Ambiguity: The Role of Heuristics in the Gulf of Tonkin Incident

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The escalation of the Vietnam War began with the Gulf of Tonkin Resolution, passed by Congress on 7 August, 1964, as a result of two alleged naval skirmishes between U.S. and North Vietnam forces. The first engagement took place on 2 August, and in its aftermath, the U.S. delivered a diplomatic protest to North Vietnam in which it warned of "grave consequences" if any additional attacks occurred\(^1\). On 4 August, word reached Washington that an additional attack had occurred, and in response, President Lyndon Johnson ordered air strikes on North Vietnamese positions. By 10 August, the President had signed the Gulf of Tonkin Resolution, authorizing him to take "all necessary measures to repel any armed attack against the forces of the United States."\(^{ii}\)

Within an hour of the end of the alleged second attack, however, the captain of the ship that had been attacked was reporting that the "entire action leaves many doubts\(^{iii}\). Indeed, the entire action was predicated on a signals intelligence (SIGINT) intercepted message from North Vietnamese forces that was interpreted to mean that North Vietnam was planning an attack. After the message was conveyed to the captains of the two ships in the area, they took precautions and sailed away from the North Vietnamese coast. As they sailed away from the area, they believed that they came under attack, and took extensive measures to evade what they believed were multiple torpedoes fired at them from multiple enemy boats; however, no one on either of the two ships that had been attacked, or on the planes that were called to support them, were ever able to visually confirm any enemy boats during the attack. And despite extensive air searches after the attack for signs of wreckage or casualties, no evidence was located, amidst U.S. claims of multiple enemy boats damaged or sunk during the engagement.

While the U.S. attempted to determine if a second attack had, in fact, occurred, the National Security Agency (NSA) provided a report of an intercepted message that was interpreted as an
after-action report, indicating that an attack had occurred and the North Vietnamese had both inflicted and incurred losses. This message was taken as the clinching evidence, and the Navy and Johnson administration seized it to press their case.

Forty years after the incident, however, in 2005, the NSA de-classified documents related to the Gulf of Tonkin Incident, as well as a NSA history of the event, which concluded that the second attack had never occurred. Instead, the history concluded that faulty intelligence analysis, as a result of poor translations of messages, poor analytical work, and potentially heightened nerves as a result of the 2 August incident, led to erroneous conclusions. These errors highlight one of the major difficulties in intelligence analysis that plagues both analysts and policymakers—ambiguity. Because it is inherently difficult to judge another's intentions based on their statements or actions—especially when those statements and actions may be attempts to deceive others—ambiguity can lead to a variety of problems that continue to manifest themselves in analytical products today. First, preconceived ideas can lead an analyst to false conclusions. Second, selective interpretation of the data can lead to intentional manipulation of it. And finally, there is never enough data to present a definitive picture.

The ambiguity inherent in intelligence analysis forces the analyst to hypothesize about potential courses of action or intentions indicated by the information. This opens the analysis up to all of the cognitive biases from which individuals suffer. The most prominent of these is referred to as anchoring and adjustment bias. This describes the tendency of the analyst to “anchor” his/her hypothesis on a particular type or timeframe of data, and then “adjust” his/her analysis based on that initial assessment, rather than analyzing other data independently. In the Gulf of Tonkin Incident, the previous attack of 2 August, coupled with the report on 4 August of North Vietnamese plans for an impending attack, led the participants, analysts, and politicians to
conclude that an attack had occurred, even as evidence came in which, at the very least, called the original analysis into question. Rather than use the dissenting data to form an independent analysis of the event, all parties proceeded on the anchor of their belief that North Vietnam intended to attack, and adjusted their analysis about the extent of the attack, rather than on whether an attack had occurred at all. Because the data was ambiguous—consisting of intercepted and translated messages, sonar contacts, and eyewitness testimony—it could be easily twisted to fit the prevailing notion. On the other hand, if the prevailing sentiment had been that North Vietnam had no intention of or capability to attack, it is quite likely that the data could have been used to support that analysis.

In fact, the report of the impending attack only said that three boats were to carry out "military operations" that night. Furthermore, the Vietnamese phrase for military operations could also have meant "forced march" or "long voyage," which in fact is what it had meant, as the boats were to take part in a salvage operation for the boats damaged during the 2 August attack. Because the analysts had anchored their hypothesis around the earlier attack and the resulting tensions, they misinterpreted the message and jumped to an erroneous conclusion.

