

POLICY FORUM

SCIENCE AND SECURITY

Challenges in researching terrorism from the field

Research must focus on youth

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Despite intense efforts by intelligence agencies and countless conferences, articles, and books, fundamental aspects of terrorism remain unclear: What identifies terrorists before they act; how do they radicalize; what motivates their violence; when do they act; what countermeasures are most effective? These efforts to find answers have fallen short in part because of flaws in program design, despite commitment and courage from many people involved. We propose an alternative design, driven by theoretically informed field research and integrated with policy-making. Better progress to inform and test hypotheses is possible by using field data, collected in scientifically reliable ways from terrorists, supporters, and host populations.

The U.S. government (USG) has relied almost exclusively on the intelligence community, which monitors individuals and groups that threaten national security and specializes in clandestinely gathering and analyzing pertinent information. Problems with data collection and interpretation have limited this effort to understand terrorist groups' motivations, recruitment, and capabilities. The intelligence community initially had nearly all existing data on actual, possible, and potential terrorists; however, such information has not necessarily been constrained by scientifically testable theories and methods or systematically cross-examined for accuracy and completeness. The pressing need to protect people's lives and assets justifies use of partial information, sometimes to good effect in capturing dangerous terrorists and preventing terrorist actions; but policymakers tend to fit such information to prevailing paradigms in foreign policy, military doctrine, and criminal justice, each with serious drawbacks when applied to terrorism.

For example, USG national security structure was primarily built to manage state-to-state interactions during the Cold War and hence is not well-suited to sub- and trans-state threats, such as Al Qaeda and now the Islamic State. Also, U.S. war-fighting doctrine has relied on "cost-imposition" as key to any strategy to defeat an enemy, including terrorism and terrorists (1). Yet suicide bombers, for example, do not seem to respond to utilitarian cost-benefit strategies (2). Finally, unlike terrorism, most criminal activity does not involve low-probability high-impact events, deliberate targeting of many anonymous civilians, or active support and recruitment from noncriminal populations. Whereas criminology has developed somewhat reliable checklists, preincident indicators, and profiles for specific forms of criminal activity and their perpetrators (e.g., securities fraud or serial killers), little approaching statistical or clinical reliability exists for terrorism or terrorists (3).

Academics mobilized from many disciplines in natural and social sciences and humanities, but (apart from the U.S. military's war colleges and National Defense University) most had no prior familiarity with the issues, no access to classified data, and no experience with the field research needed to discipline theories with the reality of sound data collected in conflict zones. In this impoverished space, overly simple "root-cause" paradigms gained currency, e.g., socioeconomic causes, psychological processes, or political sources. These explanations became hammers seeking nails even as more complex data became available. Recognizing the need to integrate diverse data, but still limiting access to classified data, the USG developed an arm's-length strategy, asking researchers to develop algorithms for theory-agnostic, big data-driven exploratory work.

Although the need for broadly informed field research should be obvious (4), USG support has been meager. Department of Defense (DoD) funding for social science has been no more than 2% of its annual \$5 to \$6 billion budget for science and engineering research in recent years (5). Similarly sparse



is federal funding for psychology and social science research at universities (\$958 million of \$16 billion, less than 6%, for basic research in 2016) (6), basically flat funding for the last decade (7), which some in Congress want to cut entirely despite critical contributions to the national interest in business, technology, medicine, and defense.

