Organization Theory, Intelligence, and the Cuban Missile Crisis

Amy B. Zegart
Associate Professor,
UCLA School of Public Affairs
and
Research Fellow, The Hoover Institution
Stanford University
zegart@ucla.edu
(310) 850-2248

Abstract

Although scholars have been dissecting the Cuban missile crisis for almost half a century, this paper argues that we have learned the wrong intelligence lessons and neglected many important ones. Organizations explain why. Ever since Graham Allison’s *Essence of Decision*, scholars have concentrated on the pitfalls of individual perception and cognition while paying little attention to organizational weaknesses in intelligence. As a result, researchers have considered the crisis a stunning intelligence success instead of a stunning intelligence warning failure. And they have overlooked the silent but deadly organizational weaknesses that led analysts to make the wrong call.

In part one, I make the empirical case for calling the crisis an intelligence failure by examining all of the pre-crisis national intelligence estimates of 1962. In part two, I discuss why the success narrative has stuck and why it matters. Part three explores three lingering questions from the historical record: (1) Why did estimators miss all of the signals pointing to Nikita Khrushchev’s true intentions? (2) Why were all of the pre-crisis estimates so consistent even in the face of alarming new evidence of a Soviet military buildup? (3) Why were there no dissents in any of the estimates? To date, answers have focused on mirror imaging and other aspects of misjudgment. Yet I find that organizational deficiencies also played a pivotal and unexplored role-- causing signals to be found and then lost in the bureaucracy; driving the interagency estimates process toward a false consistency over time; and channeling dissenting hypotheses out of the Cuba estimates process entirely.
Organization Theory, Intelligence, and the Cuban Missile Crisis

For nearly half a century, scholars and policymakers have been learning the lessons of the Cuban missile crisis, dissecting virtually every aspect of that terrifying nuclear showdown between the United States and Soviet Union. Digging through documents in Soviet and American archives, and attending conferences from Havana to Harvard, generations of researchers have labored to distill what happened in 1962 -- all with an eye toward improving U.S. foreign policy making.

This paper argues that we have learned the wrong intelligence lessons from the most studied event of the nuclear age. In some sense, this result should not be surprising. Lebow (1983) finds that the Cuban missile crisis is filled with “dogmas” that have only tenuous connections to reality. And organization theorists have long argued that learning lessons is fraught with peril (March 1991). Typically, learning is envisioned as a straight-line trajectory where time only makes things better. But time often makes things worse. Organizations (and individuals) frequently forget what they should remember and remember what they should forget. These realities mean that improving any organization’s performance over time requires unlearning erroneous lessons as much as retaining the indispensable ones. Intelligence from 1962 is no exception.

Below, I revisit intelligence warning during the Cuban missile crisis, challenging one of the most widely accepted lessons: that the discovery of Soviet
missiles constituted a stunning American intelligence success. Instead, I argue that the onset of the crisis stemmed from an equally stunning intelligence warning failure that has been downplayed in Cuban missile crisis scholarship since the 1960s. Shifting the analytic lens from intelligence success to failure, moreover, reveals surprising and important organizational deficiencies at work. Ever since Graham Allison penned *Essence of Decision* (1971), a great deal of scholarship has focused on the pitfalls of individual perception and cognition (Jervis 1976; Blight and Welch 1998; Haas 2001: Kahneman and Tversky 1979; Renshon 2009), as well as organizational weaknesses in the policymaking process (Halperin 1974; George 1980; Bendor and Hammond 1992). Surprisingly little work, however, has examined the crucial role of organizational weaknesses in intelligence analysis. The paper seeks to fill the gap, shining a light on the organizational deficiencies that lurked in the background and led analysts to make the wrong call. These weaknesses are not simply a matter of history. The September 11 terrorist attacks and faulty estimates of Iraq’s weapons of mass destruction suggest that organizational impediments to analysis are still very much alive today.

I begin my making the empirical case for treating the crisis as in intelligence warning failure, focusing in particular on the four national intelligence estimates produced before American U2 pilots snapped those infamous photographs of Soviet nuclear missile sites near San Cristobal on October 14, 1962. As we shall see, every estimate, including one issued just 25
days before the missiles were discovered, concluded that Soviet leader Nikita Khrushchev would not place nuclear weapons or any other offensive capabilities in Cuba. Sherman Kent, who chaired the Central Intelligence Agency (CIA) estimates office, later reflected, “There is no blinking the fact that we came down on the wrong side. When the photographic evidence of 14 October was in, there was proof” (Kent 1964, 1). And yet, scholars and practitioners (including Kent) have either excused the warning failure as an occupational hazard -- arguing that intelligence is not omniscience -- or glossed over it, focusing instead on the CIA’s eventual discovery of the missiles and the successful conclusion of the crisis.

Next, I turn to this historical narrative, exploring how the intelligence success story has gained so much traction over time while the intelligence warning failure has not. I then offer a re-examination of the crisis through an organizational lens, exploring three key questions from the historical record: (1) Why did estimators miss the signals pointing to Nikita Khrushchev’s true intentions? (2) Why were all four of the pre-crisis estimates so consistent even in the face of alarming new evidence of a Soviet military buildup? (3) Why were there no dissents in any of the estimates, particularly the final one issued on September 19, 1962, less than a month before the sites were discovered? For each question, I show how conventional explanations, which attribute failure to analytic constraints, fall short, and how organizational forces played a powerful and unseen role.
Zigging When Khrushchev Zagged:
The Four Pre-Crisis Intelligence Estimates of 1962

The empirical record of U.S. intelligence assessments leading up to the crisis is rich. We now know that between January and October 1962, when Soviet nuclear missile sites were ultimately discovered, the CIA’s estimates office produced four National Intelligence Estimates (NIEs) and Special National Intelligence Estimates (SNIEs) about Castro’s communist regime, its relationship with the Soviet Bloc, its activities in spreading Communism throughout Latin America, and potential threats to the United States.

