



CSI

Intelligence Techniques

Secrecy and Protection

The Committee of Secret Correspondence insisted that matters pertaining to the funding and instruction of intelligence agents be held within the Committee. In calling for the Committee members to "lay their proceedings before Congress," the Congress, by resolution, authorized "withholding the names of the persons they have employed, or with whom they have corresponded." On May 20, 1776, when the Committee's proceedings-with the sensitive names removed-were finally read in the Congress, it was "under the injunction of secrecy." The Continental Congress, recognizing the need for secrecy in regard to foreign intelligence, foreign alliances and military matters, maintained "Secret Journals," apart from its public journals, to record its decisions in such matters.

On November 9, 1775, the Continental Congress adopted its own oath of secrecy, one more stringent than the oaths of secrecy it would require of others in sensitive employment:

"RESOLVED, That every member of this Congress considers himself under the ties of virtue, honour and love of his country, not to divulge, directly or indirectly, any matter or thing agitated or debated in Congress, before the same shaft have been determined, without the leave of the Congress: nor any matter or thing determined in Congress, which a majority of the Congress shall order to be kept secret, And that if any member shall violate this agreement, he shall be expelled this Congress, and deemed an enemy to the liberties of America, and liable to be treated as such, and that every member signify his consent to this agreement by signing the same."

On June 12, 1776, the Continental Congress adopted the first secrecy agreement for employees of the new government. The required oath read:

"I do solemnly swear, that I will not directly or indirectly divulge any manner or thing which shall come to my knowledge as (clerk, secretary) of the board of War and Ordnance for the United Colonies. . . So help me God."

The Continental Congress, sensitive to the vulnerability of its covert allies, respected their desire for strict secrecy. Even after France's declaration of war against England, the fact of French involvement prior to that time remained a state secret. When Tom Paine, in a series of letters to the press in 1777, divulged details of the secret aid from the files of the Committee of Foreign Affairs (formerly, the Committee of Secret Correspondence), France's Minister to the United States, Conrad Alexandre Gerard, protested to the president of the Congress that Paine's indiscreet assertions "bring into question the dignity and reputation of the King, my master, and that of the United States." Congress dismissed Paine, and by public resolution denied having received such aid, resolving that "His Most Christian Majesty, the great and generous ally of the United States, did not preface his alliance with any supplies whatever sent to America."

In 1779 George Washington and John Jay, the president of the Continental Congress and a close associate of the Commander in Chief's on intelligence matters, disagreed about the effect disclosure of some intelligence would have on sources and methods. Washington wanted to publicize certain encouraging information that he judged would give "a certain spring to our affairs" and bolster public morale. Jay replied that the intelligence "is unfortunately of such a Nature, or rather so circumstanced, as to render Secrecy necessary." Jay prevailed.

Cover

Robert Townsend, an important American agent in British-occupied New York, used the guise of being a merchant, as did Silas Deane when he was sent to France by the Committee of Secret Correspondence. Townsend was usually referred to by his cover name of "Culper, Junior." When Major (later Colonel) Benjamin Tallmadge, who directed Townsend's espionage work, insisted that he disengage himself from his cover business to devote more time to intelligence gathering, General Washington overruled

him: "it is not my opinion that Culper Junior should be advised to give up his present employment. I would imagine that with a little industry he will be able to carry on his intelligence with greater security to himself and greater advantages to us, under the cover of his usual business. . . it prevents also those suspicions which would become natural should he throw himself out of the line of his present employment." Townsend also was the silent partner of a coffee house frequented by British officers, an ideal place for hearing loose talk that was of value to the American cause.

Major John Clark's agents in and around British-controlled Philadelphia used several covers (farmer, peddler, and smuggler, among others) so effectively that only one or two operatives may have been detained. The agents traveled freely in and out of Philadelphia and passed intelligence to Washington about British troops, fortifications, and supplies, and of a planned surprise attack.

Enoch Crosby, a counterintelligence officer, posed as an itinerant shoemaker (his civilian trade) to travel through southern New York while infiltrating Loyalist cells. After the Tories started to suspect him when he kept "escaping" from the Americans, Crosby's superiors moved him to Albany, where he resumed his undercover espionage.

John Honeyman, an Irish weaver who had offered to spy for the Americans, used several covers (butcher, Tory, British agent) to collect intelligence on British military activities in New Jersey. He participated in a deception operation that left the Hessians in Trenton unprepared for Washington's attack across the Delaware River on December 26, 1776.