In 2008, then-U.S. Secretary of Defense, Robert Gates, instituted Minerva, the most sustained and consequential USG basic research effort on global conflict, with a focus on the spread of violent extremism. Its researchers have published broadly and have provided policy-relevant information in congressional testimony and briefings to senior military. For example, the Empirical Studies of Conflict Project has developed into a growing policy-relevant research community that partners the USG with major universities (Princeton; Stanford; University of Chicago; and University of California, San Diego). The Climate Change and African Political Stability Program at the University of Texas, Austin, has analyzed conflict related to climate change, informing the Intergovernmental Panel on Climate Change 2014 report. Still, Minerva is understaffed and underfunded, with less than 2% of DoD's basic research

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Consortium for the Study of Terrorism and Responses to Terrorism (START) program, Massachusetts Institute of Technology's Security Studies Program, Yale University's program in comparative political science, and the Center on Terrorism at the John Jay College of Criminal Justice]. There are, however, two fundamental improvements required to transform such research efforts into a national capability for facing transnational terrorism: (i) given that the Islamic State of Iraq and Syria (ISIS) alone has managed to recruit from some 100 countries, systematic field research (and funding for it) needs to extend beyond sporadic involvement of researchers from top Western universities to coordinated, multinational cooperation; (ii) research needs to become truly interdisciplinary, so that field interviews with militants, country surveys, and psychological experiments can be integrated into theoretically driven research designs to ensure that big data analyses informed by theory and field experience pay special attention to meaningful connections.

Approaches such as machine learning (12) and multilingual text analysis (13) offer possibilities for mining vast quantities of data for patterns and indicators that can elude human observers. Realizing their potential will require embedding the technology in the research environment described here. Theoretical and field knowledge are needed to create culturally sensitive training data that the technology needs: to narrow the search space and find real-world relevance in the patterns revealed (14) and to be alert to adversaries' adaptive changes in their behavior that can undermine the usefulness of archived observations. ISIS's success can be attributed, in part, to its own fieldwork, when learning the nuances of words and social connections needed to enlist followers.

The potential for research that can overcome existing constraints can be seen in recent advances in understanding violent extremism and, to some degree, in interdiction and prevention. Most notable is waning interest in simplistic root-cause explanations of why individuals become violent extremists (e.g., poverty, lack of education, marginalization, foreign occupation, and religious fervor), which cannot accommodate the richness and diversity of situations that breed terrorism or support meaningful interventions. A more tractable line of inquiry is how people actually become involved in terror networks (e.g., how they radicalize and are recruited, move to action, or come to abandon cause and comrades) (15).

budget (\$28 million of \$1.7 billion) (8, 9). DoD has not allocated a single government position for management of the Minerva program, and <\$10 million annually goes to scientific research that has a field component.

A key challenge facing field research arises from legal and ethical protocols designed to protect DoD against charges of spying and interference and against abuse of human subjects. Although such protocols often serve these purposes, in some contexts they make little sense. For example, host-country authorization to conduct research is often unobtainable for a country where government control is too weak (e.g., during civil war) or too strong (e.g., preventing research a ruling power does not like). Captured fighters cannot be interviewed, whatever protection is accorded them (e.g., anonymity and/or consent), because academic institutions require prisoners to have representatives on their Institutional Review Board (IRB). However, having any direct representative would violate a Supreme Court Ruling (*Holder v. Humanitarian Law Project*) prohibiting participation of members of any organization on USG's terrorism list in any humanitarian endeavor. Even if USG grants approval of human subjects

research, each academic institution is free to make its own determination, which can vary from institution to institution and year to year, but which is usually attuned to protecting the sensibilities of U.S. college students (e.g., avoiding intellectual or emotional discomfort, such as occurs in distressed environments and war zones).

One possible remedy is to move responsibility for such cases to a national IRB, properly constituted with legal, ethical, and scientific expertise, including familiarity with the missions that such research can serve. That national board would need to be protected from political and financial pressures. Having an address for concerns might avoid situations like the American Psychological Association's now-repudiated involvement with torture. Its jurisdiction would be something like (narrowly defined) research with a National Security Designation.