These were not just any intelligence reports. National Intelligence Estimates and Special National Intelligence Estimates were -- and still are -- the gold standard of intelligence products, the most authoritative, pooled judgments of intelligence professionals from agencies across the U.S. government. Sherman Kent, the legendary godfather of CIA analysis who ran CIA’s estimates office at the time, described the process as an “estimating machine,” where intelligence units in the State Department, military services, and CIA would research and write initial materials, a special CIA estimates staff would write a draft report, an interagency committee would conduct “a painstaking” review, and a “full-dress” version of the estimate would go down “an assembly line of eight or more stations” before being approved for dissemination (Kent 1964, 2).
The four pre-crisis estimates of 1962 reveal that U.S. intelligence officials were gravely worried about the political fallout of a hostile communist regime so close to American shores and the possibility of communist dominoes in Latin America. But they were not especially worried about risk of a military threat from Cuba or its Soviet patron. The first estimate, released January 17, 1962, was a big think piece that assessed threats to the United States from the broader Caribbean region over the next twenty years. Although the estimate considered it “very likely” that communism across the region would “grow in size” during the coming decade, it concluded that “the establishment of…Soviet bases is unlikely for some time to come” because “Their military and psychological value, in Soviet eyes, would probably not be great enough to override the risks involved” (emphasis mine). The time horizon is important, suggesting confidence that Khrushchev would be unwilling to risk establishing a Cuban base for at least several years. Indeed, the estimate later noted that its judgment about Soviet bases “might not extend over the entire period under review.” Considering that the review period stretched twenty years into the future, this is quite a statement; the Intelligence Community’s long-term estimate anticipated no short- or even medium-term crisis brewing (SNIE 80-62, 1962).

The second estimate was issued March 21, 1962 and had a narrower time horizon and scope: analyzing “the situation in Cuba and the relationships of the Castro regime with both the Soviet Bloc and Latin American Republics” over the coming year. Again, the estimate discounts heavily the possibility that the Soviet
Union would defend Cuba or establish offensive military capabilities there. The estimate notes that despite Castro’s vigorous efforts to secure a security guarantee, the Soviet Bloc “has avoided any explicit military commitment to defend Cuba.” Later, the assessment uses much stronger estimative language, stating that, “the USSR would almost certainly not intervene directly with its own forces” were Castro regime overthrown by internal or external forces and that although the Soviets would respond to an overthrow with strong political action, “the USSR “would almost certainly never intend to hazard its own safety for the sake of Cuba” (emphasis mine). These terms are not just thrown around. Carefully chosen and reviewed in the estimates process, they are meant to convey a high degree of certainty (NIE 85-62, 1962). In fact, Khrushchev made the decision to deploy nuclear missiles to Cuba about 10 weeks later, between May and June of 1962 (Garthoff 1998, 39), massive numbers of Soviet troops were roaming about the island by fall (although total numbers were not known for the next twenty-five years), and nuclear missiles began arriving in early September (Garthoff 1998, 39; Central Intelligence Agency 1962, Item #112).

The third estimate was disseminated on August 1, 1962 just a couple of weeks after intelligence began indicating a major Soviet arms buildup in Cuba. Although the estimate notes that Soviet bloc “military advisors and instructors” were believed to be in Cuba, along with “Bloc-supplied arms and equipment,” the estimate once again notes that the Soviet Union “has avoided any formal commitment to protect and defend the regime in all contingencies.” The
assessment further states, “We believe it unlikely that the Bloc will provide Cuba with the capability to undertake major independent military operations” or that “the Bloc will station in Cuba Bloc combat units of any description, at least for the period of this estimate” (NIE 85-2-62, 1962).

The fourth and crucial estimate before the crisis was released September 19, 1962. This time, however, the situation was vastly changed: starting in mid-July, a stream of intelligence reporting from both technical and human sources began indicating a massive arms buildup. This reporting increased dramatically in August and September, and the estimate’s heading reflected these developments. Whereas the March and August estimates were blandly titled, “The Situation and Prospects in Cuba,” the Special National Intelligence Estimate of September 19th carried a more ominous title: “The Military Buildup in Cuba” (SNIE 85-3-62, 1962). The estimate notes that between mid-July and early September, approximately 70 ships had delivered Soviet weaponry and construction equipment. That number was three to four times greater than total Soviet shipments for the entire first half of 1962 (President’s Checklist, August 4, 1962). Indeed, so concerned was President Kennedy by the new intelligence that he made explicit public warnings on September 4th and again on September 13th that if the Soviets placed offensive weapons in Cuba, “the gravest issues would arise,” a warning understood to imply potential nuclear confrontation (U.S. Department of State 1962, 450).
Nevertheless, this crucial intelligence estimate still concluded that, “Soviet policy remains fundamentally unaltered.” For the fourth time in nine months, a national intelligence estimate asserted that Soviet activities in Cuba were meant to deter an American attack there and sustain a vital ideological victory for the communist cause. Engrossed by the political threat of a strengthened communist regime in the Western hemisphere, the estimate considered but ultimately dismissed the possibility of a major offensive Soviet base. “The establishment on Cuban soil of Soviet nuclear striking forces which could be used against the U.S. would be incompatible with Soviet policy as we presently estimate it,” the estimate starkly concluded. The estimate justified this judgment at some length, noting that the Soviets had never placed any such weapons even in Soviet satellite countries before, that missiles would pose significant command and control problems, that they would require “a conspicuously larger number of Soviet personnel” in Cuba, and that the Soviets would “almost certainly” know that such a move would provoke “a dangerous U.S. reaction” (SNIE 85-3-62, 1962.)

