



U.S. Ambassador to Liberia Deborah Malac, in white, and president of Liberia Ellen Johnson Sirleaf, left, speak to reporters after touring Ebola treatment unit built to care for medical workers who become infected while treating Ebola patients, in Harbel, Liberia, November 5, 2014 (U.S. Army/Nathan Hoskins)

# Disinformation and Disease

## Operating in the Information Environment During Foreign Humanitarian Assistance Missions

By Melia Pfannenstiel and Louis L. Cook

Information warfare is a relatively low-cost alternative for adversaries who wish to diminish U.S. credibility and trust among allies and partners. Addressing current and future national

security threats requires adapting to actions that occur outside a traditional understanding of war and peace, in the often-referenced gray zone. A failure to anticipate information-related

challenges, ranging from rumors to malicious disinformation, in all planning, including foreign humanitarian assistance (FHA), threatens personnel and jeopardizes mission success. Previous disease outbreaks involving narrative exploitation by the former Soviet Union, Russia, and Iran highlight the consequences of failing to

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identify and counter misinformation and disinformation. The expected rise in disease- and disaster-related FHA missions demands interagency community and Department of Defense (DOD) coordination to mitigate risks. This analysis illustrates the threat posed by adversaries and the necessity of building expertise to synchronize information-related capabilities for counternarrative planning.

The expansion of information warfare capabilities threatens U.S. strategic interests and demonstrates the importance of adapting to actions outside a traditional understanding of war and peace. Misinformation and disinformation produce compounding effects in that seemingly minor occurrences gradually erode trust over time and lay a foundation for subsequent narrative exploitation. A failure to anticipate information challenges across a range of operations, including FHA, endangers personnel and jeopardizes mission success.

The Joint Operating Environment 2035 anticipates that the future operating environment will be characterized by, among other things, “a rise in the incidence and severity of infectious disease outbreaks.”<sup>1</sup> Correspondingly, the 2017 National Security Strategy elevates the detection and mitigation of infectious disease to a priority action in the defense of the Nation’s vital interests.<sup>2</sup> Operations in the information environment play an important role in FHA but typically focus exclusively on informing the public of danger and how to access resources. This restricted approach to information leaves a relatively unchecked opening for adversaries to shape perceptions of U.S. actions.

The following analyzes Soviet leverage of disease-related information as context for the Russian and Iranian narrative exploitation during the U.S. response to the Ebola crisis in Liberia (2014–2015). These observations underscore the operational and strategic value of counternarrative planning and inform recommendations for combatant command and joint task force information working groups to better support FHA contingencies.

## Russian Disinformation and Disease in Context

Russian disinformation targeting Western institutions, with the intent of eroding trust within societies and among partners and allies, is a continuation of Soviet-era practices. The Soviet Union honed information warfare capabilities throughout the Cold War, realizing the benefits of exploiting suspicions of U.S. intentions in the developing world. Active measures—including foreign press manipulation, document forgeries, and disinformation—sought to influence world events.<sup>3</sup> The Soviet security organization, in partnership with the East German security service, dedicated substantial resources to discrediting the United States through media manipulation and disinformation in foreign newspapers and radio broadcasts. The centralized Soviet state enabled close coordination among instruments of power, boosting the effectiveness of active measures.<sup>4</sup> Constrained Soviet resources in the 1980s drove the need for cost-effective means of challenging U.S. credibility among existing or potential partners.<sup>5</sup>

Soviet efforts included a yearslong disinformation campaign, widely known as Operation *Infektion* (the Stasi code-name was Operation *Denver*), aimed at linking the emergence of Acquired Immune Deficiency Syndrome (AIDS) to U.S. military biological warfare research and testing.<sup>6</sup> The U.S. role as a leader in scientific research provided the Soviet Union with an opportunity to begin circulating rumors that the U.S. Government manufactured and spread AIDS as part of a DOD program.<sup>7</sup>

