

The Lack of HUMINT: A Recurring Intelligence Problem

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Abstract

The United States has accumulated an unequivocal ability to collect intelligence as a result of the technological advances of the 20th century. Numerous methods of collection have been employed in clandestine operations around the world including those that focus on human, signals, geospatial, and measurements and signals intelligence. An infatuation with technological methods of intelligence gathering has developed within many intelligence organizations, often leaving the age old practice of espionage as an afterthought. As a result of the focus on technical methods, some of the worst intelligence failures of the 20th century can be attributed to an absence of human intelligence. The 21st century has ushered in advances in technology have allowed UAVs to become the ultimate technical intelligence gathering platform; however human intelligence is still being neglected. The increasing reliance on UAVs will make the United States susceptible to intelligence failures unless human intelligence can be properly integrated. In the near future UAVs may be able to gather human level intelligence, but it will be a long time before classical espionage is a thing of the past.

Key Words: Intelligence; Intelligence Failure; CIA; Espionage; Technical Intelligence; UAV's; Targeted Strikes; Signature Strikes; Bugs.

Introduction

In the aftermath of WWII the rise of the Soviet Union and the ensuing cold war would predicate the need for an organization devoted to gathering foreign intelligence. The Office of Strategic Services (OSS) dealt with intelligence during the war. Specifically, their task was to "conduct espionage, sabotage, and morale operations against the Axis powers, and conduct in-depth research and analysis on the nation's enemies and their capabilities."¹ After the war, the OSS was dissolved leaving the United States lacking a foreign intelligence apparatus. William (Wild Bill) Donovan, the director of the OSS, advocated for a permanent civilian Centralized Intelligence Agency (CIA). "His persistence paid off when President Truman signed the National Security Act of 1947, which established the Central Intelligence Agency."² The CIA was established as an independent agency which focuses on strategic analysis and coordinating clandestine actions overseas.³

¹ CIA, "A Look Back... Gen William J. Donovan Heads Office of Strategic Services," <https://www.cia.gov/news-information/featured-story-archive/gen.-william-j.-donovan-heads-oss.html> , (accessed April 24, 2013).

² CIA, "A Look Back... Gen William J. Donovan Heads Office of Strategic Services,"

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The CIA and the intelligence community of the United States were at a distinct advantage after WWII in the realm of espionage literature. “The intelligence community of the United States, together with its immediate allies, boasts a public profile and an accompanying literature that has no parallel in scale or depth.”⁴ The literature referred to are National Intelligence Estimates (NIEs). “NIEs are forward-looking official judgments of the intelligence community on a specific issue, country, or region that address the consequences of various policy options.”⁵ The United States had composed a number of these reports by 1958 while the remainder of the world was slow to catch up. The United States was also able to develop a unique intelligence culture which focused on technological means of collection because of its technological advances.

During the Second World War, the collection of intelligence on an industrial scale through radio monitoring and code-breaking at locations such as Bletchley Park and Arlington was a typically technocratic Anglo-American response to the challenges presented by new modes of warfare. The advent of nuclear weapons served only to accentuate concerns about strategic surprise. Moreover, the arrival of ballistic missiles and satellites in the late 1950s helped to conjure up a complex world in which intelligence, targeting and decision-making were interlinked more closely than ever before. More recently, the close association of battlefield surveillance with the idea of a ‘revolution in military affairs’ has further underscored the nexus between intelligence, information dominance and military power. Partly because the Pentagon ‘owns’ a large share of the American intelligence community, intelligence and strategic weaponry have become closely intertwined within America’s rise to global dominance.⁶

It was this technological prowess which became embedded within the intelligence community of the United States. The CIA has been known to employ several intelligence gathering methods which utilize human, signals, geospatial, measurements and signature intelligence. Combined and analyzed correctly, these various types of intelligence result in successful operations. However, it seems that when operations are conducted based solely upon technical intelligence, incorrect human intelligence, or without human intelligence at all, some of the greatest failures in CIA history have occurred.

The technical affluence of the United States has permeated the intelligence community and continues to contribute to the intelligence failures of the CIA because of American reliance on technology over human sources. This can be proven by identifying the types of intelligence, reviewing several historical CIA failures which can be attributed to human intelligence, and discussing the lack of human intelligence utilized regarding Unmanned Aerial Vehicles (UAV’s) to this day.

<https://www.cia.gov/news-information/featured-story-archive/gen.-william-j.-donovan-heads-oss.html> , (accessed April 24, 2013).

³ CIA, “A Look Back... The National Security Act of 1947,” <https://www.cia.gov/news-information/featured-story-archive/2008-featured-story-archive/national-security-act-of-1947.html>, (accessed April 24, 2013)

⁴ R. J. Aldrich and J. Kasuku, , “Escaping from American intelligence: culture, ethnocentrism and the Anglosphere,” *International Affairs* 88 (2012): 1018.

⁵ Michael A. Turner, *Historical Dictionary of United States Intelligence*, (Lanham, Md.: Scarecrow Press, 2006), 131.

⁶ Michael A. Turner, *Historical Dictionary of United States Intelligence*, 117.

Types of Intelligence

Human intelligence (**HUMINT**) is gathered through espionage. It usually involves sending clandestine officers to foreign countries, in an attempt to recruit spies and gather valuable information. Sometimes spies, also known as intelligence officers, have official cover which may place them at a diplomatic post in a foreign state. Intelligence officers with diplomatic cover can make contact with foreign government employees and attempt to develop them as sources of information. These intelligence officers are afforded diplomatic immunity and given a “one way ticket home”, if their covers are discovered by the host government.⁷

Another type of spy, those with non-official cover, may operate as businessmen, travelers, or another discrete and relevant cover.⁸ These HUMINT officers attempt to develop sources with pertinent information to whatever their assignment may happen to be. For instance: an intelligence officer with non-official cover may attend a convention on nuclear energy in order make contact with scientists from rogue states that may help their nations develop nuclear weapons. Once contact has been made and the officer has gone through the proper bureaucratic channels, the HUMINT officer may approach the potential source and offer them an opportunity to provide information.⁹ The officers with non-official covers tend to run more of a risk if their cover is blown, as they do not receive diplomatic immunity.

