

## A New Quantitative Approach to an Old Question

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***We offer an alternative, quantitative analysis of intelligence definitions and intelligence organizations worldwide to advance the debate over the correct definition of intelligence.***

In numerous books, manuscripts, and journal articles (including recently in these pages), IC practitioners have offered their definitions of “intelligence” and why the definition is important to practitioners. These works—including Kent (1949), Bimfort (1958), Random (1958), Lowenthal (1999), Warner (2002), and Simms (2022)—are must-reads for intelligence-studies scholars and represent a venerable who’s who in the discipline. Spanning some seven decades of scholarship, the volumes provide qualitative assessments of what intelligence is and is not. (The above, later cited works, and additional readings are listed in full bibliographic detail beginning at “References” on page 13.)

In this article, we offer an alternative, quantitative analysis of intelligence definitions and intelligence organizations worldwide to advance the debate over the correct definition of intelligence, which we hold to be:

*National security intelligence is a secret state activity to understand, influence, or defend against a threat to gain an advantage.*

As we will demonstrate, this definition iterates upon existing definitions and includes all of the key elements required for practitioners and scholars alike. Practitioners may use the definition to describe their work.

Academics may use the definition to identify intelligence as a phenomenon, develop theories, and test causal relationships.

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### ***Why Develop Definitions?***

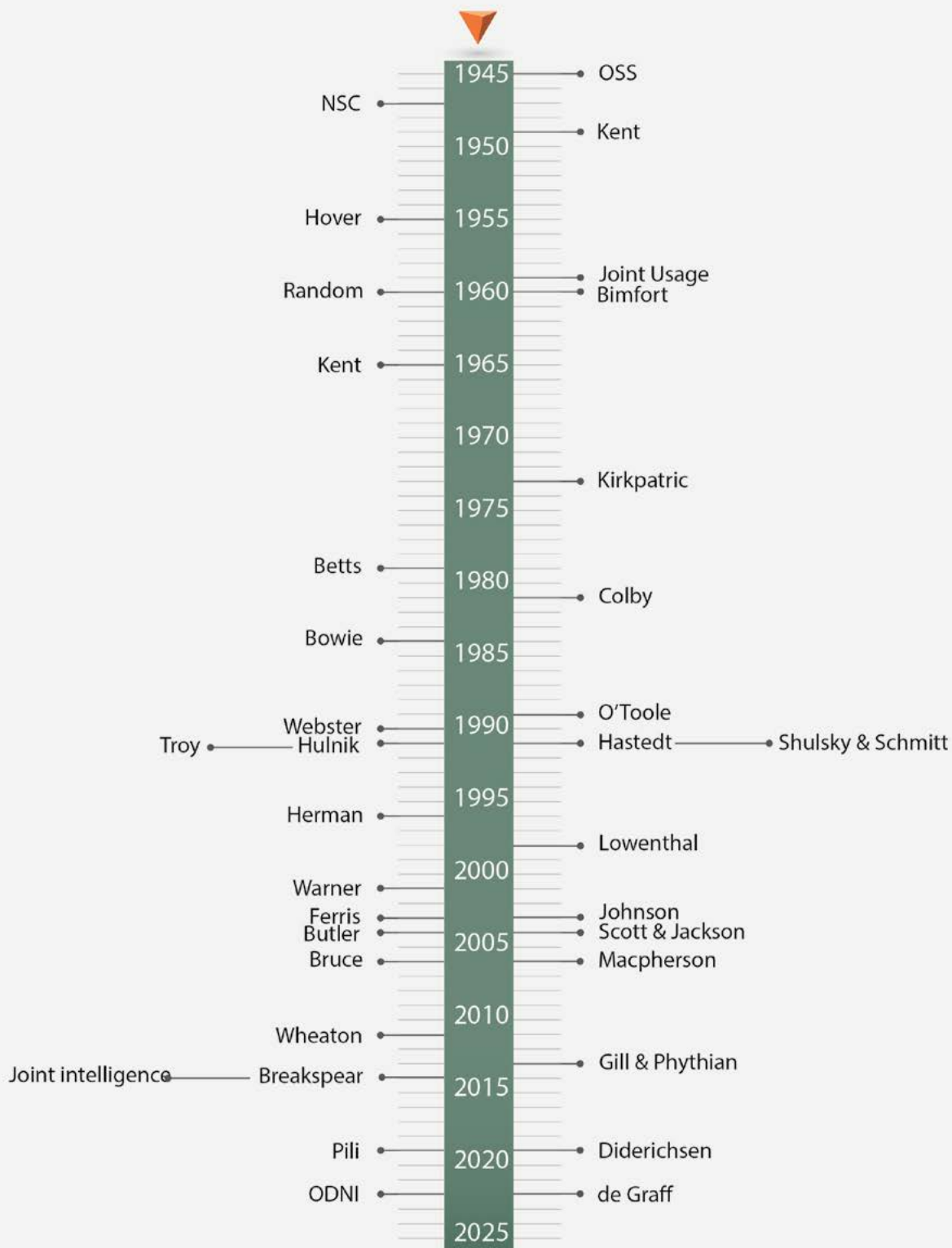
The scientific method was developed to challenge traditional notions of the absolute truth of knowledge. Individuals employing the scientific method seek to develop relevant and accurate statements that serve to explain an observed phenomenon or examine the validity of observed causal relationships of interest. Adherents to the scientific method believe that absolute truth can never be found. Instead, claims that are supported by the strongest current evidence are accepted but may always be rejected if new evidence proves them to be false.