In July 1983, the Soviet-funded Indian newspaper *Patriot* attempted to relate the discovery of AIDS in the United States to U.S. military research and U.S.-Pakistani research partnerships. The threat posed to India was highlighted in an anonymous editorial: “AIDS May Invade India: Mystery Disease Caused by U.S. Experiments.”<sup>8</sup> In the context of the Soviet-Afghan war, the op-ed had the potential to influence the nonaligned Indian government but went relatively unnoticed because HIV/AIDS

rates on the Indian subcontinent were unreported at the time.<sup>9</sup>

Efforts resumed through the Soviet magazine *Literaturnaya Gazeta* in October 1985, intensifying with the dissemination of a pamphlet titled “AIDS: USA Home-Made Evil; Not Imported from AFRICA” to delegates attending the September 1986 Eighth Conference of Non-Aligned Nations, in Harare, Zimbabwe.<sup>10</sup> To extend reach, Moscow Radio broadcast similar biological warfare claims in Kenya and Zaire, while Soviet state-run outlets TASS and Novosti Press encouraged local media to reprint these claims.<sup>11</sup> Such active measures incorporated an “ethnic weapons”<sup>12</sup> theme by highlighting U.S. policy toward apartheid in South Africa, invoking accounts of germ warfare against Native Americans, and alluding to population-control studies in areas of strategic interest, specifically in Zaire (present-day Democratic Republic of the Congo [DRC]).<sup>13</sup>

The U.S. Government’s Active Measures Working Group, created in 1981 to counter Soviet disinformation, faced a comparative disadvantage due to bureaucratic restraints and limited resources. Unaware of the AIDS disinformation campaign until the publication of the October 1985 propaganda piece, the United States did not actively counter the narrative until 1986, 3 years after the publication of the first story in India.<sup>14</sup> Between 1983 and late 1987, approximately 200 news outlets across 80 countries referenced the AIDS narrative promulgated by Soviet and East German intelligence. Following U.S. diplomatic pressure on Soviet leaders to end the disinformation campaign, Soviet scientists held a press conference in October 1987 to specify the African origin of AIDS.<sup>15</sup>

After the Cold War, relative U.S. disengagement across much of sub-Saharan Africa allowed an uncontested information environment, contributing to persistent mistrust within some populations. The transmittal of AIDS origin myths continued throughout the 1990s and 2000s. In areas dramatically affected by HIV/AIDS, such as Zimbabwe and South Africa, political leaders in the 1990s publicly alleged that



Joint Forces Command—United Assistance commander Major General Gary Volesky, right, elbow bumps Sergeant 1st Class Roderick Davis, logistics section noncommissioned officer in charge, 129th Combat Sustainment Support Battalion, 101st Sustainment Brigade, Task Force Lifeline, during visit to Monrovia, Liberia, November 6, 2014 (U.S. Army/Mary Rose Mittlesteadt)

U.S.-sponsored efforts to combat new infections were designed to spread AIDS to Africans. Limited polling data on the beliefs of the origin of AIDS suggest the myth that it was developed by the United States as a bioweapon is still well known and accepted within certain populations.<sup>16</sup>

The foundational mistrust produced by *Infektion* serves to facilitate additional conspiracies and disinformation efforts. Rumors that a World Health Organization (WHO) polio vaccination program, established in 1988, is a U.S.-sponsored plot to spread HIV, infertility, and cancer to Muslims are perpetuated by religious leaders and local media in northern Nigeria. The decades-long transmittal of these rumors continues to cause polio outbreaks in West Africa, Pakistan, and Afghanistan and hinder disease eradication worldwide.<sup>17</sup> The legacy of the Soviet AIDS disinformation campaign presents challenges for U.S. partners' abilities to manage disease outbreaks and complicates the operational environment

for building mutually beneficial security partnerships. This problem was evident during the U.S. response to the 2014–2015 Ebola outbreak in Liberia.

### **Fake News Targeting Operation *United Assistance***

Operation *United Assistance* (OUA), the DOD mission to Liberia in 2014–2015, marks the first instance of a U.S. troop deployment in support of a disease-driven FHA mission. The Ebola outbreak in Liberia began in December 2013 and led to an intensive multinational effort by summer 2014. The Centers for Disease Control and Prevention (CDC) elevated the threat level in July, followed by the Liberian president invoking emergency powers and U.S. chiefs of mission in Liberia, Sierra Leone, and Guinea declaring an emergency. In August 2014, DOD established an Ebola task force. DOD frequently supports U.S. Agency for International Development (USAID) Disaster Assistance Response Teams

with logistics, airlift, and medical capabilities, but Liberian government and U.S. State Department requests expanded the DOD role to include treatment units, medical research laboratories, and 3,000 troops.<sup>18</sup>

