In fact, its substantive effect has nearly doubled. *Open* gains significance (although *MID* loses it), but – as in Model 1 – the sign cuts against the regime-type secrecy literature: Greater political competition reduces the likelihood of secret alliances. Of the other variables, the measure of state power – *CINC* – is significant and negative, suggesting that more powerful states avoid secret agreements. Finally, *Defect*, which captures a state's reputation and recent history of betrayal, is positive and significant. Those states that recently defected on their allies are more likely to pursue secrecy, perhaps because

their new partners wish to limit the political liability associated with an uncertain ally.

This paper has asserted that both partially and completely secret alliances abide by the portfolio consistency logic. If correct, this assertion implies that the number of secret partnerships a state possesses will have similar effects on both types of secret partnerships. As it best accounts for errors in the data generating process, I use the k-adic data for a final robustness check. I disaggregate *Secret* into a trichotomous variable, with 0 indicating no alliance, 1 a public alliance, 2 an alliance with some secret provisions, and 3 a completely secret pact. For brevity, only the results for *Secret Count's* effects on the different levels are presented in Table II. I iteratively change the null category to check that partial and full secrecy have consistent effects. These two categories always possess the same sign when "no alliance" or "public alliance" is the null. They are substantively similar and statistically significant, implying that more secret alliances of any kind increase the likelihood that a new alliance will also be secret. When "Partial Secrecy" ("Complete Secrecy") is the null, "Complete Secrecy" ("Partial Secrecy") retains a positive and significant effect, as the theory would expect. When using these two categories as the null (corresponding to the last four lines on Table II), "No Alliance" and "Public Alliance" have the opposite and negative signs from the secrecy categories. This supports the portfolio consistency logic, as secrecy – no matter partial or complete – prompts further covert designs in subsequent alliances.

[FIGURE II ABOUT HERE.]

4.5 Sensitivity to Omitted Variable Bias

Finally, selection bias is a critical concern, particularly if we worry that the incentives leading to initially create a hidden alliance also affect subsequent pacts. ATOP's broad geographic and temporal scope; the insignificant coefficients on *Open*, *Polity*, and the CHISOLS variables (which proxy domestic political constraints); and the results from the sensitivity analysis leveraging Altonji, Elder and Taber (2005) all suggest that the factors generating the first secret alliance in this era are not responsible for subsequent covert alliances. In addition, the k-adic correction allows us to assess whether unallied, publicly allied, and secretly allied states systematically differ based on *Secret Count*, and it appears that they do. However, without an exogenous instrument, we cannot directly address nor fully eliminate the possibility that some omitted variable is driving cumulative secrecy.

That said, Altonji, Elder and Taber (2005) developed a calculation determining how sensitive each variable of interest is to unobserved confounders, and by extension selection bias, since the latter is a version of omitted variable bias.[33] How substantively strong and significant must these unobserved factors be to wipe out the effects of our main explanatory variables? If they must be several times stronger, and our controls effectively account for major alternative theoretical explanations, then we can have greater confidence in the portfolio consistency mechanism. Due to space constraints, I relegate details on Altonji et al's process to the online appendix.

Applying the process to Model 4 in Table I provides a ratio of 20.41. That is, normalized unobserved variables must be over 20 times as strong as the model's covariates to wipe away the effect of cumulative secrecy on subsequent covert/public

decisions. Note that, in their original analysis, Altonji et al argue that an implied ratio of 3.55 strongly supports their claim. Even with this result, it is certainly possible that selection effects could undermine this article's argument. However, it is difficult to identify what factors would have such a powerful effect, particularly since the models already include variables commonly used in the international security literature.

In total, this section provides robust support for the portfolio consistency mechanism. Even after correcting for outlier observations, unit interdependence, and the use of a dyadic observations to model multilateral phenomena, *Secret Count* is consistently positive and significant. Variables associated with alternative explanations for secrecy are not consistently significant, and they frequently point in the opposite direction from what the literature expects. This effect holds for both partially and completely hidden pacts, and sensitivity analysis suggests that the models effectively account for selection bias. Overall, increasing numbers of secret partnerships raise the likelihood that subsequent alliances will also be secret. Covert pacts follow a network dynamic where greater social ties have a constraining effect on alliance design choices.

The online appendix provides four quantitative tests further supporting the theory, subjecting each of them to the robustness checks described above. While Section 4.5 should account for selection bias, the first test leverages the k-adic dataset of "shadow" non-allied cases to run a two-stage Heckman model. Allied states may systematically differ from unallied countries, and that difference may drive cumulative secrecy. However, after accounting for selection into an alliance, *Secret Count* remains positively and significantly associated with *Secret*.