Two years later, Sherman Kent categorically concluded that the September 19th estimate’s judgments about Soviet intentions turned out to be wrong; Khrushchev had “zig[ged] violently out of the track of ‘normal,’” and U.S. intelligence agencies had missed it (Kent 1964, 8). More recently declassified Soviet archives reveal that the Intelligence Community’s mistakes were not confined to misjudging Khrushchev’s intentions. They also included erroneous
conclusions about what Kent terms “indisputable facts” (Kent 1964, 2). For example, the estimate confidently asserts that Soviet military personnel increased from 350 to 4,000 during 1962, and that “conspicuously larger” numbers of Soviet personnel would have to present to indicate a potential nuclear missile site. It turns out, however, that conspicuously larger numbers of Soviet military forces actually were in Cuba at the time; we just did not know it. In fact, Soviet forces numbered 41,900, a figure ten times higher than the September estimate (Gribkov and Smith 1993, 28). CIA estimators assumed this key indicator of a Soviet strategic missile base would be easy to see. Indeed, it would be “conspicuous.” Instead, U.S. intelligence officials were unaware of the full size of the Soviet troop deployment for the next 25 years (Garthoff 1998, 28).

The Intelligence Success Narrative

For decades, scholars and practitioners have been reluctant to call the pre-crisis intelligence estimates of 1962 a strategic warning failure. Instead, the intelligence narrative of the Cuban missile crisis has taken two contradictory forms. One argues that intelligence warning succeeded, the other admits that no accurate warning was possible; U.S. intelligence estimators did the best that anyone could.
The first success narrative conflates causes and outcomes. Because the crisis ended without nuclear confrontation and gave Khrushchev a major political defeat, there is a natural tendency to conclude that U.S. intelligence warning worked well. As Blight and Welch note, “American intelligence did positively identify Soviet missiles prior to their becoming operational, which permitted the Kennedy administration to seize the initiative in attempting to secure their removal” (Blight and Welch 1998, 7). Garthoff echoes these sentiments, writing, “Intelligence did do its job” (Garthoff 1998, 53).

Yet two arguments suggest otherwise. First, although it is clear that U.S. intelligence officials discovered Soviet missiles in Cuba days before they became operational, it is equally clear that they utterly failed to anticipate the presence of Soviet missiles in Cuba every day before then. As Grabo notes in her classic work on warning, the essence of warning is not presenting a list of iron-clad facts but anticipating and preventing the looming and murky danger of strategic surprise (Grabo 2004). To be sure, for most of 1962, there were no nuclear missiles in Cuba to be found. Still, none of the intelligence estimates sounded the alarm to be on the lookout for such a possibility; indicated specifically what factors, other than large numbers of troops, might conceivably change the assessment of Khrushchev’s intentions; or urged policymakers to take seriously the idea that

1 Nor did Khrushchev give any indications that something was afoot. The Soviets mounted a substantial denial and deception program to keep the deployment secret (Hansen 2002).
the Soviets could be up to something more. Quite the contrary. All four of the estimates had a distinctly reassuring quality to them, highlighting inferences and evidence in ways that suggested policymakers need not worry about a Soviet offensive base in Cuba. Rather than inoculating the Kennedy Administration against the horrors of a possible Soviet missile surprise in Cuba, the estimates made the surprise all the more sudden, shocking, and total.

Second, the contingency of history also cautions against finding intelligence warning success in chancy, happy outcomes. In the case of the

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2 The President’s Foreign Intelligence Advisory Board was particularly critical of this indicators failure (President’s Foreign Intelligence Advisory Board 1963).
3 The false comfort provided by the estimates of 1962 mirrors the false comfort before 9/11 provided by the Intelligence Community’s now-infamous August 6, 2001 President’s Daily Brief, which assessed current intelligence about the threat of an al Qaeda attack on the U.S. homeland. The final paragraph of that document noted, “the FBI is conducting approximately 70 full field investigations throughout the US that it considers bin Laden-related.” (President’s Daily Brief, “Bin Ladin Determined to Strike in US,” August 6, 2001, declassified April 10, 2004). Both President Bush and his National Security Advisor, Condoleezza Rice, told the 9/11 Commission that the large number of FBI field investigations (which turned out to be grossly exaggerated) gave them the distinct impression that the FBI had the threat covered. “In the August 6th memorandum it says that there were 70 full field investigations underway of these cells,” testified Rice. “And so there was no recommendation that we do something about this…the FBI was pursuing it.” (Condoleezza Rice, testimony before the 9/11 Commission ninth public hearing (transcript) April 8, 2004, p.24, available at http://www.9-11commission.gov/archive/hearing9/9-11Commission_Hearing_2004-04-08.pdf (accessed March 1, 2006). The FBI, however, was not pursuing sleeper cells aggressively, and missed all twelve opportunities in the summer and fall of 2001 that might have penetrated and thwarted the 9/11 plot (Zegart 2007).
4 The same can be said of warning failure. As many have noted, false alarms look like warning failures when they are really warning successes, compelling policymakers to take steps that prevent the anticipated bad outcome from occurring in the first place.
Cuban missile crisis, each passing decade brings new and frightening evidence of how Kennedy’s “seizing the initiative” after seeing those U2 photographs nearly led to nuclear disaster, not American victory. Transcripts of Kennedy’s secret Excomm meetings reveal that had the president made his decision on the first day of the crisis rather than the seventh, the United States would have launched an air strike against Soviet missiles in Cuba that could very well have triggered thermonuclear war (May and Zelikow 1997, 45-117). Scott Sagan has chronicled numerous instances during the crisis where mistakes (an American U2 pilot who accidentally flew into Soviet airspace, bringing with him American F102-A interceptors armed with Falcon nuclear air-to-air missiles) or routine military procedures (including a previously scheduled test tape of a Soviet missile attack that ran during the crisis and was mistakenly identified as a real incoming strike) nearly spiraled out of control (Sagan 1993). In 2002, scholars unearthed terrifying new evidence that one Soviet submarine captain actually did order preparations to launch of a nuclear-tipped torpedo off the American coast. On October 27th, bombarded by U.S. Navy depth charges and running out of air, the Soviet Captain gave the order to prepare a nuclear weapon for firing. "We're going to blast them now! We will die, but we will sink them all. We will not disgrace our navy," the Soviet intelligence report quotes the Soviet captain as saying (Lloyd 2002). But in the heat of the moment, another submarine officer, Vasili Arkhipov, convinced him to await further instructions from Moscow (Blanton 2002). In short, the mounting evidence of narrow misses during the crisis suggests that
luck played a pivotal role, and that the outcome could easily have taken a tragic turn. One wonders whether observers would feel quite the same about the performance of U.S. intelligence agencies had Soviet SS-4 nuclear missiles landed in south Florida.