HUMINT requires a great deal of time and resources to gather assets and analyze information, rendering it one of the most difficult types of intelligence to produce and implement. The training alone is time consuming. Officers need to learn “foreign languages; conducting, detecting, or evading surveillance; recruiting skills and other aspects of HUMINT tradecraft; the ability to handle various types of communications equipment; weapons training; and so on.”¹⁰ Training of these intelligence officers is costly and can take a number of years to complete. Foreign language school alone often takes several years to complete. “The schools taught difficult languages like Chinese and Japanese by way of a single teacher who met the class daily in an apartment. Unfortunately, the schools had been around long enough for everyone to realize that even after a two-year course confined in an apartment, the students weren’t learning.”¹¹ Even though it may seem costly, “HUMINT is far less expensive than the various technical collectors, although it still involves costs for training, special equipment, and the accoutrements clandestine officers need to build successful cover stories.”¹²

⁷ Ishmael Jones, *The human factor: Inside the CIA's Dysfunctional Intelligence Culture*, (New York: Encounter Books, 2008).

⁸ Mark M. Lowenthal, *Intelligence: From Secrets to Policy*, 5th ed. (Washington, DC: CQ Press, 2012), 102-110.

⁹ Ishmael Jones, *The Human Factor: Inside the CIA's Dysfunctional Intelligence Culture*, 85.

¹⁰ Ishmael Jones, *The Human Factor: Inside the CIA's Dysfunctional Intelligence Culture*, 103.

¹¹ Ishmael Jones, *The Human Factor: Inside the CIA's Dysfunctional Intelligence Culture*, 65.

¹² Mark M. Lowenthal, *Intelligence: From Secrets to Policy*, 107.

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Besides the long collection and processing times, HUMINT is also susceptible to deceptive tactics based upon counterintelligence (CI). “Counterintelligence is the analytical and operational process of identifying and neutralizing foreign intelligence activities.”¹³ CI consists of guarding secret information while maintaining a campaign of misinformation against foreign intelligence services.

HUMINT is susceptible to CI on a number of fronts. A foreign state could know the identity of an informant and force them to divulge misinformation to their handlers. This specific type of CI has led to several intelligence failures throughout the history of the CIA. Volunteers, referred to as walk-ins, give their services to foreign governments on their own volition. “Spies Oleg Penkovsky of the Soviet Union, Aldrich Ames of the CIA, and Robert Hanssen of the FBI were all walk-ins. Walk-ins raise a host of other issues: Why have they volunteered? Do they really have access to valuable intelligence? Are they real volunteers or a means of entrapment -- called dangles?”¹⁴ Dangles are used by intelligence services to root out foreign personnel by obtaining their identities and gaining knowledge of the intentions of a foreign intelligence service.¹⁵ When a clandestine operation fails, the failure can usually be attributed to a lack of HUMINT with a focus on the technical INT’s or a failure of HUMINT due to CI.

Despite the shortcomings of HUMINT, it still has tremendous significance. “Clandestine sources may make up only 10 or 20 percent of the inputs to intelligence analysis, agent reports can provide insights that are truly valuable.”¹⁶ The insights of the agents are valuable because they are experts in their respective fields, and are on the ground to watch the developments unfold firsthand. HUMINT should give analysts a perspective that ‘puts their fingers on the pulse’ of the situation; allowing them to know what is happening on the ground. Arthur Hulnick points out that “agents can bring us material that cannot be obtained by technical sensors or developed by diplomats. It seems foolish to give up the possibility of learning inside information from a well-placed source.”¹⁷

“Signals intelligence (**SIGINT**) is the interception and decoding of foreign electronic communications.”¹⁸ It is made up of communication intelligence, electronic intelligence, and telemetry intelligence. Communications intelligence (COMINT) is the monitoring of communications in whatever form they can be conveyed. Operation Gold was a mission during the Cold War which utilized communications intelligence. “Agents tunneled half a mile into East Berlin and set up a listening post to intercept Russian and East German military communications.”¹⁹ COMINT has several weaknesses; communication has to exist for it to be intercepted. A target can go ‘off the grid’, rendering the COMINT operation

¹³ Michael A. Turner, *Historical Dictionary of United States Intelligence*, 41.

¹⁴ Mark M. Lowenthal, *Intelligence: From Secrets to Policy*, 105.

¹⁵ Mark M. Lowenthal, *Intelligence: From Secrets to Policy*, 105.

¹⁶ Arthur S. Hulnick, *Fixing the spy machine preparing American intelligence for the twenty-first century*, 36. (Westport, Conn: Praeger, 1999), 36.

¹⁷ Arthur S. Hulnick, *Fixing the spy machine preparing American intelligence for the twenty-first century*, 36.

¹⁸ Michael A. Turner, *Historical Dictionary of United States Intelligence*, 183.

¹⁹ Michael A. Turner, *Historical Dictionary of United States Intelligence*, 81.

irrelevant. Encoded communications can also pose a problem to SIGINT analyst whether the code is verbal, written, or within computer programs.