The second test examines what effects prior *public* alliances have on subsequent secret pacts. The theory would expect that the more public alliances a country participates in, the less it will adopt a secret one, as covert partners will find their hidden status a signal of lower rank. I define *Public Count* as the number of public alliances a dyad participates in prior to creating a new security pact. Its inclusion does not affect *Secret Count's* results. In total, it reduces participation in subsequent private alliances by 25.4 percent, on average. Similarly, we would expect that subsequent public pacts increase the failure rate of previously concluded secret alliances. A third test supports this conclusion, that subsequent publicity leads to a 31.2 percent increase in secret alliance failure.

The final test examines the influence of the hegemon's decision to go secret on other states' covert alliance decisions, a systematic check of next section's case study. As a theory of social diffusion, portfolio consistency would expect the decision of powerful states to go secret to have outsized influence on smaller state secrecy. The models in the online appendix consistently produce a positive and significant relationship with *Secret*.

5 Qualitative Evidence: A Case Study on Conservative Imperial Alliances, 1879–1890

The statistical analysis demonstrates that friendly secrecy has a cumulative dynamic. But how does this explain the central puzzle, the overwhelming prevalence of covert pacts from 1870–1916 and their stark absence otherwise? This section presents a case study on Bismarckian Germany's secret alliance network to connect the theory and

puzzle. Chancellor Bismarck actively sought allies to secure his newly-established German Empire. He chose a covert pact – the Dual Alliance (1879) with Austria-Hungary – as the foundation for this diplomatic strategy. Following the portfolio consistency mechanism, subsequent German alliances also adopted secrecy to maintain Vienna's prime position. In this way, secret alliances spread throughout Europe and, due to imperial domination, globally. A case study allows us to isolate and exclude the reasons for the initial secret pact in assessing subsequent treaties. It also better illustrates causal process flows, how secrecy in the core Bismarckian alliance prompted continued secrecy in subsequent ones through concerns about rank and portfolio consistency.

As Weitsman (2004) notes, "[The Dual Alliance] became the cornerstone of Austro-Hungarian and German policy; it endured to fight in the First World War and only collapsed some forty years after its formation. [...] The Dual Alliance became both member states' insurance policy against the threats they faced and repeated tethering failures."[34] Bismarck feared a two-front conflict with Russia and France and sought to neutralize Moscow as a threat, ideally through a lasting alliance. Doing so, however, required gathering sufficient strength to resist possible Russian domination *within* an alliance, requiring the Dual Alliance with its defensive guarantee. As one German diplomat put it, "Only when mounted were we as tall as the Russian giant. Austria was intended to be our mount."[35] The alliance promised benevolent neutrality if either country was attacked. If, however, Russia was the aggressor, then, according to Article 1, the parties "are bound to come to the assistance one of the other with the whole war strength of their Empires."

However, Austrian Foreign Minister Baron Heinrich von Haymerle insisted upon a

secret agreement, ostensibly "in conformity with its peaceful character, and to avoid any misinterpretation" by outside parties. In fact, the Imperial Council (Austria-Hungary's parliament) contained a strong pro-Russian bloc that also disliked Germany. Alliance with Berlin was certain to upset this group and cause political problems.[36] For his part, Bismarck preferred that the Dual Alliance be made public, as it simply formalized the existing pattern of German-Austrian cooperation. He also suggested public, parliamentary ratification to demonstrate both sides' commitment.[37] Indeed, after its signing, Bismarck regularly hinted at and later even publicized the pact's existence to newspapers. Yet, because Austrian alignment was the linchpin to Germany's broader strategy, the final treaty was covert.

Secrecy spread from this kernel to Bismarck's subsequent alliances. The cleanest example is the Reinsurance Treaty (1887) between Germany and Russia. As mentioned, the central goal of Bismarck's diplomacy was preventing French-Russian military alignment, ideally through a German-Russian pact. Moscow had likewise sought a defensive guarantee from Germany in previous treaties. The idea was a trade: protection by Russia against France for Germany, protection by Germany against Austria for Russia. Russian ambassador Pyotr Shuvalov's instructions were "to surround the maintenance of peace with solid guarantees [...] and to guard Russia against the danger of European coalitions by sincere and firm alliance with the most powerful of the neighbouring states..."[38], as well as Germany's "firm support" regarding Russia's position on the [Bosporus] Straits.