The second variant of the success narrative maintains that U.S. intelligence estimators may have been wrong, but they did the best that any human could; as Betts (1978) and Jervis (2010) note, intelligence failures are inevitable. Sherman Kent himself writes in 1964 that, “By definition, estimating is an excursion out beyond established fact into the unknown.” An estimator, he notes, will undoubtedly be wrong from time to time.” To recognize this as inevitable,” however, “does not mean that we estimators are reconciled to our inadequacy; it only means we fully realize that we are engaged in a hazardous occupation” (Kent 1964, 3). In this particular case, Kent admits to being dead wrong but then claims no one could possibly have predicted Khrushchev’s irrational behavior. “No estimating process,” he concludes, “can be expected to divine exactly when the enemy is about to make a dramatically wrong decision” (Kent 1964, 6).

With a few exceptions, examinations of the Cuban missile have picked up this theme. Although comparatively little work has examined intelligence in the crisis, nearly all of it starts from the premise that intelligence agencies did the best possible job against a highly irrational enemy.5 Raymond Garthoff’s

5 For a different view questioning Khrushchev’s rationality, see Lebow 1983.
excellent and oft-cited analysis of the crisis finds several major errors in the estimates process but then concludes that “based on what has been declassified, the intelligence community cannot be faulted” unless intelligence is presumed to know everything about an adversary (Garthoff 1998, 52). Taking this reasoning to its extreme, Garthoff ends up agreeing with Kent and other intelligence officials who maintained that the intelligence estimates were essentially correct: Khrushchev was the one who erred by acting in such an aberrant, risky fashion. More recently, Renshon examines the role of “mirroring risk” in U.S. intelligence estimating errors of the crisis. Yet he, too, begins by sharing Garthoff’s judgment that, “the Cuban missile crisis itself should not be considered an intelligence failure….” (Renshon 2009, 318).

Blaming the adversary for his unpredicted behavior is an odd argument, to say the least. The logic suggests, for example, that U.S. intelligence agencies should also criticize the Chinese for their surprise entry into the Korean War, the Indians and Pakistanis for their unexpected 1998 nuclear tests, and Iranian President Mahmoud Ahmadinejad for his strange letters and on again/off again nuclear saber rattling (can’t these people act more predictably?) This argument also contradicts one of the most important maxims of intelligence warning: Good warning analysis does not discount anomalies, it targets them. Grabo’s primer, which has been required reading for warning analysts for years, notes, “While not all anomalies lead to crises all crises are made up of anomalies” (Grabo 2004, 31). By this measure, the Cuban missile crisis seems a textbook case of anomaly
leading to crisis. The Soviets had never taken such risks before. Nor had they ever provided such an extraordinary level of military aid to Cuba. But starting in the spring of 1962, ships were sailing, and by summer, crates of weapons -- lots of them -- were being unloaded. Something different was definitely afoot, and U.S. intelligence officials knew it. Yet their estimates confronted these anomalies and declared them more of the same.\textsuperscript{6}

**The Benefits of Calling a Failure a Failure**

Calling something a success or failure is not simply an exercise in semantics.\textsuperscript{7} The categorization itself directs researchers to examine different questions, mount different arguments, or as Allison put it so many years ago, fish in different conceptual ponds (Allison 1971, 4). In this case, viewing the Cuban missile crisis as an intelligence warning failure naturally shifts the explanatory lens from “showing why warning was so hard” to “identifying what went so wrong.”

Doing so reveals significant research gaps. Seeking to explain “why warning was so hard,” intelligence research on the crisis has focused primarily on cognitive psychology and the pitfalls inherent in human cognition. Mirror imaging, mirroring risk, prospect theory, confirmation bias, attribution error, and other explanations in this vein figure heavily (Ross 1977; Kahneman, Slovic, and

\textsuperscript{6} Strangely, Garthoff even argues that better and earlier warning would have been worse, making the crisis even more difficult to resolve (1998, 53).

\textsuperscript{7} For a different view of intelligence failures, see Jervis 2006.
Tversky 1982; Bar-Joseph and Kruglanski 2003; Tetlock 2005; Heuer 2006). Part of the allure of these approaches is that they explain why intelligence success can be so elusive, even with the brightest individuals, best intentions, and highest stakes. The other part is their intuitive appeal and generality. Prospect theory, for example, shows why nearly all humans take greater risks to avoid losses than achieve gains (Kahneman and Tversky 1979). Similarly, work on confirmation bias – which explains how individuals tend to seize on information that confirms their pre-existing beliefs and discount information that does not – applies everywhere from intelligence estimates (Heuer 2006) to medical diagnoses (Arkes, Dawes, and Christensen 1986; Groopman 2007) to space shuttle launches (Vaughan 1996). These problems of cognitive psychology have an “aha” quality to them: once identified, they seem obvious and ubiquitous, though they are exceptionally difficult to overcome.

Organizational explanations, by contrast, have remained an under-tilled area. While much has been made of bureaucratic politics in presidential decision-making (Halperin 1974; George 1980), little has been done to examine the silent but deadly role of organizational weaknesses in intelligence during the Cuban missile crisis. But more recent analyses of the September 11 terrorist attacks (9/11 Commission 2004; Zegart 2007) and the faulty estimates of Iraq’s

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8 Sagan’s excellent work (1993) examines organizational weaknesses that nearly led to accidents, not organizational factors that impeded intelligence analysis.
weapons of mass destruction (WMD Commission 2005) suggest that organizational weaknesses in intelligence can have devastating effects.