Social scientists using the scientific method develop operationalized definitions. Operationalization is a process for assigning rules so a defined phenomenon or object may be measured or a hypothesis of causal relationships tested. Operationalized definitions facilitate measurement and objectivity, because a discrete observer should be able to make the same observation or measurement under similar conditions. Beyond technical definitions used for specific scientific activities, broader definitions may be used to generally

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Figure 1. National Security Intelligence, 1945–2023



classify phenomena or the objects of study. Intelligence is a phenomenon that can be defined. Researchers can develop measurable variables for intelligence. For example, by counting the intelligence organizations countries operate, researchers can develop descriptive statistics and determine if there are patterns. In some cases, identifiable patterns may be predicted using statistical methodologies.

The 1948 National Security Council Intelligence Directive No. 3 states, “National Intelligence is integrated departmental intelligence that covers the broad aspects of national policy and national security.” This tautology is an example of applying Supreme Court Justice Potter Stewart’s “I know it when I see it” standard.<sup>a</sup> Many definitions of intelligence have been proposed, lamented, and debated both inside and outside the IC.

### Existing Definitions

In 1955, Sherman Kent called for a comprehensive intelligence literature that included rigorous definitions. Over the intervening years, many practitioners and scholars have responded. Wesley Wark (1994, 4) called efforts to define intelligence a “separate project” among scholarly work in the domain. A RAND practitioner/academic workshop titled “Toward a Theory of Intelligence” found no consensus on a definition (Treverton et al., 2006, 20). A survey of academics and practitioners published in the journal *Intelligence and National Security* notes that defining intelligence is one of the principal scholarly debates advancing

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knowledge in the domain (Johnson and Shelton, 2013, 110).

These findings are not due to a lack of definitions. We identified 36 definitions of intelligence in practitioner, scholarly, and legal works from 1945 through 2023 (figure 1, opposite). We plot a different course in this narrative, providing a quantitative analysis to highlight the critical elements that must be included in a definition of intelligence.

### **The Boundaries of this Study**

As a boundary condition, we stipulate that the type of intelligence we are investigating is focused on national security and practiced by national governments. If we were developing a typology of intelligence practiced by heterogeneous organizations, we would use examples of real-world activity to develop categories. For example, private-sector organizations such as oil companies collect and analyze information that helps their decisionmakers limit risk. Law enforcement agencies collect criminal intelligence to facilitate their investigations or proactively interdict illicit activity. Terrorist entities conduct intelligence activities to plan their violent actions.

Although these are all categories worthy of study, we leave them to other scholars. The units of analysis we are interested in are the government agencies practicing intelligence. We specifically exclude intelligence oversight organizations from our focus, as these entities generally focus on accountability or compliance.

### **Term-Document Matrix**

We used a text-mining framework to compile the definitions for analysis and to create a term-document matrix (TDM). A TDM is a mathematical representation of a corpus of text, in which rows represent unique terms in the vocabulary and columns represent documents in the corpus. The matrix contains a count or frequency of each term’s occurrence in each document. Each cell in the matrix corresponds to a specific term and document combination, and its value indicates the number of times that the term appears in that document.

The compiled definitions contained a total of 608 words, of which 345 were unique. The TDM sparsity was 96 percent, meaning that most of the terms in the vocabulary do not appear in most of the definitions in the corpus. As seen in the word cloud (figure 2), the words “information,” “policy,” and “foreign” are prominent, proportional to their count in the corpus.

What can we glean from this analysis? The definitions that exist likely meet their authors’ requirements; however, the lack of common keywords represents the lacuna of operationalized definitions with specific measurable components.