Recent years have seen innovative efforts to work within these constraints from government-funded field research (10) and theory-driven analyses from university researchers (11). At several top universities, there is strong commitment to putting the supply of researchers ahead of the demand [e.g., University of Maryland's National

Reports from the The Soufan Group, International Center for the Study of Radicalisation (King's College London), and the Combating Terrorism Center (U.S. Military Academy) indicate that approximately three-fourths of those who join the Islamic State or al-Qaeda do so in groups. These groups often involve preexisting social networks and typically cluster in particular towns and neighborhoods (16). This suggests that much recruitment does not owe to direct personal appeals by organization agents or individual exposure to social media (which would entail a more dispersed recruitment pattern). Fieldwork is needed to identify the specific conditions under which these general processes play out. Natural growth models of terrorist networks then might be based on an epidemiology of radical ideas in host social networks rather than built in the abstract then fitted to data and would allow for a public health, rather than strictly criminal, approach to violent extremism.

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Such considerations have implications for countering terrorist recruitment. The present USG focus is on “counternarratives,” intended as alternative to the “ideologies” held to motivate terrorists. This strategy treats ideas as disembodied from the human conditions in which they are embedded and given life as animators of social groups. In their stead, research and policy might better focus on personalized “counterengagement,” addressing and harnessing the fellowship, passion, and purpose of people within specific social contexts, as ISIS and al-Qaeda often do. This focus stands in sharp contrast to reliance on negative mass messaging and sting operations to dissuade young people in doubt through entrapment and punishment (the most common practice used in U.S. law enforcement) (17) rather than through positive persuasion and channeling into productive life paths. At the very least, we need field research in communities that is capable of capturing evidence to reveal which strategies are working, failing, or backfiring.

In 2015, the White House inaugurated a federal program for Countering Violent Extremism (CVE) after consulting many experts from government, academia, and the private sector. Although the initiative was not driven by scientific evidence, federal agencies began training staff, mediators,

local communities, and private-sector firms to recognize and prevent violent extremism. The hope is that by continuing “to convene a wide range of disciplines,” a “community-based” approach to prevention led by the federal government will get it right (18). But accessing, interpreting, and leveraging community-based knowledge requires disciplined, theoretically informed field research in and with communities at risk. CVE currently lacks the mechanisms and funding (19).

A necessary focus of that research effort must be youth, who form the bulk of today's terrorist recruits and tomorrow's most vulnerable populations (20). At present, young people, especially young men (but increasingly young women), are viewed as a problem rather than the promise of a solution. To prevent terrorism, we need prevention research, fostering positive youth development through concrete possibilities for realizing young people's hopes and dreams.

One such success story is the Aware Girls program founded by teenagers Gulalai and Saba Ismail a decade ago in Northwest Pakistan. It provides young women with a platform for learning and advocacy, and their interventions have helped hundreds of young men move away from political and religious violence (21). A key feature of such programs is that they are local, which allows personal engagement by individuals attuned to culture and conditions.

Moving from local successes to global achievement requires institutions and programs that can help weave together general principles and practices that underlie local successes, while also encouraging local initiative, tailoring, and autonomy. The United Network of Young Peacebuilders is one youth-led organization that follows this strategy and uses baseline studies and ex post evaluations, with very limited means (22). It was instrumental in promoting UN Security Council Resolution 2250 that urges Member States to give youth a greater voice in decision-making at the local, regional, and international levels in order to better confront the threat to stability and development posed by violent extremism. The resolution's implementation requires independent scientific research not merely on youth, but in the field with youth, to inform policies of member nations and, perhaps more important, to create transnational social and intellectual channels to allow youth to formulate and choose best practices.

Providing the scientific foundations for that youth work, as well as interdiction and other programs for stopping violent extremism, requires fieldwork deeply integrated with basic science. It also requires integration with government to address

decision-makers' perceived needs, while informing them about the content, strengths, and limits to the science. To fulfill these roles, scientists must retain strong independence to avoid co-option by bureaucratic or political interests, while maintaining their colleagues' respect. Unless the sciences are integrated and independent, government may get oversimplified views from scientists unaware of their subdiscipline's limits, or pandering ones from scientists eager for attention and influence. Unless government maintains proper distance, it will deter scientists ready to build knowledge to contain terrorism but who fear wasting time or compromising their integrity. ■

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