Lead elements of the task force began to arrive in mid-September 2014, but most forces were not in place until late October. Joint force support to the Ebola response was organized along command and control, engineering support, logistics support, and medical training assistance lines of effort. The 101st Airborne Division and additional specialized Army units deployed in support of USAID, the lead Federal agency for the Ebola response. Ongoing engagements in Liberia through U.S. Africa Command's Disease Preparedness Program, the Michigan National Guard State Partnership Program, and Marine security cooperation aided many aspects of OUA; however, limited knowledge of the operational environment, overuse of classification systems, and the inability to

communicate with non-DOD partners restricted unity of effort.<sup>19</sup>

Technological limitations between U.S. Government partners and distrust across Liberian society of the U.S. military presence in OUA accentuated the challenges of operating in information-permissive environments. Realizing the need for a synchronized narrative to convey U.S. intentions, U.S. Army Africa public affairs (PA) officers supported the Liberian government's public messaging campaign, in direct coordination with Disaster Assistance Response Teams through the U.S. Embassy. DOD PA played a minimal role in messaging during OUA because it was not a line of effort, and the Embassy did not identify an immediate need for information operations to support the Ebola response.<sup>20</sup> The joint PA support element assisted in managing international media but did not deploy until 4 weeks into the operation. White House press releases attempted to satisfy requests from American media but focused attention on informing the American people of the Ebola threat on U.S. soil.<sup>21</sup> Ineffective counternarrative capabilities in OUA meant that media outlets distorted U.S. intentions in Liberia.

The first rumors appeared on the Web site of the popular Liberian newspaper *Daily Observer* in early August 2014. Initial reports suggested that Ebola was the result of secret agents poisoning the water supply with formaldehyde or that it spread through vaccines made of formaldehyde. Reports also claimed trafficking organizations might be harvesting the organs of Ebola victims.<sup>22</sup> These and other rumors led to devastating attacks on health care workers, including the ransacking of a Monrovia hospital as Ebola patients fled.<sup>23</sup>

Indications of a Russian disinformation campaign to discredit the United States emerged in a *Pravda* report on August 11, 2014, published weeks before the first deployment of U.S. troops. The purported scientific report suggested the Pentagon developed an effective Ebola vaccine not available to Africans, as the U.S. Government held all rights to it. Subsequent analysis posited the U.S. Government withheld the vaccine

because Ebola is a “near perfect biological weapon” or because commercial interests sought to drive panic and increase the price of the lifesaving treatment. To alleviate suffering, the report claimed that Russian scientists were on the cusp of developing a highly effective vaccine.<sup>24</sup>

The *Daily Observer* mimicked this narrative throughout September and October 2014, accelerating the publication of salacious stories during the U.S. deployment to Liberia. Some claimed the Pentagon or CDC manufactured the Ebola virus and administered it through the United Nations to depopulate the planet, while others alleged CDC-enabled U.S. pharmaceutical companies spread Ebola to drive vaccine development for financial gain.<sup>25</sup>

The motives behind the *Daily Observer's* reporting of Ebola rumors are unclear. The newspaper is a frequent critic of the Liberian government, but the online traffic generated by the highly interesting reports may also have been profitable. To combat misinformation, Liberian president Ellen Sirleaf requested the authority to restrict media reporting. The Liberian legislature denied the request in October 2014, but the president's attempt to manage the narrative perpetuated rumors that Ebola was a government plot to impose martial law.<sup>26</sup>

The unique mission of the 101<sup>st</sup> Airborne Division in OUA fueled additional conspiracies that Russian and Iranian media then amplified.<sup>27</sup> Russian outlet *Sputnik News* published an opinion piece on October 8, 2014, that began, “The United States may be behind the deadly Ebola outbreak in Liberia and Sierra Leone, two West African countries known to host American biological warfare laboratories.” It later asked readers to consider, “Why has the Obama administration dispatched troops to Liberia when they have no training to provide medical treatment to dying Africans? How did Zaire/Ebola get to West Africa from about 3,500 km away from where it was first identified in 1976?”<sup>28</sup>

Kremlin-funded *Russia Today* broadcast a series of stories criticizing the Ebola response by a “Warmongering

Washington.”<sup>29</sup> Some online articles argued that the U.S. Army might weaponize Ebola,<sup>30</sup> while others suggested the Obama administration might use the military's experience to implement martial law throughout the United States in the event of a disease outbreak.<sup>31</sup> In mid-October, Iran seized the opportunity to galvanize Ebola conspiracies in response to U.S. troop deployments to Liberia. Iranian state television suggested U.S. intentions in OUA were to gain a long-term position in Liberia to advance competition with China for African resources. Iran added that the United States manufactured Ebola and HIV to benefit pharmaceutical companies and that Africans were being used as “guinea pigs.” Iranian reports spread to Turkish state television, and a depiction of the narrative reappeared in a popular Turkish newspaper cartoon.<sup>32</sup>

The U.S. Government succeeded in providing medical support to contain the Ebola outbreak, but the operation exposed weaknesses in managing the narrative. Soviet-generated conspiracies, the dissemination of rumors, and opportunistic disinformation during OUA illustrate the need for FHA planners to anticipate risks to U.S. forces and missions by evaluating informational challenges beyond the scope of PA, including the weaponization of information.