Electronic intelligence (ELINT) is the interception of electronic emissions, and telemetry intelligence (TELINT) detects signals given off from weapons.²⁰ “TELINT and ELINT offer valuable information on weapons capabilities that would otherwise be unknown or would require far more risky human intelligence operation to obtain.”²¹ Although these are not forms of communication, these disciplines of intelligence are able to discern what has happened from either electronic signals or those given off by weapons of mass destruction (WMD).

An issue that arises in SIGINT is referred to as risk versus take. This implies that the value of intelligence must be weighed against the dissemination of technology to enemies and political fallout.²² Terrorists and other criminal groups may also pose a problem to SIGINT because they emanate a much smaller signature than a country or no signal at all. “Against terrorists, drug dealers, or organized criminal groups, however, our ability to collect information will depend on the extent to which these groups use communications that can be intercepted.”²³ Additional problems which plague the future of SIGINT are a lack of language skills and the rate at which new technologies are introduced. Foreign language skills are generally lacking within the United States and fast pace of changing technology that SIGINT collectors must keep up with make SIGINT a complex undertaking. Moore’s law states that “that processor speeds, or overall processing power for computers will double every two years.”²⁴ This means that SIGINT is constantly changing and hard to maintain.

SIGINT is relevant because “it gives insight into what is being said, planned, and considered. It comes as close as one can, from a distance, to reading the other side’s mind.”²⁵ Gathering intelligence on closed societies like Iran and North Korea may be the only form of intelligence that we can obtain. In situations such as these, something is always better than nothing.²⁶ SIGINT remains a vital tool against most militaries. Unlike terrorists, traditional militaries all have systems of communications intertwined in their military command structures and will remain ‘on the grid’. “In battlefield situations or against potential military targets, intercepted communications or electronic signals can be extremely valuable. Under the pressure of military operations, an enemy may very well loosen communications security or make mistakes in encrypting data.”²⁷

Geospatial intelligence (**GEOINT**), formerly referred to as imagery intelligence, is “derived from images collected by electro-optical, infrared, and radar sensors. As an

²⁰ Michael A. Turner, *Historical Dictionary of United States Intelligence*, 183.

²¹ Mark M. Lowenthal, *Intelligence: From Secrets to Policy*, 98.

²² Mark M. Lowenthal, *Intelligence: From Secrets to Policy*, 98.

²³ Arthur S. Hulnick, *Fixing the spy machine preparing American intelligence for the twenty-first century*, 25.

²⁴ “Moore’s Law,” <http://www.moorelaw.org/>, (accessed April 25, 2013).

²⁵ Mark M. Lowenthal, *Intelligence: From Secrets to Policy*, 96.

²⁶ Arthur S. Hulnick, *Fixing the spy machine preparing American intelligence for the twenty-first century*, 25.

²⁷ Arthur S. Hulnick, *Fixing the spy machine preparing American intelligence for the twenty-first century*, 25.

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intelligence ‘discipline’, it involves coordinating the collection by the various capabilities of the Intelligence Community (including satellites, aircraft, unmanned aerial vehicles), processing and analyzing these images, and disseminating the results.”²⁸The addition of the denomination of geospatial comes from new animated version of imagery, which allows the visualization of difficult terrains through 3-D renderings.²⁹

Exemplifying the U.S. focus on technological methods of collection, the 1996 Commission on the Roles and Capabilities of the U.S. Intelligence Community found that “The space systems developed by U.S. intelligence employ unusually advanced technology and require extraordinary skill and industrial capacity to build and operate. No other nation is capable at present of creating similar systems.”³⁰ Beginning with the U-2 and spanning to the present UAVs, aerial images used for intelligence have also been collected by planes. U-2 flights approved by Eisenhower, in the 1950s, brought back numerous images of Soviet defenses; while the predators and global hawk UAVs have delivered countless images and hours of video from Iraq and Afghanistan.³¹ UAVs can remain over a target for hours, unlike satellites which make high-altitude orbital passes on a schedule. UAVs can also get closer to a target without being detected and does not risk the life of a pilot, because they are operated remotely from miles away.³²

GEOINT is defined by the National Geospatial Agency as “information about any object – natural or man-made – that can be observed or referenced to the Earth, and has national security implications.”³³ Some imagery is produced by electro optical systems, which enhance images. Satellites communicate their images as signals, which is one of their weaknesses in the modern age. Signals are able to be seen not only by the intended audience, but by anyone who can hack into their feeds. GEOINT is also produced with radar imagery which uses radio waves to construct images and is not dependent on light. Infrared imagery can be used to see heat reflected by surfaces. Infrared “provides the ability to detect warm objects (for example, engines on tanks or planes inside hangars).”³⁴ As the satellites orbit the earth and pictures are gathered, different pictures of the same place at different dates and times can be referenced and utilized to notice any change in a particular target.

GEOINT has a number of benefits. ‘A picture is worth a thousand words’, and can often be easily interpreted by policy makers. “Another advantage of imagery is that many of the targets make themselves available. Military exercises in most nations are conducted on regular cycles and at predictable locations, making them highly susceptible to IMINT.”³⁵

²⁸ Senate Select Committee on Intelligence, *Report of the Commission on the Roles and Capabilities of the United State Intelligence Community: Preparing for the 21st Century: An Appraisal of U.S. Intelligence*, (Washington, D.C. : U.S. G.P.O, 1996), 123.

²⁹ Michael A. Turner, *Historical Dictionary of United States Intelligence*, 81.

³⁰ Senate Select Committee on Intelligence, *Report of the Commission on the Roles and Capabilities of the United State Intelligence Community: Preparing for the 21st Century: An Appraisal of U.S. Intelligence*, 117.

³¹ Michael A. Turner, *Historical Dictionary of United States Intelligence*, 208.

³² Mark M. Lowenthal, *Intelligence: From Secrets to Policy*, 92.