We can sample the definitions to test this hypothesis. The definition with the fewest words is Troy’s (1991) adoption of Constantine Fitzgibbon’s assertion that intelligence is “knowledge of the enemy.” While Troy vigorously defends his assertion that this is the “correct”

a. See Paul Gewirtz, “On ‘I Know It When I See It,’” *Yale Law Journal* 105, no. 4: 1023–47 (1996).



covert actions conducted to influence threats.

National leaders see foreign intelligence activities as threats, and thus they expend resources to develop counterintelligence capabilities. Counterintelligence may be broadly defined as “information collected and analyzed, and activities undertaken, to protect a nation (including its own intelligence-related activities) against the actions of hostile intelligence services.” (Shulsky and Schmitt 1991, 99) The term “counterintelligence” was found in three of the 36 (8.3 percent) intelligence definitions. We searched for synonyms such as “defend” or “protect” without success. The terms “safeguarding,” “subversion,” and “unauthorized” each occurred in one (2.7 percent) of the definitions. Counterintelligence is also undertaken to limit the risks from inadvertent or intentional breaches in security, such as the leaking of information. We argue that counterintelligence must be included in an operationalized definition of intelligence.

#### **Instrument of Foreign Policy**

The three most prevalent terms in the definitions—“information” in 26 of 36 (72.2 percent), “policy” in 15 of 36 (41.7 percent), and “foreign” in 14 of 36 (38.9 percent)—indicate that the authors of the definitions see intelligence as a foreign policy tool. Johnson’s definition of intelligence, the longest in the corpus, is representative of the key elements found in the corpus of definitions from 1945 to 2023. He argues that intelligence is

*a set of activities conducted by government agencies that operate largely in secret. These activities include, foremost, the*

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**After examining even a cursory sample of state intelligence activities, we can clearly see that a general definition of “national security intelligence” should not be limited to a focus on foreign entities or policy; many governments use intelligence as tools of power over their own citizens.**

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*collection and interpretation of information drawn from a mixture of open and clandestine sources to arrive at a product—knowledge—useful to illuminate foreign policy deliberations.... They also engage in covert action to advance a nation’s international interests by seeking clandestinely to manipulate events and conditions abroad.... These agencies have a mandate to conduct counterintelligence operations designed to protect a nation’s citizens and secrets against attacks from hostile intelligence services and other threats (Johnson 2003, 1).*

Yet Johnson’s definition, like many of the definitions in the corpus, has a substantive deficiency that must be addressed.

The definitions in this corpus come from Western authors who may be guilty of mirror imaging. For example, readers would be forgiven for thinking that intelligence is exclusively used as a tool for foreign policy after reading the definitions we analyzed. This may be true for many democratically governed countries, but what about more authoritarian states? In his contribution to the 1988 book *Comparing Foreign Intelligence*, John Dziak notes that in many states, “the security service and foreign intelligence tend to be the same organ of the state.” (66) As Christopher Andrew and Vasili Mitrokhin (2001, 561) note in their book *The Sword and the Shield*, the

KGB was essential to the conduct of Soviet foreign policy as well as to the running of the one-party state.

*Brassey’s International Intelligence Yearbook* profiles the intelligence organizations in 50 countries, many of which focus on both foreign and domestic threats (Henderson, 2003). After examining even a cursory sample of state intelligence activities, we can clearly see that a general definition of “national security intelligence” should not be limited to a focus on foreign entities or policy; many governments use intelligence as tools of power over their own citizens.

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#### **Quantifying Intelligence Agencies**

Over the past five years, we have worked with students to collect data for the National Security Intelligence Dataset (NSID). The NSID contains information on 416 intelligence agencies in 113 United Nations member states and Taiwan. These countries represent 58 percent of the UN’s total membership and 89 percent of the world’s population. Agencies in the NSID are official state organizations whose function is to conduct national security intelligence activities. Government entities that provide oversight of intelligence organizations are not included. The NSID does not include the financial intelligence units of most countries; only FIUs that are specifically part of a country’s intelligence services are included in the NSID.

## What is Intelligence?

	Count	Percent	N	SD
<b>HUMINT</b>	264	66.8	395	0.47
<b>TECHINT</b>	315	78.3	402	0.41
<b>Analysis</b>	360	89	405	0.31
<b>Counterintelligence</b>	290	73	397	0.44
<b>Covert Action</b>	58	4.7	394	0.35

Table 1. National Security Intelligence Dataset of 316 intelligence organizations shows the emphasis on collection, analysis, counterintelligence, and covert action. Agencies may have multiple functions, so these variables are not mutually exclusive.

Many of the organizations found in the NSID have a single function, national security intelligence. Other organizations included in the NSID have multiple roles. For example, interior ministries frequently have domestic security functions in addition to a national security intelligence role.

