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Evaluating the Effectiveness of Public Communication Campaigns and Their Implications for Strategic Competition with Russia

Many observers of international affairs have reacted with considerable alarm to Russian efforts to influence the populations of the United States and its allies and partners through tools ranging from more traditional means, such as public diplomacy (including the Russian-supported television channels RT and Sputnik), to more aggressive means, including disinformation, so-called troll farms on social media, and similar measures. Such public communication campaigns, sometimes referred to as "information warfare," are a central element

KEY FINDINGS

- The most effective campaigns are face-to-face, repeated campaigns. Such campaigns generally have a larger average impact on persuasion, knowledge, and behavior than remote campaigns (such as ones conducted through television or the internet).

- Negative and positive messages appear to be almost equally effective in motivating behavioral change. Negative messaging does seem to be more memorable than other types of messages. However, if negative advertisements are attributed to an individual or organization, they tend to lead to backlash against the sender.

- Targeting a message to a particular subpopulation greatly increases the success rate of information campaigns, especially if the targeting stresses peer groups or community norms. Additionally, targeting and knowledge of relevant subpopulations can decrease the risk of unintended or counterproductive results.

- In complex environments where people are bombarded by a wide range of messages, adversarial messaging efforts tend to cancel each other out.

of the strategic competition taking place between the United States and Russia. In this competition, both powers seek to gain advantage over the other, and seeking influence over the populations in key states is one of the primary means through which both powers operate.

Other observers argue that the fundamental threats to Western politics are domestic. Russian information warfare may exacerbate domestic political tensions at some level, but to focus on Russia is to concentrate on the wrong set of problems. In the words of one observer, "If Russia is stirring the pot, it is because the ingredients have been prepared."[1]

Unfortunately, it is difficult to settle these debates using rigorous evidence. In part, this difficulty stems from the clandestine or covert nature of many Russian activities. There is also an inherent difficulty in measuring changes that take place entirely within the heads of key audiences (Radin, Demus, and Marcinek, 2020). Indeed, the U.S. government has had considerable difficulty in measuring the effectiveness of its own efforts in this area, including initiatives in public diplomacy and countering violent extremism (CVE).[2]

However, scientific studies of the effectiveness of public communication campaigns have been conducted in various fields, and in this report we draw on these data to provide insights into the following questions:

- How effective are campaigns to influence public opinion on issues related to politics, policy, political participation, and political loyalty?
- Which factors regarding these campaigns, their audiences, or their contexts help to determine their effectiveness?
- What are the implications of these studies for the United States' strategy for and conduct of such operations in competition with Russia?

Because systematically collected data on U.S. programs, much less Russian ones, are largely missing, we adopted an indirect research strategy to provide insights into these questions. We conducted a systematic review of rigorous scientific analyses of the effectiveness of public persuasion campaigns in several fields related to the current competition between Russia and the United States to influence the attitudes of key populations. Those fields include

- civic education
- countering violent extremism
- misinformation
- electoral turnout
- media literacy.

The results of this systematic review provide only partial insights into the competition that is currently being waged between the United States and Russia.[3] Some Russian influence operations, such as bribing foreign officials, do not rely on political persuasion at all. Others involve covert operations that are difficult to approximate in other fields of analysis. Many involve the internet and social media, media for which there are fewer scientific studies than more traditional media and which may have different effects (although it is not clear that their ability to persuade differs substantially from other forms of communication). This review nonetheless offers numerous insights into the use of public communication campaigns and their implications for strategic competition between the United States and Russia.

This research was undertaken as part of a larger research project for the U.S. Army Special Operations Command. The insights from the literature, however, are applicable to U.S. government efforts more broadly.

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[1] Radnitz, 2016. See also Yaffa, 2020.

[2] On public diplomacy, see Entman, 2008. For a damning analysis of U.S.-sponsored CVE programs, see Braddock and Morrison, 2020.

[3] This competition between Russia and the United States is much broader than efforts to influence each other's populations and those of other countries, although such influence efforts are one important component. We borrow from a prior RAND report to define competition in the international realm as "the attempt to gain advantage, often relative to others believed to pose a challenge or threat, through the self-interested pursuit of contested goods such as power, security, wealth, influence, and status." See Mazarr et al., 2018, p. 5.

Research Approach

We conducted a systematic review of the academic literature on various forms of political or civic *communication campaigns*, which we define as organized efforts to induce large numbers of people to act on preexisting beliefs (such as by voting or participating in a demonstration), change their beliefs (for instance, by accepting new political views or by abandoning faith in previously held views), or change the manner in which they form beliefs relevant to politics or civic life (such as through media literacy efforts). The term may be related to but is broader than *public diplomacy*, although it is narrower than the U.S. military's concept of *operations in the information environment* (OIE).[4]

To conduct this review, we adapted a framework based on International Initiative for Impact Evaluation (3ie) guidelines for literature reviews. These guidelines were designed to ensure that reviews focus on only the highest-quality social science research, are as comprehensive as possible in their coverage of studies that meet the criteria for rigor, and minimize reviewer bias in either the selection or interpretation of the results of prior studies.[5]

Review Procedure

We searched for relevant academic studies using the databases Academic Search Complete, Scopus, and Web of Science. All articles were drawn from peer-reviewed journals and published between 2000 and 2019. The search was conducted June–July 2019. To make sure that studies met a certain level of quality, we included only studies from a preset list of journals that included quantitative measurement of the impact of a communications campaign. For included studies, we collected data on the type of intervention, including delivery method, whether it was repeated or singular, the sender, and the type of message. We additionally identified the audience of interest and collected statistics on the number of participants and demographic specifics. For outcomes, we collected information on the substantive impact of the intervention, effect size, and whether or not it was statistically significant.

We initially drew articles from five areas of interest: civic education, countering violent extremism, misinformation, electoral turnout, and media literacy. The category of civic education covered campaigns such as workshops teaching participants about democracy and civil liberties. The category of countering violent extremism (CVE) included operations such as deradicalization and informational campaigns around terrorism. The categories of misinformation and media literacy focused on the spread of false news stories and operations that are aimed to increase skepticism of those news stories.[6] The categories of electoral turnout drew from the American politics literature but focused on campaigns aiming to increase voter turnout or effect shifts in vote margins. Because of overlapping studies in some areas and a paucity of studies in others, we ultimately consolidated our research into two overarching issue areas: one focused on electoral campaigns (combining research on civic education and electoral turnout) and a second on information dissemination (combining research on media literacy and misinformation). Further information on this process, including search queries, exclusion criteria, and journals used as sources, is available in Appendix A of this report.