³³ Mark M. Lowenthal, *Intelligence: From Secrets to Policy*, 88.

³⁴ Mark M. Lowenthal, *Intelligence: From Secrets to Policy*, 88.

³⁵ Mark M. Lowenthal, *Intelligence: From Secrets to Policy*, 89.

Aside from conventional military and intelligence benefits, GEOINT can be used to locate drug crops, assess damage from natural disasters, and detect harmful emissions.³⁶

However, there are also some disadvantages to GEOINT. Satellites orbit around the Earth and only pass over certain parts of the planet a number of times a day, dependent on what orbit they are in. If an enemy intelligence agency is able to ascertain what kind of satellites, which orbit they are in, and the correct timing they could be able to hide from GEOINT or employ deception tactics. An example of deception that is still relevant is the deployment of a fake army by Patton during WWII D-Day operations. His deceptive forces consisted of “dummy tanks, artillery pieces, trucks, jeeps and planes and even dummy ships.”³⁷ Essentially if the target knows they are under GEOINT surveillance, they may engage in deception and hinder collection efforts. GEOINT is also very expensive. “Launching and maintaining the satellites is just one aspect of aerial operations. Sophisticated ground stations are needed to retrieve the imagery, and photo analysts require advanced machinery to analyze the resultant intelligence. Remotely piloted vehicles, in contrast, are less expensive but they require targeting and guidance, and the analytic cost is much the same as in space imagery.”³⁸

Measurement and Signature Intelligence (**MASINT**) is a “compendium of techniques rather than an identifiable intelligence collection method.”³⁹ The FBI defines MASINT as “a relatively little-known collection discipline that concerns weapons capabilities and industrial activities. MASINT includes the advanced processing and use of data gathered from overhead and airborne IMINT and SIGINT collection systems.”⁴⁰ MASINT can help to identify gasses emitted from a factory, or specific characteristics of weapons systems. It is useful for a variety of intelligence issues such as “WMD development and proliferation, arms control, environmental issues, narcotics, weapons developments, space activities, and denial and deception practices.”⁴¹ MASINT can be useful to identify underground facilities or weapons that have been masked from the view of a camera or satellite, because it relies on measurements of emissions which denote a certain signature of activities.

Crateology is a subfield of MASINT which studies methods to deduce the contents of a box or crate. It was developed by the U.S. in the 1950s to determine the contents by the size, shape and markings. “U.S. intelligence had determined during the Cold War that Warsaw Pact countries, and especially the Soviet Union, used the same kind of crates to ship known types of military equipment, such as aircraft wings or missiles.”⁴² Based upon the crate, crateologist could make rational assumptions about what was in a certain crate. However rational assumptions do not constitute good intelligence and crateology requires the support

³⁶ Arthur S. Hulnick, *Fixing the spy machine preparing American intelligence for the twenty-first century*, 29.

³⁷ *D-Day: Three unique perspectives*, http://www.generalpatton.org/D-Day/Patton_Dday.htm, (accessed April 26, 2013).

³⁸ Arthur S. Hulnick, *Fixing the spy machine preparing American intelligence for the twenty-first century*, 29.

³⁹ Michael A. Turner, *Historical Dictionary of United States Intelligence*, 121.

⁴⁰ FBI, Directorate of Intelligence, “Intelligence Collection Disciplines”, <http://www.fbi.gov/about-us/intelligence/disciplines>, (accessed April 25, 2013).

⁴¹ Mark M. Lowenthal, *Intelligence: From Secrets to Policy*, 102.

⁴² Michael A. Turner, *Historical Dictionary of United States Intelligence*, 45.

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of HUMINT to be effective, demonstrating the weakness of MASINT to function absent of HUMINT.⁴³

MASINT has evolved since crateology and is often used to gather intelligence. Since it deals with signatures, it has been used to devise a method to target terrorists. Terrorist often shy away from communications and it can be difficult to infiltrate them utilizing HUMINT. Terrorists do not necessarily look any different from regular people through the eyes of a satellite or UAV. So the U.S. has begun to utilize MASINT to determine “‘signatures’ that suggest involvement in terror plots or militant activity.”⁴⁴ This suggests that MASINT does not rely on HUMINT, but instead focuses on technical means.

The intelligence disciplines cover a wide range of possibilities and avenues in which intelligence is collected. Another overlooked type of intelligence is open source intelligence (OSINT). It can be divined from reading a newspaper or browsing the internet. It seems that the INT's tend to favor technical methods, which surely outnumber HUMINT, and are most likely favored over it. However as some of the intelligence failures of the CIA will show, the lack of HUMINT is detrimental to intelligence operations.

Intelligence Failures

The U.S. intelligence culture tends to focus on technical means of intelligence like GEOINT, SIGINT, and MASINT.⁴⁵ The tendency of the U.S. to employ its technological capacity has often left intelligence operations lacking something. HUMINT is missing. The lack of HUMINT in intelligence operations leaves analysts staring at pictures, frantically searching through communications, reading newspapers, and measuring emissions to ascertain what is going on. HUMINT gives operations valuable direction by uncovering intentions and capabilities to corroborate what the technical intelligence may, or may not affirm. However, because of the U.S. emphasis on the technical INTs, HUMINT was sometimes absent or susceptible to CI, resulting in some of the greatest intelligence failures and close calls in CIA history.

Operation Gold, also referred to as the Berlin Tunnel operation, was a CIA SIGINT mission during the 1950s to monitor Soviet communications by building a tunnel to tap Soviet communications lines in East Berlin. The CIA worked with the British to build the tunnel. It was a major engineering achievement. "It stretched 1476 feet/454 meters through sandy ground to reach a cable only 27 inches/68.5 cm beneath the surface, on the edge of a major highway. One of the most difficult engineering problems that had to be overcome in the course of the project was to dig up to the cable from the main tunnel shaft without

⁴³ Michael A. Turner, *Historical Dictionary of United States Intelligence*, 45.