Below, I revisit the intelligence warning failure of the Cuban missile crisis, raising three lingering questions from the historical record and offering some initial organizational explanations. All three questions beg for greater empirical research. My purpose here is to show that intelligence failure is a good starting point; that despite the rich literature on the Cuban missile crisis, much more conceptual work remains to be done; and that organization theory provides analytic traction for a deeper understanding of the challenges that have hindered intelligence warning for the past fifty years—and still do.

Question 1: Why did estimators miss the signals of Khrushchev’s true intentions?

Signals and noise have been a major part of every intelligence post-mortem since Pearl Harbor. Roberta Wohlstetter, who coined the terms, observed that intelligence warning requires analysts to separate “signals,” or clues that point to an adversary’s future action, from a background that is filled with “noise,” or intelligence indicators that turn out to be irrelevant, confusing, or just plain wrong. After-the-fact, of course, the signals are obvious. “Like the detective-story reader who turns to the last page first,” Wohlstetter writes, “we find it easy to pick out the clues” (Wohlstetter 1964-65, 691). Detecting the right signals before disaster strikes, however, is another matter entirely.
Wohlstetter’s important insight warns against the perils of hindsight bias. But it has also generated analytic pathologies of its own, focusing our sites more on the ratio of signals to noise and the analytic techniques to improve individual perception than the organizational forces that cause signals to get noticed or missed. Each time an intelligence surprise occurs, commissions, Congressional committees, and scholars are quick to ask, “How many signals were there? How much noise existed? What analytic mistakes were made?” The answer is always the same: too few signals, too much noise, too many erroneous assumptions or inferences. Rarely however, do we examine the silent organizational structures and processes that determine whether signals get noticed or ignored, amplified or dispersed (Bendor and Hammond forthcoming). Fixating on numbers and individual cognition, we have missed the crucial role of organizations.

A brief comparison of the Cuban missile crisis and the September 11 terrorist attacks illustrates the point. Immediately after the Cuban missile crisis, the steady refrain was that intelligence noise was tremendous while signals were scarce. CIA Director John McCone wrote that his agency received 3,500 human intelligence reports from agents and Cuban refugees (who were debriefed at a special CIA center in Opa Locka, Florida) claiming to spot Soviet missiles on the island before the crisis (McCone 1963). Nearly all were wildly off the mark. According to the President’s Foreign Intelligence Advisory Board, just 35 of these reports turned out to be signals indicating the actual Soviet deployment (President’s Foreign Intelligence Advisory Board February 4, 1963). McCon
finds even fewer, writing, “only eight in retrospect were considered as reasonably valid indicators of the deployment of offensive missiles to Cuba.” (McCone 1963). And Sherman Kent, who was responsible for the pre-crisis estimates, contends that at most, only three of these signals “should have stopped the clock” (Kent 1964, 4).

McCone (1963), Kent (1964), Wohlstetter (1964-5), Garthoff (1998), and others argue forcefully that these were terrible odds for detecting signals of Khrushchev’s nuclear gambit. But were they really? Looking back, the numbers actually look pretty darn good. Intelligence officials working in the weeks and months before the September 11 terrorist attacks would gladly have traded signals-to-noise ratios with their Cuban missile crisis counterparts. In 1962, there were just 5,000 computers worldwide, no fax machines, and no cell phones (Hayden, quoted in Bamford 2002). By 2001, the National Security Agency was intercepting emails, cell phone transmissions, and other signals communications at a rate of 2 million per hour, or about 200 million intercepts each workday (Bamford 2002). Although processing technology had improved dramatically, it was nowhere near enough. The collection backlogs at NSA alone were so enormous that less than 1 percent of the intake was ever decoded or processed (Diamond 2002). Against this astounding noise level, signal detection remained about the same as it was in 1962. In the two years before 9/11, U.S. intelligence officials picked up a grand total of 23 signals that al Qaeda was planning a major attack on the U.S. homeland (Zegart 2007).
As the comparison suggests, quantifying signals and noise tells part of the warning story, but not the most important part. In both cases, the crucial warning problem was not the precise number of signals; whether there were 3 or 30 or even 300 signals made little difference in the end. Instead, the crucial problem had to do with organizational deficiencies that ensured every signal, once detected, would eventually get lost in the bureaucracy. Chief among these organizational deficiencies was structural fragmentation — jurisdictional divisions within and across intelligence agencies that dispersed and isolated signals in different places.

Seven weeks before 9/11, for example, three of the FBI’s 56 U.S. field offices independently uncovered what turned out to be three key signals. In Phoenix, Special Agent Kenneth Williams identified a pattern of Jihadists attending U.S. flight schools and wrote a memo urging that flight schools be contacted, specific individuals be investigated, and other intelligence agencies, including the CIA, be notified (Williams 2001). His memo generated no interest at FBI headquarters, was sent to just one FBI field office, and was never forwarded to the CIA or any other intelligence agency. Around the same time, Minneapolis FBI agents arrested Zacarias Moussaoui, a suspicious extremist who wanted to fly 747s and paid $6,000 in cash to use a flight simulator but lacked all of the usual credentials, including a pilot’s license (U.S. House and Senate 2002a, 316-17; 2002b). He became the only person convicted in the U.S. for his connection to the attacks. Third and finally, the FBI’s New York field office began
searching for Khalid al-Mihdhar and Nawaf al-Hazmi, two suspected al Qaeda operatives who ultimately hijacked and crashed American Airlines flight #77 into the Pentagon.