The Reinsurance Treaty presents a useful test for several reasons. Perhaps the Dual Alliance's secret was idiosyncratic to Austrian-German dynamics. But Vienna was not party to the 1887 pact and apparently did not know of its negotiation.[39]

Berlin and Moscow were free to ignore Austria's domestic constraints, and they had ample ability and reason to supersede the 1879 agreement. According to one historian, "In truth, Haymerle had every right to be suspicious of Bismarck and the Russians. The best he could hope to do was to hold on to the Austro-German Treaty with as much grace as possible and to fight every concession insofar as practicable without assuming an attitude of hostility."[40] The previous Russian ambassador, Peter Saburov, certainly hoped that additional security treaties would obviate or even destroy whatever guarantees Bismarck promised Austria-Hungary through the suspected Dual Alliance.[41] As he later wrote, "Our action is working its way in, like a wedge, between these two Powers. Bismarck [...] gets visibly angry under Haymerle's opposition."[42] Moreover, collectively and individually, Germany and Russia were much stronger than Austria-Hungary, facing few material constraints for either a public or defensive obligation. Bismarck personally favored a public pact, and a defensive guarantee with Moscow was a central German objective. In previous alliance negotiations, Bismarck demonstrated a willingness to subsume its Austrian obligations under a broader settlement among the three conservative empires with similar guarantees.[43]

But that did not occur. Vienna's security was Germany's highest foreign policy priority, preventing Bismarck from concluding an agreement that contradicted the 1879 treaty. During the Reinsurance Treaty's negotiations, Shuvalov records the German Chancellor as saying: "I take no interest whatever in Bulgaria or in Constantinople. You can do what you please there; it is not I who will prevent you. It is only the integrity of the Austro-Hungarian territory that we have to defend. You know that. There, in my eyes, is a political necessity. Austria cannot be wiped off

the map of Europe."[44] Like his predecessors, Shuvalov pushed for a mutual defense pact, highlighting the equality of obligations for both Germany and Russia and the benefits of mutual protection against the other great powers. At that point of the discussion, Bismarck drew out a copy of the 1879 treaty, violating its secrecy provision to delineate the limits of German promises to Moscow. Bismarck claimed it would be "disloyal" to provide Russia with a defensive guarantee that would likely contradict that earlier pact.[45] They therefore settled on a neutrality agreement conforming to the Dual Alliance's second article.

Personally, Bismarck felt there was little in the Reinsurance Treaty that Vienna would object to, such that its negotiation and contents could be made public.[46] Meanwhile, he urged Austria-Hungary to publicize the Dual Alliance to clarify each country's security obligations and facilitate a comprehensive settlement among the three empires. However, Bismarck relented to Austrian resistance, unwilling to erode Vienna's confidence in its central security position over this issue. Having failed to reveal the Dual Alliance, the German chancellor and Shuvalov kept the Reinsurance Treaty secret too.[47] For the Russians, Vienna could have cast a public declaration as upending the status quo over Ottoman territory, allowing it to advance its own interests in that same region. And it would do so under German protection against Russian retaliation, a point reinforced by Shuvalov's inability to secure a similar defensive guarantee from Bismarck. The Russian ambassador worried that "Any indiscretion respecting it might be fatal to us by disclosing too early our aspiration."[48]

Ultimately, this episode validated former Austrian Foreign Minister Gyula Andrassy's original strategy in concluding the Dual Alliance.[49] With Vienna at the heart of Germany's security network, rank considerations would prevent Berlin from

concluding outside agreements displacing or superseding the Dual Alliance. In June 1879, speaking to the French ambassador, Bismarck claimed that "there should be between us [Germany and Austria-Hungary] not a single point of disagreement, and to this I attach so great a value that I am prepared to make real sacrifices to bring it about. [...] The existence and the integrity of the Austrian Empire are for us the first conditions of security."[50]

Given Vienna's central position, portfolio consistency extended secrecy to Germany's other alliances during this period, including agreements with Italy (1882), Romania (1883), and Spain (1887). For example, in negotiating the Three Emperors Alliance (1881), both Germany and Russia preferred a public declaration, but assented to secrecy to secure Austrian participation.[51] Again reflecting his interest in maintaining the Dual Alliance's primacy, Andrassy went so far as to obtain a German ministerial declaration that the 1879 pact was in no way affected by the "prospective triple agreement."[52] Similarly, in forming the Triple Alliance between Germany, Austria-Hungary, and Italy, Bismarck conditioned his agreement on Vienna's acceptance of terms.[53] Again indicating the Dual Monarchy's primacy, he stated: "The key of the door leading to us was to be found in Vienna.[54]

As new covert alliances formed around the Berlin–Vienna axis, countries foreclosed alternative and public alignment options. Berlin occupied the central security position, accounting for one-third of all alliance partners from 1879–1890. Including Austria-Hungary, the two countries comprised nearly 55 percent of alliance members. Ultimately, secrecy spread throughout the European and, by imperial extension, global security systems, characterizing 64.5 percent of all alliance ties just prior to World War 1.