## Categorization of Activities in the Information Environment

Previous cases of infectious disease outbreaks confirm that a complex information environment slows operational responses and increases strategic risk. Threat projections on infectious disease outbreaks elevate the importance of information and cognitive maneuver in FHA missions. The United States currently faces two principal challenges operating in the information environment during FHA missions, categorized as type I (misinformation) and type II (disinformation). Distinguishing between the intent and risk of these informational challenges is the first step in understanding maneuver in the three dimensions of the information environment: physical, informational,



Malaysian peacekeepers perform traditional dance during ceremony to mark World AIDS Day at Naqoura headquarters in south Lebanon as part of United Nations Interim Force in Lebanon, December 1, 2015 (Courtesy United Nations/Pasqual Gorriz)

and cognitive. The joint force can then develop a counternarrative approach by employing appropriate information-related capabilities (IRCs)—the tools, techniques, or activities that affect any of the dimensions of the information environment.<sup>33</sup>

Type I challenges, misinformation, include the spread of false or inaccurate information that is not necessarily intended to be deceptive but is factually inaccurate (for example, rumors).<sup>34</sup> Misinformation involves tactical- to operational-level risks, which typically present immediate short-term risk to the mission and the force. Mitigating type I challenges requires disseminating timely, accurate, synchronized information to local populations, often in austere environments, to dispel fears and encourage the populations to follow instructions for the timely delivery of aid. This effort includes countering misinformation

from local nonstate actors who threaten operational success, including risks to health care workers and forces who are frequently the subject of misinformation. According to WHO’s Pandemic and Epidemic Diseases division, “Rumors can be more devastating than the diseases. And every time you have an epidemic of diseases, you have an epidemic of rumors as well.”<sup>35</sup> Fear, mistrust, and a lack of officially released information create barriers to effective messaging in support of FHA, which threatens local populations that need access to resources and risks containment of the disease.

The mitigation of misinformation requires intensive outreach and engagement through PA. An element of the information operations cell, PA “comprises public information, command information, and public engagement activities directed toward both the internal and external publics with interest in the Department of

Defense.”<sup>36</sup> Therefore, managing misinformation to disseminate the facts about DOD activities is an active method for improving the information environment and achieving public support. Although PA serves as a foundation, it is typically not the only IRC necessary to effectively counter misinformation. Press conferences are necessary to establish a unified narrative, but this medium may reach only small portions of the population in major cities. In Liberia, misinformation spread through word of mouth and local media outlets, such as the *Daily Talk*. Deliberate planning should include a developed understanding of perceptions and mistrust in infectious disease environments; it must consider a range of capabilities to counter misinformation, tailored to the information environment.

The second category, type II, is disinformation, understood as the spread of false information meant to deliberately

deceive or manipulate a target audience. This category includes politically motivated conspiracies and propaganda.<sup>37</sup> Type II information challenges present operational risks in addition to the strategic risks that threaten the mission, force, access, partnerships, and allies. Politically motivated narratives meant to sow fear and mistrust of U.S. aims in humanitarian missions are detrimental to delivering aid and controlling disease outbreaks; threaten the lives of Americans delivering aid on the ground; and harm U.S. standing among partners and allies.

Due to the potential for long-term risk to U.S. strategic interests, type II challenges require a combination of IRCs beyond the scope of PA in order to counter malicious narratives. Military information support operations (MISO), the primary IRC focusing on countering disinformation, are “planned operations to convey selected information and indicators to foreign audiences to influence their emotions, motives, objective reasoning, and ultimately the behavior of foreign governments, organizations, groups, and individuals.”<sup>38</sup> In disease-driven FHA missions, civil-military operations constitute an IRC with direct relevance to establishing relationships with government officials and civilian populations in friendly, neutral, or hostile operational areas.<sup>39</sup> The leveraging of MISO and civil-military operations with other IRCs allows a more effective mitigation of malicious disinformation from adversaries.