Disguise

In January 1778, Nancy Morgan Hart, who naturally was tall, muscular, and cross-eyed, disguised herself as a "touched" or crazy man and entered Augusta, Georgia, to obtain intelligence on British defenses. Her mission was a success. Later, when a group of Tories attacked her home to gain revenge, she captured them all, and was witness to their execution.

In June 1778, General Washington instructed "Light-Horse Harry" Lee to send an agent into the British fort at Stony Point to gather intelligence on the exact size of the garrison and the progress it was making in building defenses. Captain Allan McLane took the assignment. Dressing himself as a country bumpkin, and utilizing the cover of escorting a Mrs. Smith into the fort to see her sons, McLane spent two weeks collecting intelligence within the British fort and returned safely.

Photo: Nancy Morgan Hart capturing Tories attacking her home

Secret Writing

While serving in Paris as an agent of the Committee of Secret Correspondence, **Silas Deane** is known to have used a heat-developing invisible ink, compounded of cobalt chloride, glycerine and water, for some of his intelligence reports back to America. Even more useful to him later was a "sympathetic stain" created for secret communications by James Jay, a physician and the brother of John Jay. Dr. Jay, who had been knighted by George III, used the "stain" for reporting military information from London to America. Later he supplied quantities of the stain to George Washington at home and to Silas Deane in Paris.

The stain required one chemical for writing the message and a second to develop it, affording greater security than the ink used by Deane earlier. Once, in a letter to John Jay, Robert Morris spoke of an innocuous letter from "Timothy Jones" (Deane) and the "concealed beauties therein," noting "the cursory examinations of a sea captain would never discover them, but transferred from his hand to the penetrating eye of a Jay, the diamonds stand confessed at once."

Washington instructed his agents in the use of the "sympathetic stain," noting in connection with "Culper Junior" that the ink "will not only render his communications less exposed to detection, but relieve the fears of such persons as may be entrusted in its conveyance." Washington suggested that reports could be written in the invisible ink "on the blank leaves of a pamphlet. . . a common pocket book, or on the blank leaves at each end of registers, almanacks, or any publication or book of small value."

Washington especially recommended that agents conceal their reports by using the ink in correspondence: "A much better way is to write a letter in the Tory stile with some mixture of family matters and between the lines and on the remaining part of the sheet communicate with the Stain the intended intelligence."

Even though the Patriots took great care to write sensitive messages in invisible ink, or in code or cipher, it is estimated that the British intercepted and decrypted over half of America's secret correspondence during the war.

Codes and Ciphers

American Revolutionary leaders used various methods of cryptography to conceal diplomatic, military, and personal messages.

John Jay and Arthur Lee devised dictionary codes in which numbers referred to the page and line in an agreed-upon dictionary edition where the plaintext (unencrypted message) could be found.

In 1775 Charles Dumas designed the first diplomatic cipher that the Continental Congress and Benjamin Franklin used to communicate with agents and ministers in Europe. Dumas's system substituted numbers for letters in the order in which they appeared in a preselected paragraph of French prose containing 682 symbols. This method was more secure than the standard alphanumeric substitution system, in which a through z are replaced with 1 through 26, because each letter in the plain text could be replaced with more than one number.

The Culper spy ring used a numerical substitution code developed by Major Benjamin Tallmadge, the network's leader. The Ring began using the code after the British captured some papers indicating that some Americans around New York were using "sympathetic stain." Tallmadge took several hundred words from a dictionary and several dozen names of people or places and assigned each a number from 1 to 763. For example, 38 meant attack, 192 stood for fort, George Washington was identified as 711, and New York was replaced by 727. An American agent posing as a deliveryman transmitted the messages to other members of the ring. One of them, Anna Strong, signalled the messages' location with a code involving laundry hung out to dry. A black petticoat indicated that a message was ready to be picked up, and the number of handkerchiefs identified the cove on Long Island Sound where the agents would meet. By the end of the war, several prominent Americans-among them Robert Morris, John Jay, Robert Livingston, and John Adams-were using other versions of numerical substitution codes.

The Patriots had two notable successes in breaking British ciphers. In 1775 Elbridge Gerry and the team of Elisha Porter and the Rev. Samuel West, working separately at Washington's direction, decrypted a letter that implicated Dr. Benjamin Church, the Continental Army's chief surgeon, in espionage for the British.

In 1781 James Lovell, who designed cipher systems used by several prominent Americans, determined the encryption method that British commanders used to communicate with each other. When a dispatch from Lord Cornwallis in Yorktown to General Henry Clinton in New York was intercepted, Lovell's cryptanalysis enabled Washington to gauge how desperate Cornwallis's situation was and to time his attack on the British lines. Soon after, another decrypt by Lovell provided warning to the French fleet off Yorktown that a British relief expedition was approaching. The French scared off the British flotilla, sealing victory for the Americans.