6 Conclusion

The Great War revealed and collapsed this constellation of hidden alliances. States had invoked their *casus foederis*, expending the pacts, and changing strategic and domestic conditions made them obsolete. Moreover, statesmen blamed these alliances for spreading and prolonging the conflagration.[55] The great powers subsequently rejected covert pacts as a legitimate tool of foreign policy, establishing treaty registration provisions and repositories in both the League of Nations and the United Nations. Following this powerful norm against covert military pacts, the great powers installed publicity at the heart of their new military networks. The portfolio consistency dynamic ensured that subsequent partnerships remained overt. Hidden alliances were linked to bottom rank, so that only peripheral or socially isolated countries would go secret, limiting the systemic prevalence of covert pacts.

In answering the central question – Why do states engage in secret, as opposed to publicly declared, alliances? – this paper points to the social factors impelling hidden action, that secrecy itself can have a cumulative dynamic and effect. The recent literature on hidden diplomacy concentrates on the benefits of such activity. Private communication grants actors the flexibility and political space to achieve difficult bargains. They can delay domestic sanctions and allow leaders the time to convince their citizens of a policy's benefits. While such strategies are undoubtedly helpful in adversarial situations, using secrecy to structure cooperative and lasting military relations can lead to inflexible diplomatic patterns that raise the risk of conflict, as scholars of World War 1 and statesmen at Versailles noted. Fearon (1995) argues that revelation of private alliances would have harmed a state's bargaining

position, and so states chose not to disclose them. Such rigidity made war – even enormously destructive war – a preferred option. Ritter (2004) argues that revelation would reveal the resources necessary to defeat a state and its hidden allies, and so countries could not effectively signal their power to deter conflict. To these analyses, I add that states were unable to break free from their secret pacts because revelation would have threatened the credibility of their wider alliance network. More research should be conducted to systematically adjudicate between these claims, determining the relative impact and importance of these different mechanisms.

This paper highlights how secrecy is a matter of consistency in diplomatic practice. The literature on secrecy generally highlights the flexibility that such behavior affords states. Covert action allows signaling to parties generally unwilling to talk with an adversary,[56] the avoidance of domestic backlash, and overall greater diplomatic latitude. While this may be the case in adversarial contexts or one-off negotiations, this paper suggests that cumulative secrecy can reduce policy options and freedom. Portfolio consistency with secret alliances – as one class of hidden behavior – can prevent states from "going public" by imposing network costs for doing so. In seeking flexibility, states instead reap rigidity. Statesmen therefore should weigh the benefits of secrecy against these broader, socially generated concerns about rank. At minimum, if public agreements are usually preferred, then states should not make their initial or central alliance a secret one. Alternatively, they should "save" secret alliances for less important partners. If not, portfolio consistency may lock them into covert patterns that reduces policy flexibility or prevents them from concluding an optimal and public security agreement after an initial secret treaty.

Notes

[1]Carson (2016); Carson and Yarhi-Milo (2017); Ramsay (2011); Kurizaki (2007); Trager (2010).

[2]Leeds et al. (2002).

[3]Carson (2016); Baum (2004).

[4]Downs and Rocke (1987); Carson (2016). See also Trager (2010); Ramsay (2011); Carson and Yarhi-Milo (2017).

[5]Yarhi-Milo (2013).

[6]Hall and Yarhi-Milo (2012); Holmes (2013).

[7]Service (1977).

[8]Mercer (1996).

[9]Indeed, Carson and Yarhi-Milo (2017) relies on this observation, in that local allies and strategic adversaries can perceive covert military action, and this is leveraged by states to signal resolve.

[10]Ritter (2004).

[11]Stuart (1991); Winrow (1994); Komer (1986).

[12]Crescenzi et al. (2009). See also Snyder and Borghard (2011) and Fearon (1994).