Manipulation of leaders and populations through information operations, troop movements, proxy fighters, and economic pressures are examples of Russian and Iranian efforts to challenge the United States. The suspected motivations of Russian and Iranian disinformation campaigns during the U.S. response in Liberia differed, but both illuminate the potential risks for the United States and partners providing FHA in Africa. Iran’s interest in spreading conspiracies is likely driven by the need to protect Hizballah, as Iranian proxy forces are central to its power projection. Hizballah raises funds through a global criminal network, maintaining financial

interests across West Africa, including Liberia.<sup>40</sup> Meanwhile, Russia seeks to dramatically expand its footprint in Africa to become the preferred partner on the continent. Aside from its 20 military agreements in Africa, Russia has growing political influence in Libya, Republic of the Congo, Chad, and DRC, as well as mercenary forces in some resource-rich areas of Sudan and Central African Republic.<sup>41</sup> Russia’s desire to expand influence across Africa, particularly within countries at high risk for infectious disease, may complicate Western aid provision. Efforts to counter the eastern DRC Ebola epidemic that began in summer 2018 face ongoing information challenges. Misinformation hampers efforts to stop the spread of the virus and prompts violent attacks on health care workers, including the April 2019 murder of a WHO epidemiologist.<sup>42</sup> U.S.-based pharmaceutical company Merck supplied the DRC with a vaccine that is over 97 percent effective in treating Ebola.<sup>43</sup> Soon after the announcement of the vaccine’s success, TASS announced Russian intentions to deliver its “revolutionary Ebola vaccine,”<sup>44</sup> but the Congolese health ministry then announced that only the Merck vaccine would be allowed to treat patients during the current outbreak.<sup>45</sup> Russia’s unease with Western influence in Africa, coupled with its pattern of exploiting disease outbreaks, suggests the United States should monitor active measures.

## Recommendations and Conclusion

The traditional functions of DOD in infectious disease settings are force protection and sustainment for the interagency team, shaped largely by the perception that the Defense Department brings limited experience or tools directly applicable to the problem set. A failure to appreciate FHA from a broader context of information warfare carries risks for local populations as well as for DOD and its interagency and international partners. The joint force possesses unique information capabilities that, when coupled with interagency expertise, may achieve unified action in

countering misinformation and disinformation. As DOD typically serves in a supporting role in FHA, dedicating resources to strengthen relationships between the combatant commands, Department of State, USAID, and CDC will facilitate future planning for operations in the information environment during these missions.

Adversary abilities to wage information warfare present an intensifying threat to U.S. political, economic, and military interests. Understanding the gray zone between war and peace requires a cultural shift in thinking about operational planning. As former Chairman of the Joint Chiefs of Staff General Joseph Dunford put it, “We think of being at peace or war. . . . Our adversaries don’t think that way.”<sup>46</sup>

The weaponization of information in FHA reveals that the benign intentions of U.S. support are not necessarily apparent to local audiences; thus, the narrative is vulnerable to manipulation. Current FHA doctrine emphasizes intelligence and information-sharing, which is a key step toward a comprehensive approach and may satisfy type I information challenges. The joint force must develop ways to address both type I and type II challenges. Instead of the traditional language of strategic communication,<sup>47</sup> an emphasis on narrative competition may be better suited to conveying the strategic and operational risks of disinformation and the need to integrate operations in the information environment in all planning.

The elevation of information as a joint function is a critical step toward building narrative-mindedness among operational planners.<sup>48</sup> To consolidate this doctrinal change over the long term, joint professional military education (JPME) must maintain an emphasis on orienting the joint force toward information challenges<sup>49</sup> and appropriate responses across the competition continuum. Moreover, education and training serve to grow information-enabling expertise and develop a greater appreciation for distinctions between intelligence and information functions. JPME can develop narrative-mindedness by strengthening the contextual understanding of political,



Colonel David Mounkes, USAF, commander of Joint Task Force–Port Opening Senegal, discusses unit's mission as part of Operation *United Assistance* with delegation representing U.S. Agency for International Development, at Léopold Sédar Senghor International Airport, in Dakar, Senegal, October 16, 2014 (U.S. Air National Guard/Dale Greer)

economic, or social forces that may shape local or international interactions. Planning exercises should consider cultural sensitivities and broadly explore potential areas of narrative exploitation by U.S. adversaries. Fostering diversity of thought through civilian and military educators, international officers, and interagency representatives is necessary to meet the demands of operating in the information environment.

DOD can better support FHA missions by deploying early those PA officers who can integrate with lead agencies and discern misinformation and disinformation in local and international media. The PA support element can quickly convey potential information-related threats to the lead agency for additional monitoring and suggest appropriate IRCs for consideration by the lead agency and country team. In peacetime, MISO requires interagency coordination and national-level authorization,<sup>50</sup> but the delineation becomes less clear in information warfare. In OUA, the limited capabilities of the single USAID PA officer and the late arrival of key DOD PA elements hampered the development of a deliberate communication synchronization plan to coordinate USAID, State Department,

and government of Liberia efforts.<sup>51</sup> Inadequate monitoring of linkages between misinformation and disinformation in local and international media also left the Embassy with an incomplete assessment to support counternarrative authorities.