⁴⁴ Cora Currier, "How Does the U.S. Mark Unidentified Men in Pakistan and Yemen as Drone Targets?" Propublica, March 1, 2013, <http://www.propublica.org/article/how-does-the-u.s.-mark-unidentified-men-in-pakistan-and-yemen-as-drone-targ>, (accessed April 25, 2013).

⁴⁵ R. J. Aldrich and J. Kasuku, "Escaping from American intelligence: culture, ethnocentrism and the Anglosphere," *International Affairs* 88 (2012).

dropping some truck passing over the highway above into the tunnel."⁴⁶ Allen Dulles, DCI, was complimentary of the mission and called it "one of the most valuable and daring projects ever undertaken."⁴⁷ Once the tunnel was completed, tapping of the lines began immediately in May 1955.⁴⁸

"However, George Blake, a British Intelligence officer who was on the KGB's payroll, probably passed details of the operation to the Soviet KGB. This suggests that the Soviets were aware of the entire operation even before it started and were possibly feeding the Western intelligence services false information."⁴⁹ The Soviets used CI, or HUMINT, to take advantage of the U.S. leanings toward the technical means of collection. On the other hand, the "CIA states that it has been determined that there were no known attempts to feed disinformation to the CIA. The Soviet military continued to use the cables for communications of intelligence value."⁵⁰

Most likely, the KGB did not reveal that it knew about the Tunnel to protect Blake. In April 1956 the KGB sent a team to "discover" the Tunnel while repairing faulty underground cables. CIA officers monitoring the area saw the digging and vacated the tunnel before the Soviets closed it down. Moscow had hoped to win a propaganda victory by publicizing the operation, but most press coverage instead marveled at the United States' technical ingenuity.⁵¹

This press coverage could only serve to bolster the emphasis on technical means of collection over HUMINT because this operation was mostly portrayed as a success, despite the CI possibilities and Soviet infiltrations. Clearly this operation should not be portrayed as a success. The mere possibility that the operation was compromised by human sources should clearly make it a failure. However, the U.S. was pleased with its technical capabilities and would continue to pursue them despite misgivings in the absence of reliable HUMINT and in the face of obvious CI.

Operation Zapata, known today as The Bay of Pigs, was an intelligence failure in which the CIA trained exiles to overthrow Fidel Castro's regime. "However, the operation failed totally, largely because of inadequate preparations, insufficient political backing, faulty assumptions about what the Cuban population thought of the Castro regime and what it might do in the wake of the invasion, and reckless expert opinion."⁵² Ishmael Jones points out that the failure associated with the Bay of Pigs was attributable to bad tradecraft. "The Agency had run dozens of Cuban agents over the years and in the end nearly all turned out

⁴⁶ The Cold War Museum, "The Berlin Tunnel Operation Gold (U.S.) Operation Stopwatch (U.K.)," http://www.coldwar.org/articles/50s/berlin_tunnel.asp, (accessed April 25, 2013).

⁴⁷ Michael A. Turner, *Historical Dictionary of United States Intelligence*, 81.

⁴⁸ CIA, "A Look Back... The Berlin Tunnel: Exposed," <https://www.cia.gov/news-information/featured-story-archive/the-berlin-tunnel-exposed.html>, (accessed April 26, 2013).

⁴⁹ Michael A. Turner, *Historical Dictionary of United States Intelligence*, 81-82.

⁵⁰ CIA, "Featured Story Archive, A Look Back... The Berlin Tunnel: Exposed," <https://www.cia.gov/news-information/featured-story-archive/the-berlin-tunnel-exposed.html>, (accessed April 26, 2013).

⁵¹ CIA, "Featured Story Archive, A Look Back... The Berlin Tunnel: Exposed," (accessed April 26, 2013).

⁵² Michael A. Turner, *Historical Dictionary of United States Intelligence*, 12.

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to be double agents. Those who were real agents had been captured and imprisoned or executed by the Cuban government.”⁵³

In this instance the U.S. saw itself superior to the Cubans and did not anticipate, let alone believe, that double agents had been conducting CI operations on them by feeding them misinformation. When the CIA finally realized its folly, it was too late. “The double agents realized the Agency had figured out at last that they all worked for Cuba, their last messages to their case officer were words to the effect of ‘Die capitalist pigs.’”⁵⁴ Jones, a former CIA officer, asserts that it was a “lack of Cuban human sources,” which led to the failure of the Bay of Pigs and resulted in Kennedy’s greatest fiasco.⁵⁵

Shortly after the Bay of Pigs, the U.S. faced another challenge to the capabilities of the intelligence community. However this could be seen more as a victory and not a failure, solely because of HUMINT. The Cuban Missile Crisis occurred between the U.S. and the Soviet Union during October 1962, over the placement of Soviet missiles in Cuba. U-2 reconnaissance flights over Cuba discovered the movement of the missiles utilizing imaging, or GEOINT. The CIA “had discovered the missiles, which it deemed capable of striking the United States, on 14 of October 1962, and corroborating intelligence was received from a Cuban refugee on 20 September 1962 that he had seen a Russian missile on a truck in Cuba.”⁵⁶

Although the world seemed to be on the brink of nuclear war, the U.S. had HUMINT sources which would be influential to the decisions of policy makers. Oleg Penkovsky was a colonel in Soviet military intelligence that provided invaluable intelligence to the U.S. beginning in 1961. “Penkovsky’s debriefing sessions produced about 1,200 pages of transcripts, which CIA and MI-6 had around 30 translators and analysts working on. The Colonel’s information was immensely valuable, helping dispel concerns about Soviet strategic superiority, and showing that the United States had the advantage in missile systems.”⁵⁷ The information Penkovsky provided allowed the Kennedy administration to know the amount of time the Soviet missiles took to assemble and become functional.⁵⁸ This allowed Kennedy to pursue a diplomatic option, which resulted in Russia removing the missiles from Cuba in exchange for concessions from the U.S.⁵⁹ Penkovsky and HUMINT had averted a disaster and saved the world from nuclear destruction. Had the HUMINT not been available, Kennedy would have been forced to act on the existing intelligence based upon images of missiles capable of hitting the U.S. mainland.