[13]For example, NATO members worried that the Baghdad Pact would redirect too many of Washington's and London's resources away from Europe. (FRUS, 1957, Vol. 12; Doc. 68)

[14]For example, the Mediterranean Agreements (1887) between Italy, Spain, Germany, and Austria-Hungary partially conflicted with Berlin's obligations to Russia through the Reinsurance Treaty (1887). Indeed, German dissatisfaction with the Treaty's benefits in light of its other security guarantees was one reason that pact was not renewed in 1890. (Gibler, 2008, 192)

[15]Caso et al. (2005); DePaulo et al. (2003); Gilbert (1991); Granhag and Strmwall (2002); Hartwig et al. (2006); Spence et al. (2001, 2004); Strmwall, Hartwig and Granhag (2006); Vrij and Mann (2001); White and Burgoon (2001); Vrij et al. (2008).

[16]Ikenberry (2001); Waltz (1979); Gilpin (1981).

[17]Lake (2009); Job (1992); Vital (1982); Handel (1990); Sylvan and Majeski (2009).

[18]Barnes (1994).

[19]Leeds et al. (2002).

[20]The online appendix includes a justification for this unit of analysis.

[21]The online appendix includes a justification for grouping fully and partially secret alliances together.

[22]Palmer et al. (2015).

[23]Jaggers and Marshall (2007).

[24]See Greenhill (2010); Donno (2010); Miller et al. (2015).

[25]*IGO* is likely the best measure of interstate norms for this study. It is systematically and consistently measured across this study's relatively long time frame and geographic scope. This helps to avoid interpretive issues about norm meaning and adherence, as well as macro-historical changes to those concepts that can complicate operationalization and measurement.

[26]Leeds et al. (2002), Siverson and King (1980), Mattes (2012), Crescenzi et al. (2009).

[27]Leeds and Mattes (2015).

[28]Specifically, I use a dichotomous measure of whether *Secret Count* is greater than 0 (i.e. does the dyad have any secret pacts?) and the median value of *Secret Count* for each year (i.e. does the dyad have more secret pacts than average?). The results were substantively the same.

I also ran separate matching algorithms for *Open*, *MID*, *Major*, and various forms of *CHISOLS* to better account for alternative explanations. Even after these processes, none of these variables is significant.

[29]Rogers (2003); Wasserman and Faust (1994).

[30]Klier and McMillen (2005).

[31]Poast (2010).

[32]Only three draws of non-events were possible before running out of available observations, without replacement.

[33]Heckman (1979).

[34]Weitsman (2004, 66).

[35]Langer (1931, 20)

[36]Langer (1931, 183).

[37]Waller (1974, 193).

[38]Goriainov (1917, 334).

[39]Goriainov (1917, 338) and Ritter (2004, 40).

[40]Brown (1973, 149). See also Medlicott (1956, 270).

[41]Saburov (1929, 260).

[42]Saburov (1929, 133).

[43]Saburov (1929, 173-4. Emphasis in original.).

[44]Goriainov (1917, 341).

[45]Goriainov (1917, 335).

[46]Langer (1931, 424).

[47]Langer (1931, 424).

[48]Goriainov (1917, 338).

[49]Andrassy (1927).

[50]*Documents diplomatiques francais* (1939, No. 440).

[51]Langer (1931, 185) and Brown (1973, 156).

[52]Pribram (1920, Vol.1, 33-35).

[53]In a diplomatic despatch to German Ambassador to Austria-Hungary Heinrich Reuss on April 3, 1882, German minister Mortiz Busch wrote Austria-Hungarys assent [to draft Triple Alliance text] was a prerequisite to that of Germany. Published in Pribram (1920, 28).

[54]Dugdale (1928, Vol. 1, p. 113.).

[55]Deeks (2017).

[56]Fearon (2013).

References

Altonji, Joseph, Todd Elder and Christopher Taber. 2005. "Selection on Observed and Unobserved Variables: Assessing the Effectiveness of Catholic Schools." *Journal of Political Economy* 113(1):151–184.

Andrassy, Julius. 1927. *Bismarck, Andrassy, and Their Successors*. London: T. Fisher Unwin Ltd.

Barnes, J.A. 1994. *A Pack of Lies: Towards a Sociology of Lying*. Cambridge University Press.

Bas, Muhammet and Robert Schub. 2016. "Mutual Optimism as a Cause of Conflict: Secret Alliances and Conflict Onset." *International Studies Quarterly* .

Baum, Matthew A. 2004. "Going Private." *Journal of Conflict Resolution* 48(5):603–631.
URL: *http://journals.sagepub.com/doi/10.1177/0022002704267764*

Brown, Marvin. 1973. *Heinrich von Haymerle*. Columbia: University of South Carolina Press.