An additional bias that leads analysts to their already preconceived notions is confirmation bias, which is the tendency to collect or select only that information which confirms the hypothesis. During the Gulf of Tonkin Incident, analysts and politicians chose to focus on the text of the alleged after-action report, ignoring the fact that based on its time of intercept, it would have been transmitted while the alleged attack was still taking place. In addition, analysts ignored or discounted reports indicating that the ships allegedly involved in the attack were participating in salvage operations far from the site of the alleged attack. Two hours after the initial report of a planned attack (and an hour before the alleged attack), the same reporting station that warned of
an attack issued a report in which it concluded that the boats it had previously implicated in the
planned attack "will not participate in any military operations."\(^{viii}\) Apparently, these conflicting
messages were never considered in the follow-on analysis of what had taken place. The official
NSA chronology of events for the 4 August incident only included ten percent of the total
intercepted messages from that time period.\(^{ix}\) Many of those excluded messages would have cast
serious doubt on the conclusion at that time that an attack had occurred.

Unfortunately, ambiguity of data does more than lead analysts and policymakers to false
conclusions based on preconceived hypotheses or beliefs: ambiguous information can also be
manipulated in order to intentionally mislead. Forty years after the Gulf of Tonkin Incident,
there is still debate about whether the Johnson administration knowingly deceived the public
about the second attack. In particular, NSA historian Robert Hanyok has questioned the veracity
of the alleged after-action report on the 4 August attack.\(^{v}\) Although NSA maintained original
transcripts and translations for intercepts related to the Gulf of Tonkin, and published them
internally shortly after the incident, the transcript and translation for the after-action report are
currently considered missing, and in fact were not published even in the official chronology
released at that time. Although Hanyok provides possible explanations for legitimate mistakes
that may have been made in translating and analyzing the report, and earlier suggests that no
evidence exists for a conspiracy, he adds, “might we ask if [the transcript and original
translation] were already ‘missing’ shortly after the incident itself?”\(^{xi}\) Because the report in
question provided two of Defense Secretary McNamara’s five pieces of evidence that the attack
took place, and was considered the confirming evidence, it is at best ironic that the supporting
documents were not included in the original chronology of events, nor can be located to this day.
Perhaps the most significant problem of ambiguity is that there is never enough information to form a complete picture. Instead, the analyst is constantly faced with, on the one hand, a demand to accurately anticipate or predict future threats in order to inform appropriate policies or activities, and on the other hand, an incomplete picture that is dominated by a tremendous volume of information—some credible, some not credible, some verifiable, some not verifiable. This cognitive uncertainty is compounded by stove piping, the bogeyman of intelligence, which prevents corroborating information from one organization from being seen by another organization that may desperately be looking for it.

In order to reduce the impact of this issue and encourage analysts to voice their viewpoints, while simultaneously reducing the likelihood of intelligence manipulation, the Intelligence Reform and Terrorism Prevention Act of 2004 required intelligence products to be reviewed to ensure that they “express uncertainties or confidence in analytic judgments;” however, while this is a helpful step in bringing ambiguity into the open, it does nothing to reduce it. Analysts are still faced with situations where they hope that the next piece of information will be the one that conclusively proves their case.

No situation better illustrates the conundrum of ambiguity than the current case of Iran’s nuclear program. For those who believe that Iran intends to develop and build nuclear weapons, each new revelation—of materials, of secret facilities, of documents and blueprints—provides further proof of that intention. For those who deny Iranian intentions, however, these revelations are discounted, and Iranian statements and explanations are given precedence over any physical evidence. In addition, the specter of the alleged past U.S. manipulation of intelligence about weapons of mass destruction in Iraq clouds the debate over whether U.S. intelligence agencies and politicians can be trusted. Those allegations may also have played a role in the 2007
National Intelligence Estimate, which assessed with “high confidence” (a phrase based on the previously mentioned IRTPA of 2004) that Iran suspended its covert bomb-making activities in 2003, before assessing with only “moderate confidence” that Iran had not restarted its activities at a later date.\textsuperscript{xiii}

These degrees of confidence also highlight a problem pointed out in a 2006 paper by Steven Rieber\textsuperscript{xiv}—namely, that analysts, policymakers, and other stakeholders may have different ideas about what these confidence levels mean. Without any measureable or verifiable data to confirm the analysis, any conclusion remains an informed guess. As we have seen with the Gulf of Tonkin Incident, even forty years after the fact, we may not have enough evidence to say with certainty how or why something occurred.

In the final analysis, intelligence remains at best an inexact science. “Monday morning quarterbacks” are able to look back with perfect clarity and connect pieces that, as they were falling into place, were easy to miss or dismiss, and difficult to verify or corroborate. While cognitive biases have been identified for many years, and various analytic tools have been developed to offset these biases, the same mistakes continue to be made, which suggests either that the tools are ineffective or that they are being insufficiently applied. But the reality is that our ability to discern the intentions of others based on their actions or statements, either public or private—especially in an era where the expectation of privacy has been dramatically reduced—is virtually nil. Rather than continue to chase tools and heuristics to overcome this ambiguity, perhaps it is time to reconsider whether accurate prediction is a realistic outcome of intelligence analysis.