⁵³ Ishmael Jones, *The Human Factor: Inside the CIA’s Dysfunctional Intelligence Culture*, 33.

⁵⁴ Ishmael Jones, *The Human Factor: Inside the CIA’s Dysfunctional Intelligence Culture*, 34.

⁵⁵ Ishmael Jones, *The Human Factor: Inside the CIA’s Dysfunctional Intelligence Culture*, 358.

⁵⁶ Michael A. Turner, *Historical Dictionary of United States Intelligence*, 46.

⁵⁷ CIA, “The Capture and Execution of Colonel Penkovsky, 1963,” <https://www.cia.gov/news-information/featured-story-archive/2010-featured-story-archive/colonel-penkovsky.html>, (accessed April 26, 2013).

⁵⁸ CIA, “The Capture and Execution of Colonel Penkovsky, 1963,” <https://www.cia.gov/news-information/featured-story-archive/2010-featured-story-archive/colonel-penkovsky.html>, (accessed April 26, 2013).

⁵⁹ Catherine Evtuhov, *A history of Russia: peoples, legends, events, forces*. (Boston: Houghton Mifflin, 2004), 744.

Another eventual intelligence failure, Operation Ivy Bells, “was a joint navy -- NSA operation initiated in the 1970s to tap into Soviet communications in the Sea of Oskotsk in the Pacific. The action involved stealthy U.S. submarines entering the denied area and placing wraparound, nonpenetrating pods around the undersea cable carrying highly classified Soviet Communications.”⁶⁰ Once the tap was in place, the NSA analyzed the recordings and tried to decode any encrypted information. The Soviets were confident in their communications, as a large amount of sensitive information traveled through the lines without encryption.⁶¹

However, HUMINT would soon undermine this successful SIGINT operation. Ronald Pelton, an NSA analyst, walked into a Soviet Embassy in 1980 and divulged his knowledge of Ivy Bells. "One day in 1981, overhead surveillance showed a cluster of Soviet ships directly over the pod site; when the submarine returned to pick up the pod it was gone."⁶² HUMINT has repeatedly overshadowed the technical collection methods preferred by the U.S. intelligence community and a reminder of its dominance would be put on display by the Soviets. "If you visit the KGB museum in the Lubyanka building -- former KGB headquarters, a site with a grim reputation -- one item on exhibit is a large cylindrical 'pod,' part of an operation code-named Ivy Bells."⁶³

The intelligence failures of the United States to fully utilize HUMINT would continue with the 1979 Iranian revolution. The intelligence failure here can be attributed to the U.S. failure to perceive Iranian discontent with the Shah.⁶⁴ This could have only been detected by HUMINT, thus making it a failure in HUMINT collection. The failure to see what was coming was caused by limits placed on collection by policy makers. “Basically, intelligence officers were not allowed to have contact with those in the souks (markets and bazaars) who were opposed to the shah, because the shah’s regime would be offended. Instead, U.S. intelligence had to rely on the shah’s secret police, Savak, which had an institutional interest in denying that any opposition existed.”⁶⁵

In 1985, CIA officer Aldrich Ames began working as a source for the Soviets. "During the summer of 1985, Ames met several times with a Russian diplomat to whom he passed classified information about CIA and FBI human sources, as well as technical operations targeting the Soviet Union."⁶⁶ Ames’s betrayal along with FBI agent Robert Hanssen, would lead to the deaths of many of the agents whose identities they revealed. The technical information divulged would put a stop to all known operations until the intelligence community could recuperate.

⁶⁰ Michael A. Turner, *Historical Dictionary of United States Intelligence*, 103.

⁶¹ Matthew Carle, “Operation Ivy Bells”, http://www.military.com/Content/MoreContent1/?file=cw_f_ivybell, (accessed April 27, 2013).

⁶² Antony Shugaar, “I lie for a living: greatest spies of all times”, Washington, D.C.: *National Geographic*, 2006, 51.

⁶³ Antony Shugaar, “I lie for a living: greatest spies of all times”, 51.

⁶⁴ Mark M. Lowenthal, *U.S. Intelligence: Evolution and Anatomy*, (New York, N.Y., U.S.A.: Praeger, 1984), 55.

⁶⁵ Mark M. Lowenthal, *Intelligence: From Secrets to Policy*, 208.

⁶⁶ FBI, “Famous Cases & Criminals, Aldrich Ames,” <http://www.fbi.gov/about-us/history/famous-cases/aldrich-hazen-ames>, (accessed April 26, 2013).

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Despite its many failures, the U.S. has continued methods of technical intelligence gathering while downplaying or relying upon bad HUMINT. This has persistently resulted in failures and has reoccurred throughout the history of the CIA. WMDs in Iraq were another failure related to bad HUMINT which has become all too familiar to the public.⁶⁷ Although the U.S. should have learned a lesson about intelligence by now, the technical pursuit of intelligence in the form of UAVs has culminated to combine all forms of technical intelligence into a single platform. However, the lack of HUMINT still exists; making the use of UAVs questionable in several respects.

