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Introduction

Intelligence collection is one of the earliest recorded organized human activities, along with war. The earliest writing about intelligence collection dates from the seventh and sixth centuries BCE: Caleb the spy in the Book of Numbers and *The Art of War* by Sun Tzu. It is striking that two cultures, ancient Hebrew and Chinese, geographically remote from one another and undoubtedly unknown to one another, should both discuss the importance of intelligence collection at roughly the same time in an early part of human history. But the precept is elementary at its core—information confers power. Whoever is best at gathering (and exploiting) relevant information tends to win. In the twenty-first century, the U.S. Intelligence Community (IC) is premier in its capabilities for doing both.

Collection in the IC generally refers to five disciplines (or sources): Open Source Intelligence (OSINT), Human Intelligence (HUMINT), Signals Intelligence (SIGINT), Geospatial Intelligence (GEOINT), and Measurement and Signature Intelligence (MASINT). A great deal of mystery and myth surrounds the subject of those sources and the capabilities and uses implied. And many popular perceptions are far afield from reality. That is why we have written this book. Our intention is to give readers an approachable but detailed picture of U.S. intelligence collection capabilities. To that end, each chapter follows a similar construct. We discuss the unique origin and history of the INT, or intelligence collection discipline, which is important to understand in terms of both its development and how it is used today. We discuss the types of intelligence issues that each INT is best suited for and those for which it is of little help. We also discuss issues involved in managing each INT, introducing what is sometimes called the TPED or TCPED process: tasking, collection, processing, exploitation, and dissemination. Each INT, no matter the sources it targets or whether it is a technical or non-technical INT, must go through the TPED process in order to produce intelligence that can be used by analysts and policymakers.

We would also note that although this book is U.S. centric, the United States is not the only nation to use these techniques. Many nations now collect GEOINT from space; many also have SIGINT and some MASINT capabilities. HUMINT and OSINT are the most "democratic" intelligence disciplines, as they require no advanced technology. It is difficult to imagine a state that does not conduct HUMINT and pay attention to OSINT.

A note about this book's organization: we have chosen to address the INTs within their traditional "stovepipes"—meaning in parallel but separated activities, INT by INT. It is the best way to provide a detailed and coherent discussion of core capabilities. It is also important to understand that this is the collectors' view. Let us put some context into how these silos, or specialty organizations, evolved.

Properly speaking, the IC should not be described as an organization. Though it has a titular head (the director of National Intelligence [DNI]), it has many independent components with different organizational structures, roles and missions. The current IC was not planned. It developed into its present form over time as a result of laws, executive decisions, experience, and new capabilities.

The IC developed after World War II and the enactment of the National Security Act of 1947, which created the director of Central Intelligence and the Central Intelligence Agency (CIA). In the following decades, specific organizations were created to collect and process different types of intelligence. For example, the National Security Agency (NSA) focused on SIGINT—especially the collecting, processing, decrypting, and analyzing of adversaries' communications. The CIA Directorate of Operations developed expertise in spotting, recruiting, vetting, tasking, and running clandestine human sources. The National Photographic Interpretation Center (NPIC) became the technical experts in the interpretation of imagery—first from aircraft and then from satellites as well. Again, these specialty organizations operated as information silos and thus became known as stovepipes. Each managed the TPED process of raw intelligence, essentially without interference from the others. At the time, it was an efficient and effective approach to conducting challenging and diverse collection tasks. However, as intelligence collection grew in size and complexity, multiple agencies became involved in each INT. NSA and CIA both collected SIGINT. CIA, the Defense Intelligence Agency (DIA), and the military services all collected HUMINT. And every agency collected OSINT. The result was duplicative efforts, wasted resources, and often budget competition that promoted information hoarding rather than information sharing. Cross-INT management became a major issue, and we discuss this in the closing chapter of the book.

Throughout the chapters of this book, we urge the reader to keep in mind that there are individuals who are responsible for creating strategies and managing overall collection so that the INTs perform in a more integrated manner. The goals are to identify and close gaps in collection and to use the different INTs either to support or to raise questions about one another's collected intelligence—both of which are important analytically. Collectors would be the first to acknowledge that they must understand the overall objectives of the collection effort in order to respond most effectively to the intelligence requirements. Analysts have a role to play here. Without analysis to detail what is missing, to assess the collection and to give it context, collection is much less useful. So analysts need to understand the capabilities of collection systems to be able to apply those to their intelligence issues effectively. The analysts often have the best understanding of

the target and therefore can help develop a collection strategy to get the desired intelligence. We need both collection and analysis, as DNI James Clapper has urged in his emphasis on intelligence integration.

Some Important Definitions

All intelligence collection disciplines have their specialized jargon, or short-hand for communicating concepts. Some of these terms are explained in the appropriate chapters of this book. A few terms are common to almost all collection, and their definitions are given next.¹

Clandestine versus covert: These two terms are often confused by the layman. They tend to be used interchangeably, but they have distinct meanings in intelligence. Clandestine refers to something that is secret but attributable; covert is secret but not attributable. So, for example, if an agent is caught trying to recruit a spy, his home country will likely acknowledge their relationship, as they want him returned. That makes him clandestine. But they will never admit what he was doing. That is covert.

Collateral: This term has a very specific meaning in all collection organizations. It refers to material or information that is extrinsic to the organization—usually reporting or intelligence that is produced by another INT. A communications intelligence (COMINT) organization that used imagery to supplement a COMINT report would refer to the imagery as *collateral*. Conversely, a GEOINT organization would refer to any COMINT used in its reporting as collateral.

Collection: This term has two meanings in practice, and both meanings are used in this book. It can mean the entire process, from the planning stage to the dissemination of raw intelligence—which is the meaning that is applied in this book's title. Or it can mean one step in the process where information or something else of intelligence value is physically acquired. The context usually suggests which meaning is relevant.

INTs: Collection disciplines are often called "INTs" as shorthand because they have a common suffix—for example, SIGINT, MASINT, and HUMINT.

Multi-INT versus all-source analysis: The difference between these two terms is a controversial issue. Some authors argue that there is no difference. Others distinguish multi-INT analysis (often called multi-INT fusion) as being the merging, or fusion, of raw intelligence from different collection sources—usually GEOINT and SIGINT—as opposed to all-source, which will involve other INTs as well. The controversy usually arises from the analysis added to the report, with the chief complainants being the all-source analysts or managers who argue that

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multi-INT fusion is less nuanced and less able to provide political context and that multi-INT can be confusing to policymakers who cannot discern the difference between the two types of intelligence and analysis. Multi-INT supporters argue that their product is a useful fusion and do not worry about these other issues.

Raw versus finished intelligence: The end product of intelligence collection is referred to as raw intelligence. *Finished intelligence* is the term customarily applied to the product of all-source analysis (described next).

Single-source versus all-source analysis: All-source analysts, as the name implies, make use of all relevant sources of intelligence in producing what is described as *finished intelligence*. But collection organizations also have analysts who specialize in exploiting, analyzing, and reporting the collection product, for example, COMINT analysts, OSINT analysts, and GEOINT analysts. The functions performed by these single-source analysts are described in this book.

Reference

1. Robert M. Clark, Intelligence Collection (Washington, DC: CQ Press, 2013).