Burr, W and J. Kimball. 2003. "Nixon's Secret Nuclear Alert: Vietnam War Diplomacy and the Joint Chiefs of Staff Readiness Test, October 1969." *Cold War History* 3(2):113–156.

Carson, Austin. 2016. "Facing Off and Saving Face: Covert Intervention and Escalation Management in the Korean War." *International Organization* 70:103–131.

Carson, Austin and K. Yarhi-Milo. 2017. "Covert Communication: The Intelligibility and Credibility of Signaling in Secret." *Security Studies* 26(1):124–156.

Caso, L., A. Gnisci, A. Vrij and S Mann. 2005. "Processes underlying deception: An empirical analysis of truths and lies when manipulating the stakes." *Journal of Interviewing and Offender Profiling* 2:195–202.

Crawford, Vincent. 2003. "Lying for Strategic Advantage." *The American Economic Review* 93(1):133–149.

Crescenzi, Mark J.C., Jacob Kathman, Katja Kleinberg and Reed Wood. 2009. Reliability, Reputation, and Alliance Formation. Prepared for the Annual Meeting of the American Political Science Association, Toronto, CA.

Deeks, Ashley. 2017. "A (Qualified) Defense of Secret Agreements." *Arizona State Law Journal* 49:713–794.

DePaulo, B. M., J. L. Lindsay, B. E. Malone, L. Muhlenbruck, K. Charlton and H. Cooper. 2003. "Cues to deception." *Psychological Bulletin* 129:74–118.

Dingman, Roger. 1998-1989. "Atomic Diplomacy during the Korean War." *International Security* 13(3):50–91.

Documents diplomatiques francais. 1939. 1 Imprimerie Nationale.

Donno, Daniela. 2010. "Who is punished? Regional intergovernmental organizations and the enforcement of democratic norms." *International Organization* 64(4):593–625.

Downs, George W. and David M. Rocke. 1987. "Tacit Bargaining and Arms Control." *World Politics* 39:297–325.

Dugdale, E. T. S., ed. 1928. *German diplomatic documents, 1871-1914*. Vol. 1 Methuen & Co. Ltd.

Fearon, J. 2013. "Fighting Rather than Bargaining.".
URL: *https://www.stanford.edu/group/fearon-research/cgi-bin/wordpress/wp-content/uploads/2013/10/frtb6.pdf*

Fearon, James. 1994. "Domestic Political Audiences and the Escalation of International Disputes." *American Political Science Review* 88(3):577–592.

Fearon, James D. 1995. "Rationalist Explanations for War." *International Organization* 45(3):379–414.

Fordham, Benjamin and Paul Poast. 2014. "All Alliances are Multilateral: Rethinking Alliance Formation in an International System." *Journal of Conflict Resolution* 58.

FRUS. 1957. Foreign Relations of the United States, 1955-1957. Washington, DC: U.S. Government Printing Office.
URL: *"http://digital.library.wisc.edu/1711.dl/FRUS"*

Gibbs, David. 1995. "Secrecy and International Relations." *Journal of Peace Research* 32(2):213–228.

Gibler, D. 2008. *International Military Alliances, 1648-2008*. CQ Press.

Gilbert, D. T. 1991. "How mental systems believe." *American Psychologist* 46:107–119.

Gilpin, Robert. 1981. *War and Change in International Politics*. Cambridge, UK: Cambridge University Press.

Goriainov, Serge. 1917. "The End of the Alliance of the Emperors." *American Historical Review* (1).
URL: *"http://archive.org/stream/jstor-1836570/1836570_djvu.txt"*

Granhag, P. A. and L. A. Strmwall. 2002. "Repeated interrogations: Verbal and nonverbal cues to deception." *Applied Cognitive Psychology* 16:243–257.

Greenhill, Brian. 2010. "The Company You Keep: International Socialization and the Diffusion of Human Rights Norms." *International Studies Quarterly* 54(1):127–145.

Hall, Todd and K. Yarhi-Milo. 2012. "The Personal Touch: Leaders? Impressions, Costly Signaling, and Assessments of Sincerity in International Affairs." *International Studies Quarterly* pp. 1–15.

Handel, Michael. 1990. *Weak States in the International System*. Frank Cass.

Hartwig, M., P. A. Granhag, L. Strmwall and O. Kronkvist. 2006. "Strategic use of evidence during police interrogations: When training to detect deception works." *Law and Human Behavior* 30:603–619.