To build narrative-mindedness in the short term, combatant commanders and joint force commanders should prioritize building knowledge of the information environment in their respective theaters. As OUA illustrates, in its traditional supporting role in FHA, DOD often allocates minimal resources to perform a detailed analysis of the environment to address type I and type II challenges.<sup>52</sup> The joint information preparation of the operational environment must expand its focus on understanding local perceptions, internal and external actors, and stakeholder analysis to better appreciate how adversaries might manipulate the information environment. This focused insight will enable synchronization of information across lines of effort.

To effectively plan and execute operations in the information environment in support of FHA, combatant commands and joint task forces must elevate the importance of the information operations

working group to integrate IRCs. The working group should involve planner and liaison officers who have a clear understanding of communication synchronization, representing the full range of joint and interagency IRCs, including special operations, electronic warfare, MISO, legal, cyber, and representatives from the Joint Interagency Coordination Group (JIACG). Aside from combatant commands structuring or placing variable emphasis on the JIACG, most combatant commands and joint task forces do not maintain information working groups with such robust representation.

FHA missions, such as infectious disease mitigation, are opportunities to advance regional and global campaign plan objectives. As the United States prepares for a future operating environment that includes a growing risk of infectious disease, it must develop the ability to more effectively maneuver in the information environment. *Infektion* illustrates typical active measures that reappeared decades later in *United Assistance*. To counter the information competencies of adversaries, the United States must adapt in organizing and applying its own power. Types I and II information challenges require tailored responses that give combatant command and joint task force information cells the capabilities and authorities to mitigate the damaging effects of misinformation and disinformation. JFQ

## Notes

<sup>1</sup> *Joint Operating Environment 2035: The Joint Force in a Contested and Disordered World* (Washington, DC: The Joint Staff, July 14, 2016), 9.

<sup>2</sup> *The National Security Strategy of the United States of America* (Washington, DC: The White House, December 2017), 9, 42.

<sup>3</sup> Department of State, *Soviet "Active Measures": Forgery, Disinformation, and Political Operations*, Special Report No. 88 (October 1981); Claudinne Mileur and Chris Kremidas-Courtney, "Weaponized Disinformation and Propaganda on Social Media: Case Study on Measles Surge in Europe," United States European Command, Open Source Element (May 2019).

<sup>4</sup> The KGB tasked its Service A with active measures. See Thomas Boghardt, "Soviet Bloc Intelligence and Its AIDS Disinformation

Campaign,” *Studies in Intelligence* 53, no. 4 (December 2009).

<sup>5</sup> Marc Trachtenberg, “Assessing Soviet Economic Performance During the Cold War: A Failure of Intelligence?” *Texas National Security Review* 1, no. 2 (March 2018).

<sup>6</sup> Douglas Selvage, “Operation ‘Denver’: The East German Ministry of State Security and the KGB’s AIDS Disinformation Campaign,” *Journal of Cold War Studies* 21, no. 4 (Fall 2019).

<sup>7</sup> The first accounts of AIDS appeared in a Centers for Disease Control and Prevention (CDC) report in June 1981, detailing cases of a rare cancer and lung infection in Los Angeles. Between April and September 1982, Congress held hearings and allocated funds to the CDC for surveillance and the National Institutes of Health for AIDS research. Global research efforts led to the 1983 discovery, by French scientists, of human immunodeficiency virus as the cause of AIDS. Sonja Schmid, “Milestones: The Discovery of HIV-1,” *Nature* (December 2018), 4, available at <[www.nature.com/articles/d42859-018-00003-x](http://www.nature.com/articles/d42859-018-00003-x)>.

<sup>8</sup> Boghardt, “Soviet Bloc Intelligence and Its AIDS Disinformation Campaign,” 4; David Spetrino, “Soviet Active Measures: AIDS Disinformation,” *Studies in Intelligence* 32, no. 4 (1988).

<sup>9</sup> Boghardt, “Soviet Bloc Intelligence and Its AIDS Disinformation Campaign.”