Out of a total of 729 articles returned from our standardized search queries, we selected 158 articles with relevant information, then further excluded meta-analyses and nonquantitative evaluative work, leaving the research team with a total of 137 evaluative quantitative academic articles. Table 1 sum-

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[4] The U.S. Department of Defense's *Joint Concept for Operating in the Information Environment* describes OIE as activities occurring in the information environment, which the Department's *Dictionary of Military and Associated Terms* defines as "the aggregate of individuals, organizations, and systems that collect, process, disseminate, or act on information" (Joint Chiefs of Staff, 2018).

[5] Available at International Initiative for Impact Evaluation (3ie), homepage, undated. 3ie is a global leader in funding, producing, and synthesizing rigorous evaluation, with a focus on international development research. Systematic literature reviews are one of their areas of emphasis.

[6] For the purposes of our analysis, we defined media literacy interventions as "education programs designed to reduce harmful effects of the media by informing the audience about one or more aspects of the media, thereby influencing media-related beliefs and attitudes, and ultimately preventing risky behaviors." See Jeong, Cho, and Hwang, 2012.

marizes these, and the full list of articles is provided in an online Appendix B available at www.rand.org/t/RRA412-2. In the vast majority of cases, these articles employed experiments to rigorously evaluate the effect of a given *intervention* (to use the term common in experimental methods). These interventions included television advertising, door-to-door canvassing, workshops, or other communication campaigns intended to influence political behavior.

Our review covered only articles published in English. This language-exclusion criterion inevitably skewed our review toward American or European research at the expense of perspectives from other parts of the world. However, 45 of the interventions in our review occurred outside the United States, so there is regional diversity in our results.

Our reliance on published research is potentially problematic. On the one hand, this focus on published research that has undergone peer review ensures that we are using only rigorously derived results to inform our conclusions. On the other hand, because journals seldom publish null findings (e.g., a finding that communications campaigns had no observable effect), our review *might* overstate the effectiveness of communication campaigns. There is some—albeit limited—evidence from previous systematic reviews in this area that unpublished results might not vary from published results in a statistically significant way (Jeong, Cho, and Hwang, 2012). Still, this limitation is a caveat we reinforce at several points, as the absence of these unpublished results in our review means the reported effect size in our findings may be larger than the effect size of these interventions in reality.

Outcomes of Interest

Communication campaigns in the areas of our review seek to achieve a wide range of results. Of these possible outcomes, we focus on those for which there is the most available information and thus the outcomes for which trends are most easily observed and strongly confirmed.

Studies on civic education and electoral turnout evaluate these outcomes:

- **voter turnout:** campaigns focused on increasing the number of voters who participate in elections
- **vote margin shift:** campaigns focused on shifting votes from one candidate or side of an issue to another
- **increasing factual knowledge:** campaigns focused on increasing knowledge of the electoral system, particular candidates, or issue areas
- **shifting attitudes toward democracy or the West:** campaigns focused on increasing positive attitude toward democratic regimes, the United States, or the West more generally.

TABLE 1

Descriptive Summary of the Number of Articles

Category of Articles	Quantitative Impact Articles	Other[a]	Total Articles
Civic education	40 (evaluate impact) 0 (evaluate exposure)	2	42
Countering violent extremism	3 (evaluate impact) 2 (evaluate exposure)	7	12
Misinformation	4 (evaluate impact) 5 (evaluate exposure)	0	9
Electoral turnout	80 (evaluate impact) 0 (evaluate exposure)	2	82
Media literacy	12 (evaluate impact) 1 (evaluate exposure)	5	18

[a] Meta-analyses or framework articles. The "Other" column includes results from searches of the bibliographies of all articles returned by our standardized search queries, with the exception of the category of media literacy.

Studies on misinformation and media literacy evaluate these outcomes:

- **increasing factual knowledge:** campaigns focused on increasing awareness of false news or information, the ways in which false news or information is spread, or what credible news or information looks like or requires
- **increasing skepticism/criticism of media:** campaigns focused on increasing critical reading of information or media
- **self-perceived media literacy:** campaigns focused on increasing critical consumption of media and awareness of what makes news or information credible
- **tested media literacy:** campaigns focused on increasing the ability to identify false news or information or credible news or information
- **correction of mistaken beliefs:** campaigns focused on increasing the ability to reject false information, or correct false information after an individual already believes it.

In the remainder of this report, we describe the findings from our systematic literature review and then discuss the implications and corresponding recommendations for the United States and its allies and partners.

Research Findings

The body of academic work we collected is extensive and diverse and has many possible implications. To narrow the focus of this report and maximize its usefulness, we focus discussion in this chapter on four key factors that, first, have particularly strong empirical support and, second, are directly relevant to the conduct of U.S. government programs in competition with Russia or other strategic competitors. These key themes are

- face-to-face versus remote messaging
- message content
- targeting
- competition environment.

Each of these themes is applicable to both our categories (civic education/electoral turnout and media literacy/misinformation).[7]

Face-to-Face Versus Remote Messaging

Face-to-face campaigns are those in which a sender physically delivers information. They include canvassing, workshops, and classroom activities. Face-to-face campaign examples include the efforts by the U.S. government during the 1990s to support political parties and election monitoring in Russia (Mendelson, 2001).

Remote campaigns are campaigns from a distance and include leaflets, mailings, phone calls, radio and television advertisement, email, text messages, mobile phone application notification, and website information. Examples of remote messaging by governments include Russian social media efforts to influence the 2016 U.S. presidential elections and the United States' Voice of America service during the Cold War. Remote operations are, by and large, less expensive than face-to-face campaigns. For governments conducting such operations without the consent of the target nation, they also have the advantage of not requiring personnel on the ground.

The studies covered in our review indicate that face-to-face, repeated campaigns are more effective campaigns, especially to encourage behavioral change (such as an increase in voter turnout) or changes in favorability or attitude (such as positive attitudes toward the West), than other types of messaging campaigns. Although small case numbers limit the certainty of our results, in campaigns focused on eliciting electoral turnout, face-to-face campaigns are associated with an increase of 5.3 percent in voter turnout among groups exposed to the communication campaign (the *treated group*, in the language of experiments), while remote campaigns turned out an additional 2.1 percent of voters

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[7] There is one exception: Targeting based on message tailoring may have an equal impact in misinformation/media literacy, but it has only been tested extensively in civic education/electoral turnout.

in treated groups.[8] A number of academic articles in the literature have done a direct cost-assessment of campaigns, and several found that face-to-face campaigns were equal to or cheaper than remote campaigns when taking into account actual impact among treated groups (Nickerson, Friedrichs, and King, 2006; Gerber and Green, 2000).