UAV's & Intelligence

UAVs are the ultimate intelligence platform. "One of the most significant military developments in the last 10 to 15 years has been that of the unmanned aerial vehicle, which has evolved from the simple drone with limited capability to today's sophisticated aircraft, which, for some roles, particularly Intelligence, Surveillance and Reconnaissance (ISR), is now the platform of choice."⁶⁸ UAVs have replaced satellites and manned aircraft as the favored platform for intelligence collection. UAVs can be outfitted with equipment that allows them to collect SIGINT, MASINT, and GEOINT. They have also been armed with missiles to allow them to collect intelligence, fly around while it is being analyzed, and then conduct strikes based upon the decisions of policy makers. This nexus of intelligence and technology is like a new toy for a small child. The President, the CIA, and the entire intelligence community have become infatuated with the capabilities of these constantly evolving tools of war.⁶⁹

The main idea behind the development of UAV technology was to reduce the number of lives risked to collect intelligence and to deliver strikes with accuracy. "However, it is the relatively low cost of drones compared to that of modern combat aircraft that will drive the proliferation of drones over the next decade. More basic drones cost less than 1/20th as much as the latest combat aircraft and even the more advanced drones that feature jet propulsion and employ some stealth technology are less than 1/10th the cost."⁷⁰ While military budgets around the World are cut, UAVs will be viewed as a viable alternative to manned aircraft for many missions.

UAVs have several major advantages over traditional aircraft that make them valuable assets in modern conflicts. A UAVs greatest advantage is their very long endurance. Some versions of the Predator UAVs can maintain flight for over thirty hours. This advantage means that UAVs have more flight time than that of traditional aircraft, which enables them to observe and track a target for many hours at a time before deciding whether to strike.

⁶⁷ Richard Tracey, "Trapped by a Mindset: The Iraq WMD intelligence Failure," *Air & Space Power Journal*, 23 January 2007, <http://www.airpower.maxwell.af.mil/Airchronicles/cc/tracey.html>, (accessed April 27, 2013).

⁶⁸ Hugh Jameson, "Drones Between Satellite and Earth", *Armada International*, 12/2007, <http://www.highbeam.com/doc/1G1-173229598.html>, (accessed April 27, 2013).

⁶⁹ "Obama and Drones," *Commonwealth*, December 21, 2012.

⁷⁰ Michael Lewis, "Drones and the Boundaries of the Battlefield," *Texas International Law Journal*, Vol. 47, Issue 2, 298.

“This makes drones an ideal surveillance and striking weapon in counterinsurgency or counterterrorism operations, where the targets are usually individuals rather than objects.”⁷¹

UAVs have several vulnerabilities to go along with their advantages. UAVs are susceptible to air defense systems because they are very slow. “Even the jet-powered Avenger recently purchased by the Air Force only has a top speed of around 460 miles per hour, meaning that it cannot escape from any manned fighter aircraft, not even the outmoded 1970s-era fighters that are still used by a number of nations.”⁷² UAVs are also vulnerable to manned fighter aircraft and jamming. Manned aircraft are much faster than UAVs and the pilots can respond more rapidly to air combat situations than the current technology allows the operators of UAVs to do. “Remotely piloted aircraft are dependent upon a continuous signal from their operators to keep them flying, and this signal is vulnerable to disruption and jamming.”⁷³ This cyber vulnerability has been exploited by insurgents and governments in several instances. Several years ago the Iranians downed a RQ-170 sentinel UAV and essentially pilfered it for intelligence information and technology.⁷⁴

UAVs have been used in targeted strikes and signature strikes against insurgents in Afghanistan, Pakistan, Somalia, and Yemen. “The primary focus of U.S. targeted killings, particularly through drone strikes, has been on the al-Qaeda and Taliban leadership networks in Afghanistan and the remote tribal regions of Pakistan. However, U.S. operations are continuing to expand in countries such as Somalia and Yemen.”⁷⁵ Targeted, or personality, strikes utilize all forms of intelligence available, including HUMINT. Targeted strikes utilize HUMINT because they are used to target top tier leadership of terrorist organizations; a specific person. As terrorist organization leadership tends to shy away from communications and may conceal themselves from detection by GEOINT methods, HUMINT is the remaining discipline which must be used to identify targets.

Signature strikes are based on MASINT. They do not usually rely on HUMINT, but instead use signatures ascribed by analysts to determine whether or not a strike is permissible. Based upon information collected by MASINT, signature strikes are “the type of drone strike in which no specific individual is identified, but rather a target is chosen based on the observed behavior, or ‘signature,’ of people on the ground.”⁷⁶ However there has been some dissent amongst the state department and administration pertaining to signature strikes. “Some State Department officials have complained to the White House that the criteria used by the C.I.A. for identifying a terrorist ‘signature’ were too lax. The joke was that when the C.I.A. sees ‘three guys doing jumping jacks,’ the agency thinks it is a

⁷¹ Michael Lewis, “Drones and the Boundaries of the Battlefield,” 298.

⁷² Michael Lewis, “Drones and the Boundaries of the Battlefield,” 298.

⁷³ Michael Lewis, “Drones and the Boundaries of the Battlefield,” 299.

⁷⁴ Saeed Kamali Dehghan, “Iran Broadcasts footage 'extracted from CIA spy drone,’” *The Guardian*, <http://www.guardian.co.uk/world/2013/feb/07/iran-footage-cia-spy-drone>, (accessed April 28, 2013).

⁷⁵ Jonathan Masters, “Targeted Killings,” *Council on Foreign Relations*, <http://www.cfr.org/counterterrorism/targeted-killings/p9627>, (accessed April 28, 2013).