<sup>10</sup> East German intelligence enlisted Professor Jakob Segal, a retired biophysicist with no technical knowledge of AIDS, to produce the pamphlet “AIDS—Its Nature and Origins.” The revised title targeted an African audience. Boghardt, “Soviet Bloc Intelligence and Its AIDS Disinformation Campaign”; Linda Qui, “Fingerprints of Russian Disinformation: From AIDS to Fake News,” *New York Times*, December 12, 2017, available at <[www.nytimes.com/2017/12/12/us/politics/russian-disinformation-aids-fake-news.html](http://www.nytimes.com/2017/12/12/us/politics/russian-disinformation-aids-fake-news.html)>; James Brooke, “In Cradle of AIDS Theory, a Defensive Africa Sees a Disguise for Racism,” *New York Times*, November 19, 1987, available at <[www.nytimes.com/1987/11/19/world/in-cradle-of-aids-theory-a-defensive-africa-sees-a-disguise-for-racism.html](http://www.nytimes.com/1987/11/19/world/in-cradle-of-aids-theory-a-defensive-africa-sees-a-disguise-for-racism.html)>.

<sup>11</sup> Examples of news stories compiled from Brooke, “In Cradle of AIDS Theory, a Defensive Africa Sees a Disguise for Racism”; Spetrino, “Soviet Active Measures”; Boghardt, “Soviet Bloc Intelligence and Its AIDS Disinformation Campaign.”

<sup>12</sup> Boghardt, “Soviet Bloc Intelligence and Its AIDS Disinformation Campaign.”

<sup>13</sup> Brooke, “In Cradle of AIDS Theory, a Defensive Africa Sees a Disguise for Racism.”

<sup>14</sup> Boghardt, “Soviet Bloc Intelligence and Its AIDS Disinformation Campaign.”

<sup>15</sup> Spetrino, “Soviet Active Measures.”

<sup>16</sup> Nicoli Nattrass, “Understanding the Origins and Prevalence of AIDS Conspiracy Beliefs,” *Sociology of Health and Illness* 35, no.

1 (January 2013), 113–129.

<sup>17</sup> Gabriel E. Andrade and Azhar Hussain, “Polio in Pakistan: Political, Sociological, and Epidemiological Factors,” *Cureus* 10, no. 10 (October 2018), available at <[www.ncbi.nlm.nih.gov/pmc/articles/PMC6318131/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC6318131/)>.

<sup>18</sup> Joint Chiefs of Staff, “Operation United Assistance: The DOD Response to Ebola in West Africa,” Joint and Coalition Operational Analysis (J7), January 6, 2016, available at <[www.jcs.mil/Portals/36/Documents/Doctrine/ebola/OUA\\_report\\_jan2016.pdf](http://www.jcs.mil/Portals/36/Documents/Doctrine/ebola/OUA_report_jan2016.pdf)>.

<sup>19</sup> Ibid.

<sup>20</sup> Ibid., 94n237.

<sup>21</sup> Ibid., 93–94n235.

<sup>22</sup> Terrence McCoy, “The Major Liberian Newspaper Churning Out Ebola Conspiracy Theories,” *Washington Post*, October 17, 2014, available at <[www.washingtonpost.com/news/morning-mix/wp/2014/10/17/the-major-liberian-newspaper-churning-out-ebola-conspiracy-after-conspiracy/](http://www.washingtonpost.com/news/morning-mix/wp/2014/10/17/the-major-liberian-newspaper-churning-out-ebola-conspiracy-after-conspiracy/)>.

<sup>23</sup> Brendan Nyhan, “Fighting Ebola, and the Conspiracy Theories,” *New York Times*, August 25, 2014, available at <[www.nytimes.com/2014/08/26/upshot/fighting-ebola-and-the-conspiracy-theories.html](http://www.nytimes.com/2014/08/26/upshot/fighting-ebola-and-the-conspiracy-theories.html)>.

<sup>24</sup> Dmitry Sudakov, “U.S. Created Ebola Virus as Biological Weapon?” *Pravda*, August 11, 2014.

<sup>25</sup> Alan Feuer, “The Ebola Conspiracy Theories,” *New York Times*, October 18, 2014, available at <[www.nytimes.com/2014/10/19/sunday-review/the-ebola-conspiracy-theories.html](http://www.nytimes.com/2014/10/19/sunday-review/the-ebola-conspiracy-theories.html)>; McCoy, “The Major Liberian Newspaper Churning Out Ebola Conspiracy Theories.”

<sup>26</sup> Ibid.

<sup>27</sup> Rick Noack, “What the World Thinks of the American Ebola Panic,” *Washington Post*, October 22, 2014, available at <[www.washingtonpost.com/news/worldviews/wp/2014/10/22/what-the-world-thinks-of-the-american-ebola-panic/](http://www.washingtonpost.com/news/worldviews/wp/2014/10/22/what-the-world-thinks-of-the-american-ebola-panic/)>.