Face-to-face campaigns were much less likely to have no observable impact; in other words, they more reliably produced an impact in the desired direction, even in untargeted campaigns. In untargeted campaigns, ten remote campaigns out of 19 in our sample of studies showed no impact, whereas there were no face-to-face campaigns (out of 18 campaigns in our sample) with no observable impact.

While it is still worth keeping in mind the relatively small number of studies, repeated contact also appears especially effective, according to the articles in our review. In face-to-face campaigns focused on turnout, repeated contact campaigns appear both more reliable (with impacts ranging from 4.6 percent to 7.3 percent increase in turnout in a population for an election) than single-contact campaigns (with impacts ranging from 0 percent to 16.8 percent increase in turnout in a population for an election) and more effective, on average, with a mean impact of 5.6 percent compared with a mean impact of 4.8 percent for single-event campaigns.[9] This result is supported by another meta-analysis of media literacy campaigns (Jeong, Cho, and Hwang, 2012), which found that the impact of 51 interventions "increased as a function of the number of sessions, suggesting that media literacy interventions are more likely to be successful when the program is reinforced through multiple sessions" (Jeong, Cho and Hwang, 2012, p. 465).

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[8] This is an average taken from 23 face-to-face voter turnout campaigns (range of impact 1.4 percent to 16.8 percent, excluding a single 5-percent decrease campaign, which is discussed further in targeting backlash) and 38 remote voter turnout campaigns (range of impact –2.5 percent to 5 percent). This average does not include campaigns which used targeted messages or specific subpopulations.

[9] This is an average taken 45 single-contact voter turnout campaigns and 17 repeat voter turnout campaigns, and does not include campaigns with targeted messages or subpopulations.

It is difficult to directly test the effects of Russian remote messaging campaigns, since so many of these campaigns are unattributed. But the results of our literature review indicate that remote campaigns often appear to have effects only at the margins or no detectable impact whatsoever.

As can be seen in Table 2, face-to-face campaigns generally appear to have a larger average impact over three measures of communication campaign impact. The table compares average impact, as measured by the percentage categories delineated below the table, of every experimental campaign in our sample in the electorally focused section of our review without subpopulation analysis.

Persuasion, as proxied by vote-margin shift after candidate campaigns, appears to be successful only with face-to-face contact. Face-to-face campaigns can shift vote margins by more than 10 percent, whereas remote campaigns generally appear to have impacts of about a tenth of that. Unfortunately, there is still little experimental academic work on the impact of single-contact face-to-face campaigns, such as canvassing with a single visit. The studies of behavior, as proxied by voter turnout campaigns, that do exist have found a linear relationship between increased voter turnout and whether the contact was repeated and whether it was face-to-face. Remote, single-meeting campaigns had an average impact of a 1.8 percent increase in voter turnout in the studies in our sample, and remote, repeated campaigns had an average impact of a 2.7 percent increase. Face-to-face, single-meeting campaigns had an average impact of a 4.8 percent increase in voter turnout, and face-to-face repeated campaigns had an average impact of a 5.6 percent increase. Additionally, the evidence suggests that face-to-face, repeated campaigns appear to be more reliable, with all other types of campaigns showing no impact in at least one experiment, and face-to-face repeated campaigns showing a 4.6 percent increase in turnout even in the experiment with the smallest impact size.

Knowledge, as proxied by an increase in civic knowledge after civic education campaigns, is the only area where there appears to be an anomalous relationship between face-to-face versus remote campaigns. This is likely due to the very different types of education that are transmitted by these cam-

TABLE 2

Summary of Findings on the Impact of Face-to-Face and Remote Communication Campaigns

Type of Intervention	Effects on Treated Populations		
	Knowledge	Behavior (increase in voter turnout)	Persuasion (vote-margin shift)
Face-to-face—repeat	Moderate impact (n = 5)	Considerable impact (n = 11)	Considerable impact (n = 15)
Face-to-face—single-contact	Small impact (n = 4)	Moderate impact (n = 44)	Insufficient evidence (n = 1)
Remote—repeat	Small impact (n = 6)	Moderate impact (n = 52)	Small impact (n = 18)
Remote—single-contact	Considerable impact (n = 6)	Small impact (n = 74)	Small impact (n = 5)

NOTES: Color intensity indicates scale of impact, and hashmarks are used to indicate the extent of evidence behind the findings. A hatch pattern indicates a relatively small evidence base (n < 10). The color of the cells is based on the means for impact in the studies reviewed:

- Knowledge: *Considerable* indicates a knowledge increase of 20% or more, *moderate* indicates an increase of 10–19.9%, and *small* indicates an increase of 5–9.9%.
- Behavior: *Considerable* indicates a voter turnout increase of 5% or more, *moderate* indicates an increase of 2–4.9%, and *small* indicates an increase of 1–1.9%.
- Persuasion: *Considerable* indicates a vote-margin shift of 10% or more, *moderate* indicates a shift of 5–9.9%, and *small* indicates a shift of 1–4.9%.

Percentages are used here because this review summarizes multiple studies that did not offer enough data to calculate standard deviations. These studies, especially those in the behavior category, often communicate their results as the percentage change in the occurrence of the desired outcome in the overall population. (For an illustrative example, see Nickerson, Friedrichs, and King, 2006.) Previous reviews of the field have also examined these campaigns in terms of percentage effect (Gerber and Green, 2000).

paigns. Face-to-face campaigns are usually courses or workshops that take place over several days and focus on higher-level concepts, such as parliamentary procedure, philosophical questions of democracy, and deeper dives into civic action. Remote campaigns, by comparison, are usually ads or short text messages focused on clearly transmitting simple information, such as voting dates or particular policy positions. This means that although remote, single-episode campaigns may appear to be more successful, the underlying reason is most likely that single-episode campaigns are focused on transmitting knowledge that is easier to grasp.

Two studies that directly evaluated Russian messaging campaigns found results consistent with our review of the broader field. In a study of the effects of Russian television exposure among Ukrainian populations, the political scientists Leonid Peisakhin and Arturas Rozenas found very small effect sizes. Ukrainian populations in the range of Russian tele-

vision broadcasts differed in their voting behavior and in their opinions of their own and the Russian government by less than a percentage point from populations that did not receive such broadcasts, despite the popularity of Russian television and the heavily slanted political content of the programming (Peisakhin and Rozenas, 2018). The social scientists Hannah Chapman and Theodore Gerber similarly found that biased Russian television had only a limited impact on opinion even in the very favorable environment of Kyrgyzstan. They also found no apparent difference between the effects of traditional media (particularly television) and internet-based media (Chapman and Gerber, 2019).