⁷⁶ Ryan Grim and Joshua Hersh, “John Brennan Confirmation Battle Stirs Drone Strike Controversy,” *Huffington Post*, 3/7/2013, http://www.huffingtonpost.com/2013/03/07/john-brennan-drones_n_2823583.html, (accessed April 30, 2013).

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terrorist training camp, said one senior official. Men loading a truck with fertilizer could be bombmakers — but they might also be farmers, skeptics argued.”⁷⁷

What these skeptics are alluding to is that unlike personality strikes, signature strikes have no corroborating HUMINT to support the operation. The absence of HUMINT has been a consistent factor in the absence of intelligence failures throughout the history of the CIA. The absence of HUMINT has resulted in an increase of unintentional civilian casualties, which will turn the tide of public support against UAV strikes in time. “*TBIJ* reports that from June 2004 through mid-September 2012, available data indicate that drone strikes killed 2,562-3,325 people in Pakistan, of whom 474-881 were civilians, including 176 children. *TBIJ* reports that these strikes also injured an additional 1,228-1,362 individual. Where media accounts do report civilian casualties, rarely is any information provided about the victims or the communities they leave behind.”⁷⁸

“The bulk of CIA's drone strikes are signature strikes.”⁷⁹ Due to the fact that a majority of UAV strikes are signature strikes which rely solely on MASINT, the CIA and U.S. intelligence community appear to be falling into the same pattern that has plagued intelligence operations for over sixty years. They are putting technical means of intelligence ahead of HUMINT, and if history is indicative of any kind of pattern will eventually suffer a massive intelligence failure due to this choice.

Conclusion

The pattern that emerges when reflecting upon intelligence failures of the 20th century shows that no single form of intelligence collection does well by itself. HUMINT is especially detrimental to overlook or ignore because covert actions are often subject to bad information, CI, and mismanagement from policy-makers. The U.S. fascination and focus on technical methods of intelligence has made some operations especially susceptible to CI and other forms of failure when areas of HUMINT are not addressed.

This problem has come to an apex in the form of UAV technology and the implementation of signature strikes. UAVs can contain GEOINT, SIGINT, and MASINT capabilities and can therefore immediately operate based upon technical intelligence. The United States has focused on the technical methods of intelligence gathering, and once again HUMINT is missing. Signature strikes are not based upon HUMINT, which brings to mind the various intelligence failures that failed to incorporate HUMINT into their modus operandi.

⁷⁷ Jo Becker and Scott Shane, “Secret 'Kill List' Proves a Test of Obama's Principles and Will,” *New York Times*, May 29 2012, http://www.nytimes.com/2012/05/29/world/obamas-leadership-in-war-on-al-qaeda.html?pagewanted=all&_r=0, (accessed April 29, 2013).

⁷⁸ Tony Jin, “Living Under Drones,” *Stanford Law School*, <http://www.livingunderdrones.org/>, (accessed April 30, 2013).

⁷⁹ Adam Entous, Siobhan Gorman, and Julian E. Barnes, “U.S. Tightens Drone Rules,” *The Wall Street Journal*, November 4, 2011, http://online.wsj.com/article/SB10001424052970204621904577013982672973836.html?mod=WSJ_hp_LEFT_TopStories, (accessed April 29, 2013).

Despite the problem with HUMINT and UAVs, a new day may be approaching for technical methods of intelligence. UAVs may soon evolve past the need for HUMINT. This is because the development of technology that allows UAVs to be built smaller is becoming more attainable. As Moore's law states, technology will reduce in size every 2 years.⁸⁰ Several companies are working on developing a UAV resembling a hummingbird.⁸¹ The repercussions this will have on the intelligence community will be grandiose. Researchers have also developed a flight platform that resembles small insects.⁸² Another development has recently been made in the imaging technology for these tiny UAVs. Cameras, the size of an insect's eye, have been developed to fit these micro-UAVs.⁸³

What these developments imply is that the UAV is going to become smaller. It can be outfitted with imaging, listening, measurement, and location capabilities. These micro UAVs may be able to, eliminate or reduce, the need for traditional human espionage. The UAVs will soon have the potential to float in place by a window while recording a conversation. They could also nonchalantly observe the layout of a small room under the disguise of a fly or cockroach. These usages are all in line with the original intention of UAVs, which was to avert the loss of human life when at all possible.

The term 'bugs' has been used to reference listening devices, but may soon take on a new meaning. The evolution of UAVs and their need to incorporate HUMINT roles into their repertoire will alter the meaning of that term. The context of the word may change to reference the tiny UAVs which will resemble bugs, crammed full of technical intelligence gathering capabilities. HUMINT officers may soon become antiquated as miniaturized UAVs take over their duties. However, until the advent and mass deployment of this potential technology, HUMINT should be incorporated into intelligence operations and should never be overlooked.

⁸⁰ "Moore's Law," <http://www.moorelaw.org/>, (accessed April 25, 2013).

⁸¹ Innovation News Daily Staff, "Robotic Hummingbird UAV Flies out of DARPA Lab," *Tech News Daily*, June 3, 2011, <http://www.technewsdaily.com/2675-robotic-hummingbird-darpa-lab.html>, (accessed May 1, 2013).

⁸² Dan Vergano, "Robotic Fly Takes Flight," *USA TODAY*, May 2, 2013, <http://www.usatoday.com/story/tech/sciencefair/2013/05/02/robot-fly-video/2124985/>, (accessed May 4, 2013).

⁸³ BBC, "Scientists make 'bug-eye' camera," *BBC*, May 1, 2013, <http://www.bbc.co.uk/news/science-environment-22372442>, (accessed May 4, 2013).

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