Yet because the FBI field office structure was highly decentralized (one longstanding joke at the Bureau was that the FBI consisted of 56 field offices with a headquarters attached), none of the agents working these cases knew about the others (U.S. House and Senate 2002a, 25). And because a gaping divide separated domestic and foreign intelligence agencies, the CIA and the rest of the U.S. Intelligence Community never seized these or other FBI leads in time, either. Instead, tantalizing signals surfaced, only to disappear again. Promising clues went unnoticed. And smart intelligence officials struggled alone, piecing together what they knew based on what they could get. Moussaoui’s belongings (which included additional leads to the 9/11 plot) sat unopened for weeks as agents desperately tried to obtain a search warrant -- unaware of the Phoenix memo or the existence of another terrorist in FBI custody who could have identified Moussaoui from al Qaeda’s training camps. Similarly, two weeks before 9/11, an FBI agent was searching blindly for al-Mihdhar and al-Hazmi in

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9The Phoenix memo reached some officials in New York and was forwarded to the Portland office, which took no action. No other field offices received it. The Moussaoui investigation was known by a handful of headquarters officials and some agents in the bureau’s Oklahoma City field office who had been dispatched to Airman Flight School, which Moussaoui had previously attended. (U.S. House and Senate 2002b; Zegart 2007).

10 There is one exception: CIA Director George Tenet was briefed about the Moussaoui investigation, but believed it was an FBI case and therefore took no further action (9/11 Commission 2004, 275).
New York Marriott hotels, completely unaware that the Bureau’s San Diego field office had an informant and several other subjects of counterterrorism investigations who knew both terrorists. In these cases, and twenty others, someone somewhere in the intelligence bureaucracy noticed something important. A string of Jihadist flight school students in Arizona, a suspicious extremist at a Minnesota flight school, two suspected al Qaeda operatives with U.S. visas in their passports -- these and other signals were not drowned out by the noise. They were found, and then subsequently lost in the bowels of the bureaucracy (Zegart 2007).

Cognitive bias was not the culprit. Organizational structure was. FBI signals were never put together before 9/11 because the Bureau’s field office structure was designed to keep them apart. FBI field offices were supposed to work independently, carefully and slowly investigating past crimes, case by case, in discrete jurisdictions. They were never designed to track broad terrorist plots that spanned the country and required fast action to forestall catastrophe. In addition, although CIA Director George Tenet believed the system was “blinking red,” his Central intelligence Agency was not, in fact, centralizing intelligence across agency lines. Why? Because it never could. By law, the U.S. intelligence system was splintered into a dozen different agencies, and the CIA Director had little more than “whining rights” over their budgets, personnel, and activities.

Even a cursory look at the Cuban missile crisis suggests that structural fragmentation appears to have played a similar role then, isolating and
weakening signals rather than concentrating and amplifying them. In 1962, just as in 2001, the Central Intelligence Agency was central in name only. Created just fifteen years earlier, the CIA had been hobbled from birth by existing intelligence agencies in the State, Justice, War and Navy departments, all of whom vigorously protected their own missions, budgets, and power. The CIA, in fact, did not control the intelligence budgets or activities of the Defense Intelligence Agency, the National Security Agency, or any of the military intelligence services, all of whom reported to the secretary of defense. What’s more, the Bay of Pigs debacle of April 1961 made a weak CIA even weaker. Kennedy’s own distrust was so great that he sacked CIA Director Allen W. Dulles and replaced him with a man none of his inner circle trusted: John McCone, a Republican businessman with staunch anticommunist leanings and no professional intelligence experience.

This structure meant that intelligence reporting and analysis of the Cuban situation was handled by half a dozen different agencies with different missions, different specialties, different incentives, different levels of security clearances, different access to information, different interpretations of the findings, and no common boss to knock bureaucratic heads together short of the president. The Defense Intelligence Agency photographed deck cargoes of Soviet ships en route from the Soviet Union. The Navy conducted air reconnaissance of ships entering and leaving Cuba. The CIA ran human agents in Cuba, but jointly operated a special Cuban refugee debriefing center in Florida with the military. The State
Department handled diplomatic dispatches. The National Security Agency intercepted communications indicating Soviet ship movements, radio transmissions in Cuba, and other signals intelligence. At first the CIA, and then the Strategic Air Command, manned U2 reconnaissance flights over Cuba. Estimates, finally, were technically produced by the CIA’s Office of National Estimates but coordinated and approved by an interagency group called the U.S. Intelligence Board. In short, in 1962, as in 2001, there were many bureaucratic players and no one firmly in charge of them all.

Although a more thorough organizational analysis of how every signal was processed through the bureaucracy lies beyond the scope of this paper, initial evidence does suggest that organizational fragmentation existed, and that it had the effect of delaying action and hindering signal consolidation. For example, retrospective examinations by both the CIA and the President’s Foreign Intelligence Advisory Board found that there was “rigid compartmentation” between aerial imagery collectors and CIA analysts and that this structural divide kept the CIA from disseminating reports and information about the possibility of offensive Soviet weapons in Cuba before the Oct. 14th discovery of missile installations (President’s Foreign Intelligence Advisory Board February 3, 1963; Central Intelligence Agency 1962 Item #127) The President’s Foreign Intelligence Advisory Board report on the crisis, which was completed in February 1963, finds that before October 14th, CIA analysts did not publish any information indicating a potential offensive buildup in Cuba in the president’s
daily intelligence checklist, the most important current intelligence product. The reason: the agency’s rules required that any report that could be verified by photographic evidence first had to be sent to the National Photographic Interpretation Center (NPIC), a separate CIA unit located in the Directorate of Science and Technology (President’s Foreign Intelligence Advisory Board February 4, 1963). For CIA analysts housed inside the agency’s Directorate of Intelligence, this was the bureaucratic equivalent of Lower Slobovia. What’s more, there was no systematic process to inform analysts about the status of their aerial verification requests to NPIC, so requests could languish or simply disappear without any further action (Central Intelligence Agency 1962, Item #127). Without any idea whether further action would ever be taken, analysts simply withheld information from their written products. The President’s Foreign Intelligence Advisory Board found that analysts mistakenly interpreted the verification rule as an outright ban on publishing all reports of offensive Soviet weapons without definitive photographic proof (President’s Foreign Intelligence Advisory Board February 4, 1963).

This same rigid bureaucratic division between analysis and photographic collection created a filter that appears to have hindered initial signal detection as well. According to the PFIAB chronology, a September 9th report from Castro’s personal pilot claimed that there were “many mobile ramps for intermediate range rockets,” an item subsequently deemed significant. At the time, however, it was given only “routine” precedence because the CIA analyst who saw it was
charged with identifying information relevant for aerial surveillance, and thought the information was “too general” to be of targeting use (Central Intelligence Agency 1962, item #118).