Message Content

In the previous section, we considered the timing and delivery of messaging campaigns. Here, we focus on message content. Specifically, we ask, Does a negative

To the extent that disinformation plays an important role in Russian efforts, media literacy campaigns may be helpful.

or positive tone make a message more or less effective? Many observers believe that Russian campaigns seek to sow mistrust and dissension. If negative campaigns are more effective than positive ones, it may be difficult for the United States to combat such themes. Fortunately, there is a rich American politics literature around the impact of attack ads and negative information in political campaigns that may shed light on these questions. Scholars in this literature generally focus on negative messages and whether they (a) shift vote margins, (b) increase voter turnout, (c) degrade engagement with or opinion of democracy, or (d) backfire on candidates that employ such methods.

Perhaps surprisingly, in the studies we reviewed, negative and positive messages appear almost equally effective in motivating behavioral change such as increasing voter turnout, with both increasing turnout by around 3 percent in the studies reviewed. The positive or negative content of messages appears to matter less for voter turnout than other factors examined in this report, including whether the information campaign was face-to-face or remote and whether it was repeated or a single event.

Negative messaging does seem to be more successful when it comes to memory of the campaign itself. Attack ads, in other words, are more likely to stick in the mind (Lau, Sigelman, and Rovner, 2007). There is mixed evidence on whether or not negative messaging has a corrosive impact on political participation, with a narrow majority of articles agreeing that it may slightly decrease participation in

ways other than voting. This may be because there is additionally limited evidence to suggest that negative messaging might lead to less interest in democracy by increasing skepticism about the democratic process (Ansolabehere and Iyengar, 1995).

It is well supported in the literature that negative advertisements, if attributed to a sender, appear to lead to backlash on that sender. In our review, over half the articles that discussed negative messaging also noted or showed evidence of backlash against the sender. This finding is additionally supported in another major meta-analysis of the literature showing that 33 of 40 articles that tested whether negative messaging could lead to backlash found backlash against the sender (Lau, Sigelman, and Rovner, 2007). If these findings are applicable to communication campaigns conducted by governments with the intention of influencing the publics of other countries, it suggests that attribution may be an important tool in undermining the intended effects of negative communication campaigns. Attribution may be particularly important since some research suggests that non-attributed messaging is just as effective, or even more effective than, messaging from a credible source (Brooks and Murov, 2012).

To the extent that disinformation plays an important role in Russian efforts, media literacy campaigns may be helpful. There are some promising early signs that media literacy inoculation might be successful in combating misinformation campaigns or biased media (Ramasubramanian, 2007; Tully, Vraga, and Bode, 2019; Vraga and Tully, 2015) and limited evidence that it is more successful than after-the-fact correction of misinformation (Berinsky, 2017).

Targeting

Targeting an information campaign involves tailoring a message to a subpopulation on the basis of accurate intelligence or using local, co-ethnic or co-religious messengers to deliver a message to members of the same identity group. These campaigns may take the form of *social pressure* messages, which rely on information about peer communities to add normative weight to an intervention. For example, some campaigns attempt to increase voter turnout

by including personalized and neighborhood voter history in the campaign message urging the target to vote. Another example of targeting civic education or electoral turnout interventions is relying on community pressure to encourage the targeted behavior. This tactic is echoed in misinformation campaigns, such as the Russian campaign targeted at the 2016 U.S. presidential election, which encouraged votes for the Republican party. In this campaign, messages were targeted by income and geography (Kim et al., 2018).

Targeting appears to greatly increase the success rate of interventions, especially targeting that stresses peer groups or community norms. Overall, in our review of nearly a dozen studies across multiple samples of voters, targeted get-out-the-vote mail campaigns were successful in increasing electoral turnout by an average of 4.67 percent across eight studies, and similar but untargeted get-out-the-vote mail campaigns increased electoral turnout by an average of 1.75 percent across eight studies.[10]

Figure 1 summarizes the average effect in each of the studies reviewed for our analysis (most of them conducted in the United States). Each bar represents the results from a particular study—that is, the increase (in percentage terms) in voter turnout among a group that received a get-out-the-vote message compared to a "control" group that received no such messaging.[11] From the figure, we can see that targeted campaigns appear to be not only more successful but also more reliable; in our population of articles, even the least successful targeted campaigns have a positive and statistically significant effect.

These same patterns appear in at least some studies of the effects of Russian propaganda. In the study of the effects of Russian media in Ukraine discussed above, for instance, researchers found that, while

Russian media exposure led to small changes in the attitudes of Russian-language speakers in Ukraine, it had no statistically significant effects—and possibly negative ones—on Ukrainian speakers in the same regions (Peisakhin and Rozenas, 2018).

Additionally, targeting and knowledge of the relevant subpopulations in treatment groups can decrease the risk of unintended counterproductive results. In one example of a counterproductive result, a researcher found that a get-out-the-vote/civic education campaign in Mali accidentally decreased female turnout by 5.9 percent. Participation in the civic education workshops, conducted as part of this campaign, violated local gender norms, and the resulting social backlash caused women to retreat from subsequent electoral activity (Gottlieb, 2016). Further awareness of such local dynamics and appropriate adaptations, such as gender-segregated groups, might have helped produce consistent results among both male and female participants. In a similar case of counterproductive results, a campaign to encourage electoral monitoring in the Republic of Georgia led to decreased turnout due to paranoia around what was perceived as increased government attention to the election (Driscoll and Hidalgo, 2014). Further information about cultural sensitivity to monitoring might have prevented or ameliorated this issue. Even more worrisome, an information intervention focused on encouraging dispute resolution led to a nearly 200 percent increase in extrajudicial violence, including witch-hunts, in Liberia (Blattman, Jamison, and Sheridan, 2017).

One form of targeting focuses on tailoring the message to different subpopulations, and a second form of targeting focuses on reaching out only to specific subpopulations. Different audiences vary considerably in their receptiveness to certain messages. This variation derives from many factors, but most pertinent appear to be audience sophistication (education, knowledge of a particular issue, prior exposure to messaging campaigns) and predisposition (beliefs in place at the time a message is received).

Some of the most substantial changes in opinion appear to occur among subpopulations with lower levels of education or those who are less experienced with information campaigns and the behavior being promoted. In a study of the

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[10] Some studies included both targeted and untargeted interventions.

[11] Some studies included only two groups—a "treatment" group that received a particular get-out-the-vote message (either targeted or untargeted) and a "control" group that received no such message. Other studies compared three groups—one that received a targeted message, one that received either a different targeted message or an untargeted message, and a third that received no message at all. For studies with multiple treatment groups, each treatment group is represented separately (e.g., Study 1a and 1b).