<sup>28</sup> “U.S. Links to Bio-Warfare Labs in Ebola Zone: Scholar,” *Sputnik News*, October 8, 2014.

<sup>29</sup> Robert Bridge, “Warmongering Washington Hunting for Ebola, Russia and Islamic State,” *RT News*, October 16, 2014.

<sup>30</sup> “U.S. Army Withheld Promise from Germany that Ebola Virus Wouldn’t Be Weaponized,” *RT News*, October 20, 2016.

<sup>31</sup> Noack, “What the World Thinks of the American Ebola Panic.”

<sup>32</sup> Ibid.

<sup>33</sup> Joint Publication (JP) 3-13, *Information Operations* (Washington, DC: The Joint Staff, November 20, 2014).

<sup>34</sup> Mileur and Kremidas-Courtney, “Weaponized Disinformation and Propaganda on Social Media.”

<sup>35</sup> Reid Wilson, “Ebola Outbreak in Africa Spreads Fake News in America,” *The Hill*, June 12, 2019, available at <[thehill.com/policy/international/448197-ebola-outbreak-in-africa-spreads-fake-news-in-america](http://thehill.com/policy/international/448197-ebola-outbreak-in-africa-spreads-fake-news-in-america)>.

<sup>36</sup> JP 3-13, *Information Operations*.

<sup>37</sup> Mileur and Kremidas-Courtney, “Weaponized Disinformation and Propaganda on Social Media.”

<sup>38</sup> JP 3-13, *Information Operations*.

<sup>39</sup> Ibid.

<sup>40</sup> “Countering Iran’s Global Terrorism,” remarks by Nathan Sales, Acting Under Secretary for Security, Democracy, and Human Rights, Department of State, November 13, 2018, available at <[www.state.gov/countering-irans-global-terrorism/](http://www.state.gov/countering-irans-global-terrorism/)>.

<sup>41</sup> Tim Lister, Sebastian Shukla, and Clarissa Ward, “Putin’s Private Army,” *CNN*, August 12, 2019, available at <<https://edition.cnn.com/interactive/2019/08/africa/putins-private-army-car-intl/>>.

<sup>42</sup> Nurith Aizenman, “An Urgent Mystery: Who’s Attacking Ebola Responders in Congo—And Why?” *National Public Radio*, June 4, 2019, available at <[www.npr.org/sections/goatsandsoda/2019/06/04/726139304/an-urgent-mystery-whos-attacking-ebola-responders-in-congo-and-why](http://www.npr.org/sections/goatsandsoda/2019/06/04/726139304/an-urgent-mystery-whos-attacking-ebola-responders-in-congo-and-why)>.

<sup>43</sup> Stephanie Soucheray, “DRC to Stick with Just 1 Vaccine in Ebola Outbreak,” *Center for Infectious Disease Research and Policy*, July 12, 2019, available at <[www.cidrap.umn.edu/news-perspective/2019/07/drc-stick-just-1-vaccine-ebola-outbreak](http://www.cidrap.umn.edu/news-perspective/2019/07/drc-stick-just-1-vaccine-ebola-outbreak)>.

<sup>44</sup> “Russia Ready to Start Shipping Revolutionary Ebola Vaccine to DR Congo,” *TASS*, July 16, 2019. President Vladimir Putin claimed Russia developed a cure for Ebola on January 13, 2016. Timothy Bancroft-Hinchey, “Why Is Ebola Raging in DR Congo After a Year?” *Pravda*, June 13, 2019.

<sup>45</sup> Soucheray, “DRC to Stick with Just 1 Vaccine in Ebola Outbreak.”

<sup>46</sup> Joint Doctrine Note 1-19, “Competition Continuum,” *The Joint Staff*, June 3, 2019.

<sup>47</sup> Christopher Paul, “On Strategic Communications Today: Enhancing U.S. Efforts to Inform, Influence, and Persuade,” *Parameters* 46, no. 3 (Autumn 2016).

<sup>48</sup> Scott Thomson and Christopher Paul, “Paradigm Change: Operational Art and the Information Joint Function,” *Joint Force Quarterly* 89 (2<sup>nd</sup> Quarter 2018).

<sup>49</sup> Paul, “On Strategic Communications Today.”

<sup>50</sup> JP 3-29, *Foreign Humanitarian Assistance* (Washington, DC: The Joint Staff, May 14, 2019).

<sup>51</sup> Joint Chiefs of Staff, “Operation United Assistance.”

<sup>52</sup> JP 3-29, *Foreign Humanitarian Assistance*.