Heckman, James. 1979. "Sample selection bias as a specification error." *Econometrica* 47(1):153–61.

Holmes, Marcus. 2013. "The Force of Face-to-Face Diplomacy: Mirror Neurons and the Problem of Intentions." *International Organization* 67(4):829–861.

Ikenberry, G. John. 2001. *After Victory: Institutions, Strategic Restraint, and The Rebuilding of Order After Major Wars*. Princeton, NJ: Princeton University Press.

Jaggers, K. and M. Marshall. 2007. "Polity IV Project: Political Regime Characteristics and Transitions, 1800-2006." *Center for Systemic Peace Data Manual* .

Job, Brian. 1992. The Insecurity Dilemma: National, Regime, and State Securities in the Third World. In *The Insecurity Dilemma*. Lynne Rienner.

King, Gary and Langche Zeng. 2001. "Explaining Rare Events in International Relations." *International Organization* 55(3):693–715.

Klein, James, Gary Goertz and Paul F. Diehl. 2006. "The New Rivalry Dataset: Procedures and Patterns." *Journal of Peace Research* 43(3):331–348.

Klier, Thomas H. and Dan McMillen. 2005. "Clustering of auto supplier plants in the U.S.: GMM spatial logit for large samples." *Working Paper Series* WP-05-18. Federal Reserve Bank of Chicago.
URL: *"http://ideas.repec.org/p/fip/fedhwp/wp-05-18.html"*

Komer, Robert. 1986. "Problems of over-extension: Reconciling NATO defence and out-of-area contingencies." *The Adelphi Papers* 26(207):60–67.

Kurizaki, Shuhei. 2007. "Efficient Secrecy: Public versus Private Threats in Crisis Diplomacy." *American Political Science Review* 101(3):543–558.

Lake, David A. 2009. *Hierarchy in International Relations*. Cornell University Press.

Langer, William. 1931. *European Alliances and Alignments, 1871-1890*. Westport, CT: Greenwood Press.

Leeds, B. A. and M. Mattes. 2015. "Change in Source of Leader Support (CHISOLS) Dataset.".
URL: *http://www.chisols.org/*

Leeds, Brett Ashley. 2003. "Do Alliances Deter Aggression? The Influence of Military Alliances on the Initiation of Militarized Interstate Disputes." *American Journal of Political Science* 47(3):427–439.

Leeds, Brett Ashley, Jeffrey Ritter, Sara McLaughlin Mitchell and Andrew Long. 2002. "Alliance Treaty Obligations and Provisions, 1815-1944." *International Interactions* 28:237–260.

Levendusky, Matthew and Michael Horowitz. 2012. "When Backing Down is the Right Decision: Partisanship, New Information, and Audience Costs." *Journal of Politics* 74(2):323–338.

Lipson, Charles. 1991. "Why Are Some International Agreements Informal?" *International Organization* 45:495–538.

Mattes, Michaela. 2012. "Reputation, Symmetry, and Alliance Design." *International Organization* 66(4):679–707.

McManus, Roseanne and K. Yarhi-Milo. 2017. "The Logic of 'Offstage' Signaling: Domestic Politics, Regime Type, and Major Power-Prot?g? Relations." *International Organization* 71(4):701–733.

Mearsheimer, John J. 1994. "The False Promise of International Institutions." *International Security* 19(3):5–49.

Medlicott, W. N. 1956. *Bismarck, Gladstone, and the Concert of Europe*. London: The Athlone Press.

Mercer, Jonathan. 1996. *Reputation and International Politics*. Ithaca, NY: Cornell University Press.

Miller, Gregory D. 2003. "Hypotheses on Reputation." *Security Studies* 12(3):40–78.

Miller, Jennifer, Jacob Cramer, Thomas J. Volgy, Paul Bezerra, Megan Hauser and Christina Sciabarra. 2015. "Norms, Behavioral Compliance, and Status Attribution in International Politics." *International Interactions* 41(5):779–804.

Palmer, Glenn, Vito D'Orazio, Michael Kenwick and Matthew Lane. 2015. "The MID4 Data Set: Procedures, Coding Rules, and Description." *Conflict Management and Peace Science* .

Poast, Paul. 2010. "(Mis)Using Dyadic Data to Analyze Multilateral Events." *Political Analysis* pp. 403–425.

Polakow-Suransky, Sasha. 2011. *The Unspoken Alliance: Israel's Secret Relationship with Apartheid South Africa*. Vintage.