FIGURE 1
Effects of Targeted and Untargeted Information Campaigns

Turnout increase (percentage of total voters)
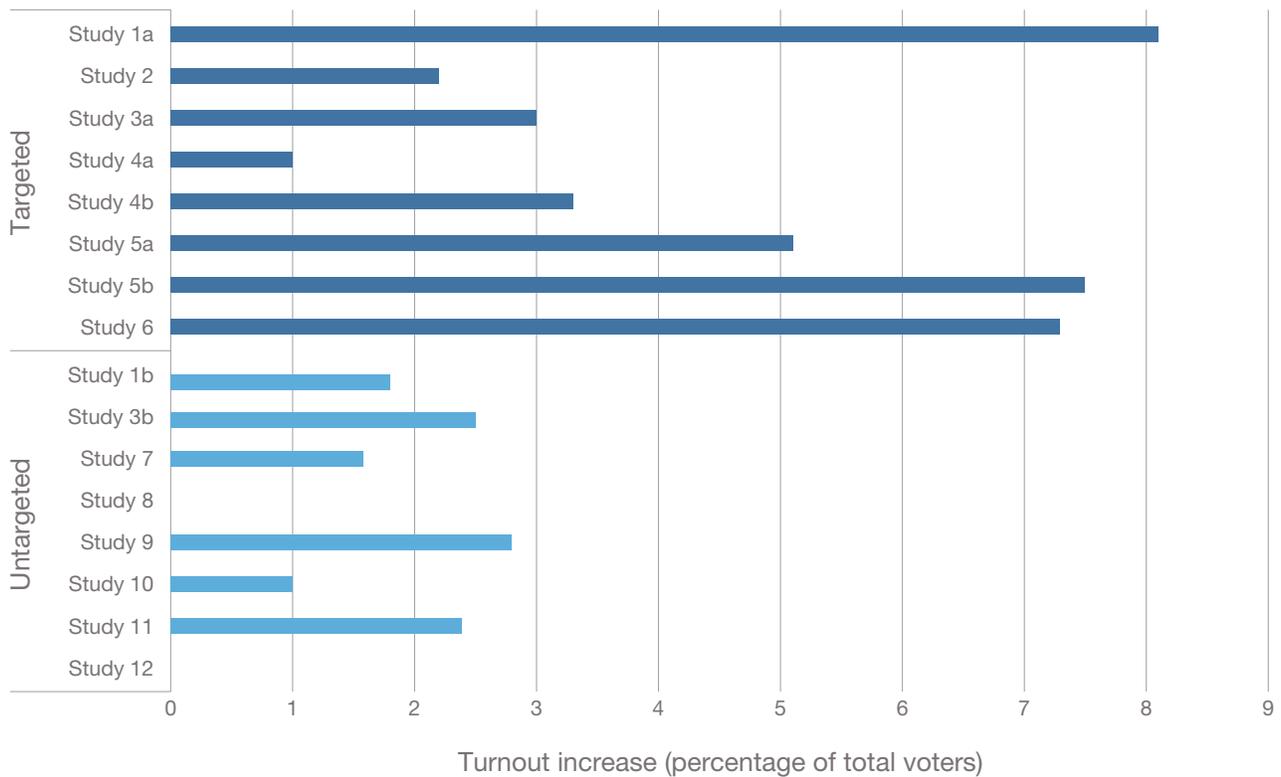
SOURCES: The studies numbered in the figure are as follows:

1(a/b): Alan Gerber, Donald P. Green, and Christopher Larimer, "Social Pressure and Voter Turnout: Evidence from a Large-Scale Field Experiment," *American Political Science Review*, Vol. 102, No. 2, 2008.

2: Alan Gerber, Gregory A. Huber, Albert H. Fang, and Andrew Gooch, "The Generalizability of Social Pressure Effects on Turnout Across High-Salience Electoral Contexts: Field Experimental Evidence from 1.96 Million Citizens in 17 States," *American Politics Research*, Vol. 45, No. 4, 2017.

3(a/b): Christopher Mann, "Is There Backlash to Social Pressure? A Large-Scale Field Experiment on Voter Mobilization," *Political Behavior*, Vol. 32, No. 3, 2010.

4(a/b): Todd Rogers, Donald Green, John Ternovski, and Carolina Ferrerosa Young, "Social Pressure and Voting: A Field Experiment Conducted in a High Salience Election," *Electoral Studies*, Vol. 46, 2017.

5(a/b): Tiffany Davenport, Alan Gerber, Donald Green, Christopher Larimer, Christopher Mann, and Costas Panagopoulos, "The Enduring Effects of Social Pressure: Tracking Campaign Experiments over a Series of Elections," *Political Behavior*, Vol. 32, No. 3, 2010.

6: Ali Valenzuela and Melissa Michelson, "Turnout, Status and Identity: Mobilizing Latinos to Vote with Group Appeals," *American Political Science Review*, Vol. 110, No. 4, 2016.

7: Marisa Abrajano and Costas Panagopoulos, "Does Language Matter? The Impact of Spanish Versus English-language GOTV Efforts on Latino Turnout," *American Politics Research*, Vol. 39, No. 4, 2011.

8: Edward Fieldhouse, David Cutts, Peter John, and Paul Widdop, "When Context Matters: Assessing Geographical Heterogeneity of Get-Out-the-Vote Treatment Effects Using a Population Based Field Experiment," *Political Behavior*, Vol. 36, No. 1, 2014.

9: Alan Gerber, Donald Green, and Christopher Larimer, "An Experiment Testing the Relative Effectiveness of Encouraging Voter Participation by Inducing Feelings of Pride or Shame," *Political Behavior*, Vol. 32, No. 3, 2010.

10: Alan Gerber, Gregory Huber, Daniel Biggers, and David Hendry, "Ballot Secrecy Concerns and Voter Mobilization: New Experimental Evidence About Message Source, Context, and the Duration of Mobilization Effects," *American Politics Research*, Vol. 42, No. 5, 2014.

11: Alan Gerber, Gregory Huber, Albert Fang, and Catlan Reardon, "The Comparative Effectiveness on Turnout of Positively Versus Negatively Framed Descriptive Norms in Mobilization Campaigns," *American Politics Research*, Vol. 46, No. 6, 2018.

12: Hans Hassell, "Teaching Voters New Tricks: The Effect of Partisan Absentee Vote-by-Mail Get-Out-the-Vote Efforts," *Research and Politics*, Vol. 4, No. 1, 2017.

effects of campaign advertising on recent immigrants in the United States, two political scientists found that, among those only recently exposed to the heavily polarized U.S. political environment, a telephone ad could increase Obama's favorability rating by 20 percent and increase turnout/shift turnout toward Democrats by 17 percent (McCann and Nishikawa-Chavez, 2016). This is an extremely

large impact in a field in which a vote margin shift of 5 percent is notable. In a similar example of reaching a population inexperienced with persuasive campaigns, a canvassing get-out-the-vote experiment conducted in China, turnout was increased from 12.5 percent to 13.9 percent (Guan and Green, 2006). It seems likely that this large impact was due to the novelty of the campaign to the possible voters in Beijing.