Using the NSID, we summarized the functions of each country's intelligence agencies. The average number of intelligence organizations found in states is 3.67, with a high of 18 and a low of 1. There were 234 civilian (56.3 percent) and 181 military (43.6 percent) intelligence agencies. Table 1 presents data on the types of activities that an intelligence agency performs. Agencies may have multiple functions, however, so the shown variables are not mutually exclusive.<sup>a</sup>

How do these data contrast with the definitions of "intelligence" that we analyzed? Recall that collection was in 36.1 percent of the definitions and analysis was in 16.6 percent. HUMINT and TECHINT are activities undertaken by the majority of intelligence organizations included in our study. Analysis, found in a minority of the definitions, is an activity in the vast majority (89 percent) of the intelligence entities in our study.

Counterintelligence, found in only 8.3 percent of our definitions, is conducted by almost three-quarters (73 percent) of the organizations we identified that conduct government intelligence activities. Covert action was found in 11.1 percent of our definitions. We found that 4.7 percent of the intelligence organizations we identified conducted covert activity.

What are the countries doing with the intelligence they gather? We argue that national security intelligence is focused on both foreign and domestic adversaries. In the NSID, we developed a variable regarding the focus of the intelligence agency. We made judgments based on available open sources to answer the question: Did the agency primarily focus on foreign intelligence (including military intelligence) or on domestic intelligence used to give the government control over its population? We defined domestic intelligence as collection, analysis, and covert activity focused on a country's own citizens.

Of the 416 intelligence organizations we evaluated, 268 (64.6 percent) primarily focused on foreign intelligence, while 147 (35.4 percent) focused on domestic intelligence. Because over one-third of the intelligence agencies we surveyed for the

NSID focused primary on domestic intelligence, a definition of "intelligence" must not be limited to a focus on foreign targets. These data indicate that the intelligence agencies of many countries target their own citizens, and any definition of "intelligence" must account for this reality.

There is one more critical issue that should be noted in current definitions of intelligence. Many definitions characterize the focus of intelligence as countries or other foreign adversaries (countries) or groups (nonstate actors). Yet, the National Intelligence Council's latest long-range forecast, *Global Trends 2040: A More Contested World*, (ODNI March 2021) lists environmental and emerging technology developments as structural forces setting and breaking boundaries in the future. The publicly released National Intelligence Estimate on challenges to US national security posed by climate change articulates the risk from a threat that is potentially greater than any single country (ODNI October 2021).

Anyone who has experimented with ChatGPT can immediately recognize the parallels with Gartin's (2019) *Studies* article, "The Future of Analysis," in which machines enhance human activity. These examples demonstrate that, in practice, national security intelligence activity is broader than an exclusive focus on other countries or human adversaries. Intelligence is gathered on forces that shape what other countries and human adversaries can accomplish.

a. Each category has slightly fewer observations than the total of 416 due to missing data.

### Offering a New Definition

In proposing a definition of “intelligence” that may be broadly adopted, we build on existing work from Warner (2002). We propose the following modified definition: *National security intelligence is a secret state activity to understand, influence, or defend against a threat to gain an advantage.*

Our definition includes all of the key elements required for practitioners and scholars alike. Practitioners may use the definition to describe their work. Academics may use the definition to identify intelligence as a phenomenon, develop theories, and test causal relationships.

Defining intelligence in a uniform manner is a necessary first step to advancing the conversation on the study of intelligence. Potential next steps involve using the definition to deepen and broaden our understanding of

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intelligence. The methodologies used to study intelligence, notably the use of quantitative analysis, may allow us to drill down and explore relationships between variables. In concert, practitioners and scholars may expand the nature of the qualitative questions they ask concerning intelligence. Here, we identify two possible questions (and acknowledge many more exist).

First, how is intelligence used regarding public goods problems such as climate change, pandemics, and emerging technologies? Intelligence may provide policymakers with a decision advantage in addressing collective goods negotiations between countries, however, key aspects of intelligence may not be relevant to policy decisions on collective goods at all.

A second question centers on the ongoing investigation of the relationship between intelligence practitioners and policymakers. Literature exists on specific issues, such as the politicization of intelligence, yet perhaps a broader lens is needed to explore the underlying dynamics of the policymaker–intelligence dynamic. Are the literature and methods used to investigate civil–military relations relevant to develop a broader understanding of civil–intelligence relationships?

Although we believe our proposed definition of intelligence is authoritative, we look forward to a conversation with our readers. We have found what we consider a useful definition of intelligence; however, some readers of *Studies in Intelligence* are sure to find areas to constructively critique our work.



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