Pribram, Alfred. 1920. *The Secret Treaties of Austria-Hungary, 1879-1914*. Harvard University Press.

Ramsay, Kristopher W. 2011. "Cheap talk diplomacy, voluntary negotiations, and variable bargaining power." *International Studies Quarterly* 55(4):1003–1023.

Ritter, Jeffrey Munro. 2004. "Silent Partners" and Other Essays on Alliance Politics PhD thesis Harvard University.

Rogers, Everett. 2003. *Diffusion of Innovations*. 5 ed. New York: Free Press.

Saburov, Peter Alexandrovitch. 1929. *The Saburov Memoirs*. Great Britain: Cambridge University Press.

Schuessler, John. 2010. "The Deception Dividend: FDR's Undeclared War." *International Security* 34(4):133–165.

Service, Washington Post Foreign. 1977. "Sadat Presents Arab Case to Knesset." *Washington Post* .
URL: *https://www.washingtonpost.com/archive/politics/1977/11/21/sadat-presents-arab-case-to-knesset/9dfd87c9-8a4b-4c26-b086-2c39f843921c/?utm$_t$erm = .e4b61681ae77*

Siverson, Randolph M. and Joel King. 1980. "Attributes of national alliance membership and war participation, 1815-1965." *American Journal of Political Science* 24:1–15.

Small, Melvin. 1995. *Democracy and Diplomacy: The Impact of Domestic Politics in U.S. Foreign Policy, 1789-1994*. Johns Hopkins University Press.

Snyder, Jack and Erica Borghard. 2011. "The Cost of Empty Threats: A Penny, Not a Pound." *American Political Science Review* 105(3):437–456.

Spence, S. A, M. D. Hunter, T. F. D. Farrow, R. D. Green, D. H. Leung, C. J. Hughes and V. Ganesan. 2004. "A cognitive neurobiological account of deception: Evidence from functional neuroimaging." *Philosophical Transactions of the Royal Society of London* 359:1755–1762.

Spence, S. A., T. F. D. Farrow, A. E. Herford, I. D. Wilkinson, Y. Zheng and P. W. R. Woodruff. 2001. "Behavioural and functional anatomical correlates of deception in humans." *Neuroreport: For Rapid Communication of Neuroscience Research* 12:2849–2853.

Strmwall, L. A., M. Hartwig and P. A. Granhag. 2006. "To act truthfully: Nonverbal behaviour and strategies during a police interrogation." *Psychology, Crime, & Law* 12:207–219.

Stuart, Douglas. 1991. "Can NATO Transcend Its European Borders?" *Strategic Studies Institute Monograph* .
URL: *https://apps.dtic.mil/dtic/tr/fulltext/u2/a233530.pdf*

Sylvan, David and Stephen Majeski. 2009. *U.S. Foreign Policy in Perspective: Clients, Enemies and Empire*. Routledge. Routledge Advances in International Relations and Global Politics.

Trager, Robert. 2010. "Diplomatic Calculus in Anarchy: How Communication Matters." *American Political Science Review* 104(2).

Vital, David. 1982. *The Survival of Small States*. Oxford University Press.

Vrij, A. and S. Mann. 2001. "Telling and detecting lies in a high-stake situation: The case of a convicted murderer." *Applied Cognitive Psychology* 15:187–203.

Vrij, Aldert, Samantha A. Mann, Ronald P. Fisher, Sharon Leal, Rebecca Milne and Ray Bull. 2008. "Increasing Cognitive Load to Facilitate Lie Detection: The Benefit of Recalling an Event in Reverse Order." *Law and Human Behavior* 32(3):253–265.

Waller, Bruce. 1974. *Bismarck at the Crossroads*. Athlone Press.

Waltz, Kenneth N. 1979. *Theory of International Politics*. New York, NY: McGraw-Hill.

Wasserman, Stanley and Katherine Faust. 1994. *Social Network Analysis: Methods and Applications*. Cambridge University Press.

Weitsman, Patricia. 2004. *Dangerous Alliances: Proponents of Peace, Weapons of War*. Stanford: Stanford University Press.

White, C. H. and J. K. Burgoon. 2001. "Adaptation and communicative design: Patterns of interaction in truthful and deceptive conversations." *Human Communication Research* 27:9–37.

Winrow, Gareth. 1994. "NATO and out-of-area: A post-Cold War challenge." *European Security* 3(4):617–638.

Yarhi-Milo, K. 2013. "Tying hands behind closed doors: the logic and practice of secret reassurance." *Security Studies* 22(3).