Lower-knowledge voters learn significantly more from information interventions and using that information as a voting signaling cue if they lack other information (Arceneaux and Kolodny, 2009). If knowledge from a campaign is used as a signaling cue, it appears to become much more powerful, as it is used much more consistently in decisionmaking. In both the Guan and Green (2006) and Arceneaux and Kolodny (2009) studies, lower-knowledge populations were more likely to mobilize in response to an information intervention. Indeed, in all eight of the articles in our review that focus on estimating the effects of lower-knowledge or lower-experience subpopulations, these subpopulations were substantially more likely to engage in politics or mobilize to vote as a result of messaging campaigns. Interestingly, these same dynamics appear relevant to Russian propaganda efforts. One study of the effects of Russian media in Kyrgyzstan found that exposure to Russian state television shifted Kyrgyzstani public opinion by fairly substantial margins on issues about which the local population knew very little. It had no observable effects, however, on issues about which the Kyrgyzstani population was well informed and had strong opinions (Chapman and Gerber, 2019).

Audience predisposition, such as partisanship, is an incredibly important context, especially for media literacy campaigns. First, partisanship influences whether or not people are exposed, since individuals with different political orientations may consume different media (Hjorth and Adler-Nissen, 2019; Kim et al., 2018). Second, even when individuals consume the same media, they may react in different ways. In seven of the 13 evaluative studies of media literacy campaigns, partisanship was a critical determinant of outcomes. In several of these studies, media literacy campaigns worked only on specific partisan subpopulations, and, in one case, the desired effect was reversed for the other partisan group (Nyhan and Reifler, 2010).

Russia sems to have already learned this lesson, as there is ample evidence that it is targeting its information campaigns at specific subpopulations. This Russian behavior may be motivated by the fact that specific subpopulations are easier to persuade, but it is also clearly aimed to "divide and conquer," sowing discontent between specific populations. The Norwegian Police Security Service "describes how intelligence services work actively to weaken confidence in the authorities or [sow] division between population groups or regions," and others have noted that Russia specifically targets regional or national internal fault lines in an attempt to turn subpopulations against each other (Karlsen, 2019).

Competitive Environments

Up until this point, we have examined the effects of particular messaging efforts in isolation—that is, we have looked at the effect sizes of campaigns with all other factors held constant. But in reality, messaging campaigns do not occur in a vacuum. Audiences are typically bombarded by a wide range of often contradictory messages. What happens in such complex environments? And what happens in particular when two or more actors are waging competitive campaigns designed to neutralize the other's message?

The complexity of such environments makes them difficult to model rigorously. But in our survey of the literature, **we found moderate evidence to suggest that adversarial messaging efforts tend, in aggregate, to cancel each other out**. This finding held true in both the electoral literature, focused on competing political campaigns, and the media literacy literature, focused on the interplay between misleading or "fake" news and factual correction. In one study, increased Democratic campaign advertisement could shift the probability of someone voting for the Democrats considerably (from a 29 percent chance to a 39 percent chance), and increased Republican campaign advertisement could shift the probability of someone voting for the Democrats in the other direction (from a 29 percent chance to a 17.5 percent chance). However, this study found that, if both campaigns saturated a market with advertisements,

voting changed little from the mean, and audience predisposition to a particular party was much more important in predicting voting for a particular party (Franz and Rideout, 2007). This trend is borne out by other work—if there is aggressive information campaigning happening in directly contradictory directions, audience predisposition to a particular action is the most important baseline factor, and there is very little behavioral change from that baseline.[12]

These findings have a clear analogue in the United States' competition with Russia. Previous RAND work by Christopher Paul and Miriam Matthews has noted the "firehose" of Russian misinformation and its impacts, and the authors suggest that one way to combat the impact of a flood of fake stories may be to produce a countervailing flood (Paul and Matthews, 2016). That is, the United States and NATO could utilize their own capabilities to compete and inform, influence, and persuade targeted audience on the same topic in the opposite direction.

Caveats

While our review covers a lot of ground, it is necessarily abridged in at least three notable ways. First, we did not examine group impacts, several of which have been suggested as important in the literature reviewed. Information interventions may influence the decisions of individuals regardless of whether anyone believes in or is persuaded by the campaign's messages. For instance, in one study of legislative scorecards in contemporary Vietnam, parliamentarians became more hesitant to criticize the regime even without obvious pressure from the public (Malesky, Schuler, and Tran, 2012). In one classic article in the fields of sociology and public opinion, a Columbia University professor recounted an attempt by the Japanese to sow dissent within American ranks through leaflets on racial lines during World War II. Although there was no sign of the propaganda

influencing the troops themselves, the next day U.S. commanders withdrew the unit that received the leaflets for fear of the effects of the Japanese messaging effort, leading to a substantial reshuffling of personnel (Davison, 1983, pp. 1–2). Such "third-person" effects would not be captured in much of the experimental research in our survey.

Second, most of the articles in our review are focused on more traditional forms of communication, such as television, radio, canvassing, and so on. Most analyses of internet-based and social media have focused on distribution and dissemination rather than effects, which limits the relevance of most of these studies for our purposes. Of those studies that have looked at their effects, most do not suggest drastic differences from traditional media, although the number of such analyses is small enough that we should treat these findings with caution. At least one recent natural experiment found very similar impacts of traditional and internet-based media specifically in the context of Russian messaging efforts (Chapman and Gerber, 2019). Some older laboratory-based experiments focused on differing reactions to television, mail, or internet as modes of communication produced similar results.[13] Nonetheless, technology is changing rapidly, and future technology—such as "deep fakes," increasingly granular targeting of messages (using ever-more sophisticated algorithms and eventually widespread use of artificial intelligence), and more easily available personal information online—all might have a large impact on the targeting effectiveness of these campaigns in the near future.

Third, there may be network impacts that are not directly examined.[14] For one example, an article in our literature review explored how almost a third of the untreated villagers in a civic education campaign reported that they had often discussed the information that had been disseminated even without attending the workshops themselves (Finkel and Smith,

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[12] For a more extensive, if older, examination of work on volume versus proportion in negative campaigning, see Stevens, 2009.

[13] See, for instance, Norris and Sanders, 2003.

[14] It is worth pointing out that while it may be difficult for studies to fully capture network effects, most of these studies are looking at aggregate outcomes such as voter turnout, which still suggests group-level effects.