In short, preliminary evidence suggests that the same organizational barriers operating on 9/11 were also at work during the missile crisis. Indeed, given the long and sordid history of intelligence coordination problems, it seems unlikely that Cuban intelligence reporting constituted a shining exception where intelligence warning signals were collected, assessed, and disseminated by a well-oiled coordination machine. Instead, in both cases, bureaucratic jurisdictions and standard operating procedures ended up creating invisible fault lines within and across intelligence agencies that kept signals from converging. Structural fragmentation made it likely that signals would get lost, even after they had been found.

*Question 2: Why were all four of the pre-crisis estimates so consistent, even in the face of alarming new evidence of a Soviet military buildup?*

The four pre-crisis intelligence estimates of 1962 raise a second perplexing question: why were these formal intelligence products so consistent even when intelligence reporting showed a dramatic uptick in Soviet military deployments to Cuba? Or more precisely, why did that final September 19th special estimate

\[\text{11For original document with “routine” precedence marking, see McAuliffe 1992, 105.}\]
draw old conclusions about Khrushchev’s intentions despite new evidence that the Soviets were sending weapons and personnel in unprecedented numbers at unprecedented rates in August and September?

Recall that the estimate clearly indicated conditions on the ground had changed since the previous estimate, which was published on August 1, 1962. The September 19th estimate begins by defining its task as assessing “the strategic and political significance of the recent military buildup in Cuba and the possible future development of additional military capabilities there.” And it devotes substantial attention to discussing the precise nature of the buildup, declaring as fact that “In July the Soviets began a rapid effort to strengthen Cuban defenses against air attack and major seaborne invasion.” Notably, there are few estimative caveats in this section such as “we judge,” or “we assess” or “it is likely.” Instead, the estimate states as a point of fact three developments: “the bulk of the material delivered” to Cuba is related to the installation of 12 SA-2 surface-to-air missile sites on the Western part of the island; new shipments also include tanks, self-propelled guns, other ground force equipment, and eight “Komar” class guided missile patrol boats to augment Cuban defenses; and a “substantial increase in the number of Soviet military personnel from about 350 early this year to the current level of about 4,000.” The estimate is more speculative and less certain about other aspects of the buildup: when existing SAM sites would be operational, the possible installation of additional surface-to-air missile sites on the eastern half of the island, the number of MIG-21
interceptors deployed, future deliveries and missile capabilities of Komar class patrol boats, and the identification of recent crates, large boxes, and vans, which were believed to contain electronics and communications gear. Although the estimate notes that MIG fighters could be used for offensive purposes, it concludes, “Nevertheless, the pattern of Soviet military aid to date appears clearly designed to strengthen the defense of the island….” (SNIE 85-3-62, 1962).

Other than the MIG discussion, the estimate confines its assessment of possible offensive weapons – including a submarine or strategic missile base -- to a different section titled, “Possibilities for expansion of the Soviet buildup.” This report structure had the effect of sharply distinguishing present intelligence reporting about the military buildup from speculation about future possibilities. According to the estimate, intelligence about the buildup clearly showed the Soviets adopting a defensive posture, just as earlier assessments had concluded. The estimate does ponder the future, noting, “The USSR could derive considerable military advantage from the establishment of Soviet medium and intermediate range ballistic missiles in Cuba, or from the establishment of a Soviet submarine base there.” However, it concludes that “Either development… would be incompatible with Soviet practice to date and with Soviet policy as we presently estimate it” (SNIE 85-3-62, 1962). In other words, earlier judgments about Soviet objectives and intentions still held.

In the immediate aftermath of the crisis, Kent took a great deal of criticism for the September 19th estimate. Nearly all of it centered on analytic
misjudgments, particularly mirror imaging or the tendency for analysts to believe an adversary will behave as they would (Kent 1964; Knorr 1964; Wohlstetter 1964-5). And as noted above, more recent scholarly work also focuses on problems of perception and cognition. According to this work, American estimators failed to see the world or weigh the costs and benefits of the missile deployment through Soviet eyes.

But mirror imaging was not the only problem hindering the estimates process; organizational pressures were also driving strongly toward conformity and consistency across the four Cuba estimates. These reports were not the product of a single mind, a single view, or even a single agency. They were collective reports that required interagency coordination and consensus. And that organizational fact of life tilted the whole estimating machine toward consistency over time. Why? Because consistency was what policymaking customers expected to find. Presidential advisors did not need to be convinced that the world essentially looked the same today as it did last month. But they did need to be convinced that the world looked different. Where consistency was a given, inconsistency had to be explained, justified, and defended. Changing a previous estimate required taking a fresh look, marshaling both new and old facts, and laying out what had shifted, and why. That, in turn, meant overcoming immense bureaucratic inertia -- convincing every intelligence agency involved in the estimating process that what it said or assessed or wrote or agreed to the last time should be discarded or modified this time. Changing an earlier estimate did
not just take more work inside each agency. It took more work negotiating new agreement across them. Generating interagency consensus on a new estimate that said, “we have changed our collective minds,” was invariably harder than producing a report that said, “Once again, we agree with what we wrote last time.” In short, organizational dynamics naturally gave consistency the upper hand.