Intercepting Communications

The Continental Congress regularly received quantities of intercepted British and Tory mail. On November 20, 1775, it received some intercepted letters from Cork, Ireland, and appointed a committee made up of John Adams, Benjamin Franklin, Thomas Johnson, Robert Livingston, Edward Rutledge, James Wilson and George Wythe "to select such parts of them as may be proper to publish." The Congress later ordered a thousand copies of the portions selected by the Committee to be printed and distributed. A month later, when another batch of intercepted mail was received, a second committee was appointed to examine it. Based on its report, the Congress resolved that "the contents of the intercepted letters this day read, and the steps which Congress may take in consequence of said intelligence thereby given, be kept secret until further orders." By early 1776, abuses were noted in the practice, and Congress resolved that only the councils or committees of safety of each colony, and their designees, could henceforth open the mail or detain any letters from the post.

When Moses Harris reported that the British had recruited him as a courier for their Secret Service, General Washington proposed that General Schuyler "contrive a means of opening them without breaking the seals, take copies of the contents, and then let them go on. By these means we should become masters of the whole plot." From that point on, Washington was privy to British intelligence pouches between New York and Canada.

Technology

Dr. James Jay used the advanced technology of his time to prepare the invaluable "sympathetic stain" used for secret communications. Perhaps the American patriots' most advanced-if not successful-application of technology was in David Bushnell's "turtle," a one-man submarine created for affixing watchwork-timed explosive charges to the bottom of enemy ships.

The "turtle," now credited with being the first use of the submarine in warfare, was an oaken chamber about five-and-a-half feet wide and seven feet high. It was propelled by oars at a speed of about three miles an hour, had a barometer to read depth, a pump and second set of oars to raise or lower the submarine through the water, and provision for both lead and water ballast.

When Bushnell learned that the candle used to illuminate instruments inside the "turtle" consumed the oxygen in its air supply,

he turned to Benjamin Franklin for help. The solution: the phosphorescent weed, foxfire. Heavy tides thwarted the first sabotage operation. A copper-clad hull which could not be penetrated by the submarine's auger foiled the second. (The "turtle" did blow up a nearby schooner, however.) The secret weapon would almost certainly have achieved success against a warship if it had not gone to the bottom of the Hudson River when the mother ship to which it was moored was sunk by the British in October of 1776.

An early device developed for concealing intelligence reports when traveling by water was a simple, weighted bottle that could be dropped overboard if there was a threat of capture. This was replaced by a wafer-thin leaden container in which a message was sealed. Not only would it sink in water, but it would melt and destroy its contents if thrown into a fire, and could be used by agents on land or water. It had one drawback-lead poisoning if it was swallowed! It was replaced by a silver, bullet-shaped container that could be unscrewed to hold a message and which would not poison a courier who might be forced to swallow it.

Drawing: The Silver Bullet

Drawing: David Bushell's "Turtle"

Intelligence Analysis and Estimates

On May 29, 1776, the Continental Congress received the first of many intelligence estimates prepared in response to questions it posed to military commanders. The report estimated the size of the enemy force to be encountered in an attack on New York, the number of Continental troops needed to meet it, and the kind of force needed to defend the other New England colonies.

An example of George Washington's interest in intelligence analysis and estimates can be found in instructions he wrote to General Putnam in August of 1777:

"Deserters and people of that class always speak of number. . . indeed, scarce any person can form a judgement unless he sees the troops paraded and can count the divisions. But, if you can by any means obtain a list of the regiments left upon the island, we can compute the number of men within a few hundreds, over or under." On another occasion, in thanking James Lovell for a piece of intelligence, Washington wrote: "it is by comparing a variety of information, we are frequently enabled to investigate facts, which were so intricate or hidden, that no single clue could have led to the knowledge of them. . . intelligence becomes interesting which but from its connection and collateral circumstances, would not be important."

Washington's intelligence chief for a short period in 1778, Colonel David Henley, received these instructions when he wrote to Washington for guidance: "Besides communicating your information as it arises. . . you might make out a table or something in the way of columns, under which you might range, their magazines of forage, grain and the like, the different corps and regiments, the Works, where thrown up, their connexion, kind and extent, the officers commanding, with the numbers of guns &ca. &ca. This table should comprehend in one view all that can be learned from deserters, spies and persons who may come out from the enemy's boundaries." (It was common practice to interrogate travelers from such British strongholds as New York, Boston and Philadelphia.)

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