2011). Such network effects are highly relevant to analyses of the effects of social media in particular.

Understanding the Substantive Effects of Communication Campaigns

Most of the messaging efforts reviewed have only small effects, but some of the results must be caveated because of small sample size. For most of the types of communication campaigns and most outcomes of interest, the studies in our review typically found either no observable effects or small effects. In studies of voter turnout, for instance, many analyses found less than a 1 percent change in voting rates; a change of 5 percent or more was considered a highly notable effect size. And these outcomes may well be lower in reality, when we consider the bias toward publishing studies that found significant effects and when we consider the effects of competitive messaging.

How important are such marginal shifts? The answer depends on the context of the communication campaign. A 1 percent change in voter turnout or voter preference may be decisive in a closely contested election in a first-past-the-post democracy such as the United States. On the other hand, the same shift may have very little impact in less closely contested races or in proportional-representation democracies, where coalitions may form to exclude parties that are considered too closely aligned with a foreign power (as has occurred in Latvia). In an authoritarian regime where public opinion and public participation in elections are less important, a 1 percent change in public opinion might have no observable impact at all.

It is also important to disaggregate effects, looking not only at the effects of messages on overall populations but also on specific subpopulations. Although aggregate public opinion may change little, the overall effects might obscure substantial shifts in opinion among certain groups, particularly if messaging campaigns are well crafted to resonate with certain audiences.

Finally, it is important to distinguish among different types of behavior an information campaign may be attempting to affect. A change of a single percentage point may mean little for many democratic elections. But if an information campaign were to motivate 1 percent of its audience to join a violent nonstate group such as al Qaeda or the Islamic State, it would have to be judged extremely successful.

Policy Implications

We began this report by noting that there is an ongoing debate about the extent of the threat posed by Russian efforts to influence Western populations. Some see these threats as broad and profound, whereas others see them as more situation-dependent. Because it is difficult to measure the effectiveness of Russian activities, it is difficult to develop policies that are proportionate and effective.

In this report, we seek to engage this debate by improving understanding of the effectiveness of public communication campaigns as a tool of political or social influence. The systematic review suggests that such campaigns have marginal effects, but these effects can have important consequences in certain situations, especially if they are used strategically.

The literature we reviewed for this report does not yield specific recommendations. It does, however, suggest a number of broad principles that might be applied in combating Russian efforts. In this section, we take stock of our findings and present the broad policy implications that derive from them.

Vigorously contest Russian messaging among allies, partners, and potential partners

The United States and its allies and partners should undertake vigorous campaigns to reinforce the resilience of Western political institutions and norms. Communication campaigns designed to influence the opinion of a given population or subpopulation tend to be more effective where they are not contested or countered by alternatives. In more competitive environments, communications efforts often largely cancel each other out. These findings suggest that Russian "information warfare" can be effectively countered—but only if the United States and other

Repeated messaging produces greater effects.

governments commit the resources necessary to do so.

In the two rigorous studies we reviewed of the effects of Russian messaging efforts in Ukraine and Kyrgyzstan, Russia was at a particular advantage. Relative to the media content produced by those two countries, Russian media were much more extensive and of much higher production quality, and Russian messaging benefited from preexisting ties in both countries. In most other contexts, Russia will not enjoy similar advantages.

Indeed, the United States typically enjoys many inherent advantages in combating Russian communication campaigns. It benefits from greater access to and familiarity with its allies and partners, enabling more in-depth and better targeted messaging campaigns. Access and familiarity also enable face-to-face campaigns (including media literacy programs in schools or civic education initiatives), which are much more efficacious than remote communication campaigns. Nor does Russia's ability to engage in norm-transgressing behavior, such as spreading disinformation, necessarily place it at a particular advantage; the studies we reviewed found that negative messages were no more effective than positive ones and that attribution of negative messaging campaigns could actually make them counterproductive for their instigators. Successful attribution of covert Russian information warfare in the West may galvanize opinion against Russia and the themes it seeks to promote.

Target messaging campaigns precisely, based on in-depth analysis of target subpopulations and where persuasion might best achieve political impact

Picking the targeted audience of messaging campaigns carefully and tailoring messages to them appears to be critical. When targeting audiences, those with less experience with the topic are generally more persuadable. When trying to counter-message, the match between partisan grouping and partisan content of messaging is especially important for correctly forecasting how audiences will respond to information campaigns (Vraga and Tully, 2015). These findings suggest the importance of "market research" to inform U.S. government programming.

Commit to long-running campaigns stressing consistent themes and narratives

The research reviewed in this report found that repeated messaging produces greater effects. This finding suggests the importance of committing to long-running campaigns stressing consistent themes or narratives. Messaging that was coherent and consistent and rich in detail was more successful (Walter and Tukachinsky, 2020). Recent work shows that repetition of a messaging campaign's content, even when that content is being repeated in an effort to counter the campaign, reinforces the message and belief in the message (Berinsky, 2017; Walter and Tukachinsky, 2020). Repeated messaging, in short, has larger impacts overall and is more difficult to counter. These findings support the importance of building a coherent, proactive narrative and committing to repeating that narrative rather than getting drawn into reacting to each new Russian messaging effort.

Work through local actors and employ face-to-face campaigns when possible

Multiple studies have found that face-to-face engagements are much more effective than remote cam-

paigns, especially when the goal is to persuade target audiences rather than simply to inform them. This finding indicates the importance of working through local actors, such as nongovernmental organizations dedicated to civic education, anti-corruption, or other goals helpful to building resilience to Russian influence operations and disinformation campaigns. The internet and social media offer the opportunity to influence audiences where a "ground game" is not possible or would be prohibitively expensive. The evidence we reviewed, however, suggests that enthusiasm for the opportunities offered by these media should not displace more traditional—but often highly effective—in-person efforts.

Invest in effective evaluation of public communication campaigns

The research we reviewed demonstrates that it is possible to rigorously evaluate the effectiveness of public communication campaigns, despite the fact that the United States government has been slow to adopt these techniques. Such rigorous evaluations can be expensive, and they require a high level of access to the targeted population. For these and other reasons, they will not always be possible. But several studies suggest the consequences of failing to invest in rigorous evaluations. Even when conducted by experts in public communication, political campaigning, or civic education, messaging campaigns are frequently ineffective, and sometimes they produce outcomes that are the exact opposite of what was intended. Experience and smarts are not a substitute for careful evaluations; rather, such evaluations are important tools to maximize the effectiveness of experience and smarts.