Political considerations only exacerbated these problems. By political considerations, I do not mean to suggest that estimators bent their judgments to curry favor or told policymakers what they wanted to hear. Instead, my point is that estimating has always involved a political “catch 22:” any new estimate that revises earlier judgments can be seized – however unjustifiably -- as proof that earlier estimates were wrong. We saw these politics play out in living color in 2007, when the National Intelligence Council dramatically changed its estimate of Iran’s nuclear weapons program. While earlier estimates judged Tehran to be developing a vigorous nuclear weaponization program, the 2007 estimate considered new evidence and concluded that Tehran had probably frozen its nuclear weapons program back in 2003. The revised estimate marked an intelligence success: intelligence agencies had obtained new evidence and drew a different, presumably more accurate, conclusion. Nevertheless, the new and improved Iran estimate was seized by Republicans and Democrats alike as evidence of an earlier estimating failure.
The political atmosphere surrounding the Cuba estimates was no less intense. The Cold War stakes had never been higher and the CIA had already caused Kennedy a devastating defeat in the Bay of Pigs invasion just eighteen months earlier. Now, with midterm congressional elections just weeks away, the pressure to “get Cuba right” was tremendous. In this environment, an intelligence estimate that gave serious consideration to a new, more ominous reading of the Soviet buildup would almost certainly have been read as an indictment of earlier, less alarming estimates. And it would have contradicted earlier public assurances by the president himself, as well as his closest advisors, that the Soviet buildup was purely defensive in nature. Such considerations may not have been in the foreground of the estimates process, but it is hard to imagine that they were not in the background. At that precise moment, on that particular topic, consistency was a safe and prudent course while inconsistency carried substantial risks, both for the Intelligence Community and the president.

*Question 3: Why didn’t anyone offer dissenting views in the intelligence estimates?*

The above discussion helps illuminate why the estimates were consistent even when confronting dramatically new facts. It does not, however, explain why the estimates failed to contain any dissenting views. As noted earlier, footnotes were used to provide dissenting opinions in estimates of other subjects written during the same period. Why, then, were they not used in the pre-crisis estimates of 1962, particularly the September 19th assessment?
The usual explanation is that no strong dissenting opinions existed. As Wohlstetter writes, “let us remember that the intelligence community was not alone. It had plenty of support from Soviet experts, inside and outside the Government. At any rate, no articulate expert now claims the role of Cassandra” (Wohlstetter 1965-5, 701). But there was at least one: CIA Director John McCone, who suspected Soviet missiles from the start. As many have pointed out, McCone was a paranoid anti-communist who always seemed to find signs of aggressive Soviet behavior, and was often wrong (Garthoff 1998, 49; Blight and Welch 1998, 5-6). This time, however, his hunch proved correct.

McCone was no wallflower. In fact, the historical record shows that he forcefully advocated his hypothesis about Soviet missiles with senior Kennedy advisors on several occasions, starting in August 1962. And after surface-to-air missile (SAM) sites were discovered, he sent a relentless series of cables to Washington from his European honeymoon, again strenuously asserting his hypothesis (the SAM sites, he believed, had to be guarding something important) and requesting additional reconnaissance (Usowski, 1988). 12 The CIA Director was not afraid to make his case or make it often. The question, then, is why he never did so in the national intelligence estimates.

12 See cables from McCone to CIA Deputy Director Marshall Carter, September 7, September 10, September 13, and September 15, 1962, in McAuliffe 1992, 50-51; 59-60; 67-68; 77-79.
Both Garthoff (1998) and Wirtz (1998) argue that McCone refrained from foisting his opinions or judgments on the estimates process, and conclude that this was a good thing. “DCI McCone deserves credit for allowing SNIE 85-3-62 to contain conclusions that clearly contradicted his views,” writes Wirtz. “If McCone had interfered in the SNIE in a heavy-handed way...analysts would have objected to what inevitably would have been viewed as politicization of their estimate” (Wirtz 1998, 137). Organization theory, however, suggests a very different possibility: that the estimating machine may have been working so smoothly, it failed utterly.

The key idea is a phenomenon called “structural secrecy.” Briefly put, the notion is that all organizations specialize to increase efficiency, and specialization turns out to be a double-edged sword. On the one hand, dividing labor into subunits enables experts to tackle specialized tasks in specialized ways. On the other hand, however, specialization generates organizational structures and standard operating procedures that filter out information and keep an organization from learning. Standard ways of writing reports, assembly line production processes, and rigid communication channels -- all of these things help managers work across sub-units efficiently. But they also keep ideas that do not fit into the normal formats and channels from getting heard. Reports, for example, are written in certain ways, with certain types of information, for certain purposes, and certain audiences. This setup is designed to create a standard product precisely by weeding out non-standard ideas and approaches.
Organizations are filled with these kinds of standard formats and operating procedures. The trouble is that the more that things get done the same way each time, the harder it is to do things differently. The entire system becomes a well-oiled machine that, by its very existence, keeps alternative ideas or ways of operating from getting through. Information that could be valuable to the organization remains hidden. Organizational structure creates its own kind of secrecy (Vaughan 1996).

The estimates process in the Cuban missile crisis seemed ripe for structural secrecy problems. It was highly specialized, with multiple units, offices, and agencies collecting and analyzing different pieces of the Cuba intelligence puzzle. It was also highly routinized. Kent himself describes the estimates process as a “machine,” with specific stations, regularized processes, and an “assembly line” production. The process was well honed, and the product was highly standardized. Notably, one of the key features of the estimating machine was its evidentiary standard for revising earlier estimates or voicing dissenting views. Kent writes extensively about what it would have taken to revise the September 19th estimate or offer a dramatically different, stronger view of the buildup and concludes that the evidence was simply not there. “[T]hese pre-October 14 data almost certainly would not, indeed should not, have caused the kind of shift of language in the key paragraphs that would have sounded the tocsin,” he writes (Kent 1964, 6). The same was true of footnotes, which were ordinarily used for airing disagreements about evidence.
In other words, the estimating process was all about data: collecting it, interpreting it, distilling it, and assessing what it meant. The machine started with evidence and ended with judgments. The CIA Director’s approach never fit into this standard operating procedure. Indeed, McCon...
And yet, some of the most powerful barriers to effective intelligence warning remain relatively unexplored. Intelligence, at its core, is a collective enterprise. Organizations are not passive players, where individuals do all of the hard thinking and make all of the tough calls. Instead, organizations powerfully influence whether signals get amplified or weakened, whether analysis looks backward at continuity or leans forward toward disjunction, and whether dissent gets highlighted or hidden.
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