Resist the temptation to "mirror image"

Russia's use of clandestine or covert instruments of influence in the United States and among U.S. allies and partners has led some in the United States to seek to impose costs on Russia for its norm-transgressing activities by conducting similar operations in Russia. Although this urge is understandable, offensive operations against Russia should be based on careful analysis of the opportunities for effectiveness.

Messaging campaigns in Russia may have limited effects except in certain cases, such as during periods of popular unrest or on specific issues. The United States and the rest of the West are playing on an asymmetric playing field; their open societies and competitive elections are usually more exposed to the effects of Russian information warfare than vice versa.

Fortunately, the United States has a wide variety of tools available to impose costs on Russia for its use of information warfare. Under current conditions, many of the most effective do not involve a tit-for-tat exchange in the information environment (Dobbins et al., 2019). Were conditions to change (in particular, if the current Russian regime's hold on power were to weaken), communications campaigns might become more effective.

Conclusion

Amid all of the media attention to "information warfare," it is important to examine carefully what the evidence suggests communication campaigns can and cannot do. Efforts at political persuasion can nudge public opinion, but normally only by relatively modest amounts. Vigorous counter-messaging can further dampen the effect sizes. Just as these findings should help us to keep the impact of Russian information warfare in perspective, they should also temper our expectations about what can be accomplished through U.S. programs. Under the right circumstances, these tools can have important effects. In tightly contested elections in electoral systems such as the United States' or in potentially revolutionary situations like that in late-Communist Poland, small initial effects from communication campaigns can sometimes have outsized impact—especially if they are not countered with an equally committed response. It would be dangerous to assume that these instances of outsized impact are representative of the broader potential of such campaigns. But neither should the United States neglect what can be a useful tool in strategic competition with Russia. Existing research on public communication strategies can help ensure the United States uses this tool as effectively as possible.

Appendix A: Methodology of Systematic Review

For our systematic review of the social science literature relevant to public communication campaigns, we adapted the 3ie template guidelines for systematic review of evidence.[15] As suggested by these guidelines, we collected information on

- title
- author
- publication citation/downloadable link
- geographical coverage
- characteristics of the region (we included a measure of democracy [Freedom House] and a measure of media freedom/polling information [National Elections Across Democracy and Autocracy, or NELDA])
- sector (topic area)/subsector
- review type (effectiveness—impact/results OR other)
- background (motivations and context)
- objectives/research question
- methodology
- main findings (including number of studies, location, results, conclusions, future research/ policy implications)
- more information on intervention (such as platform used [Twitter/newspaper/etc.], message type [corruption/vote/antiviolence/misinformation], message novelty)
- characteristics of the sender (such as credibility)
- characteristics of the receiver (subpopulations/ match with sender—if mentioned)
- phases—exposure, cognitive change, behavioral change, collective behavioral change
- competition from other actors
- did the study discuss duration or outlier/ groups?
- quality assessment (did the authors specify the type of study, participants/population, intervention, outcome? [yes/partially/no]).

Additionally, we undertook several tasks outside of data collection:

- checked reference lists for included articles (done for all but media literacy)
- made list of excluded articles with reason for exclusion
- standardized quality rules for inclusion (the queries) or exclusion (quality/topic area)
- described heterogeneity in studies that are combined.

Our systematic review differed from the 3ie template in four key ways:

- It excluded so-called gray literature.
- It excluded non-English results.
- The date range extended only from 2000 through 2019 (3ie recommends 1990 through 2019).
- Because of the large differences in statistics used, outcomes of interest, and intervention-type in our articles, we could not offer a summarized table of all articles with standardized effect sizes.

For all sections except media literacy, we pulled articles from a set list of top-tier journals, constructed in consultation with specialists in the relevant field. Search queries were generally built to reflect the format of keywords representing a diverse range of outcomes paired with intervention or experiment and represented an attempt to gather a diverse range of articles.

For example, our query for civic education was:[16]

("anti-violence" OR "anti violence" OR antiviolence OR "electoral violence" OR "anti corruption" OR anticorruption OR "anti-corruption" OR clientelism OR "voter turnout" OR "political perception*") AND (election* OR electoral OR voter* OR vote OR votes OR constituent* OR citizen*) AND (campaign OR campaigns

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16 Civic education as a field is fragmented over the particular topics of interest to particular civic educators (e.g., electoral corruption, electoral violence, clientelism, or voter turnout). Original iterations of these queries included the term "civic education" and more-general terms such as "constructing citizens," but we found that these queries offered very little meaningful collection ability as few civic educators were referring to themselves or their activities by these broad terms.

OR audit OR audits OR "corruption information" OR "voter information" OR "information provision*" OR "education program" OR "education programs" OR "education programme*" OR hotline* OR "voter education" OR "attack ad" OR "attack ads" OR "attack adverti?ing" or "political adverti?ing" or "strategic news" or "media exposure" OR "media effects" OR (("mass media" OR media) AND (persuasion OR persuade* OR influence* OR influencing OR framing OR effect OR effects OR impact OR impacts OR impacted)))

Of the articles selected, we additionally (as specified by the 3ie template) scanned the bibliographies for relevant articles that also met our search criteria (except for the media literacy search). We focused on quantitative studies, which we evaluated for quality, focusing on size of sample, discussion of methods, sampling strategy and pre-/post-test or compared results. Qualitative studies or studies that provide frameworks for future programs, although useful for informing our research, were not directly comparable or possible to aggregate in a standardized way.

While we began with five major categories (civic education, electoral turnout, media literacy, misinformation, and CVE) as discussed in the text, we combined our five initial categories into two final categories. This was for three major reasons:

- Studies on civic education and electoral turnout often overlapped in both their methods

and their outcomes. Although civic education sometimes covered transmission of more-complex information, articles in these two categories were overwhelmingly focused on voter turnout.

- We combined media literacy and misinformation because it became clear they were literatures that identified competing campaigns, with media literacy interventions often set up to combat misinformation.

- There were some interesting results and articles in the CVE literature, but overall there were very few studies that met our criteria for rigorous evaluation, making it impossible to draw solid conclusions in this field. Consequently, we did not include CVE in our final analysis and trends. This is an open and important research gap, where the stakes are high and the empirical support is low. We support the suggestion of previous work that it is key to have more empirical studies on whether or not countering violent extremism interventions work (Helmus et al., 2017).

All 137 articles included in our final sample of studies for systematic review are cited in an online Appendix B available at www.rand.org/t/RRA412-2.

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About This Report

This report documents research and analysis conducted as part of a project entitled *Leveraging Operational and Strategic Maneuver to Counter Revisionist States*, sponsored by the U.S. Army Special Operations Command (USASOC). The purpose of the project was to establish a strategic framework for U.S. Army special operations forces (ARSOF) to support countering Russian activities in the competition space.

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