Belief, Attitude, and Behavior Change: Leveraging Current Perspectives for Counter-Radicalization

To effectively prevent vulnerable audiences from being persuaded by extremist ideologies, it is important to first understand the processes by which individuals change beliefs, attitudes, intentions, and behaviors independent of context. In this vein, this paper describes and explores multiple persuasion theories, frameworks, and practices that have been utilized and studies in several other domains that can be brought to bear for the purpose of counter-radicalization.

Two of these subject areas focus on psychological processes—both of which can be prompted by persuasive messaging—that individuals undergo that lead to changes in beliefs, attitudes, intentions, and behaviors. These processes include:

- Emotional experiences and
- Goal-setting and implementation intention

Other subject areas highlight specific strategies that can be employed to facilitate audience conformity to persuasive goals. These strategies include:

- Use of narrative communication,
- Promotion of self-monitoring,
- Emphasizing reciprocity,
- Promotion of consistency with committed goals,
- Presentation of social proof,
- Highlighting scarcity, and
- Appealing to authority

Finally, there exists one strategy that is not intended to *promote* persuasion, but is instead meant to *prevent* persuasion. This strategy—called attitudinal inoculation—is included in this report because of its proven effectiveness in different contexts, as well as its natural applications for efforts intended to dissuade the adoption of extremist ideologies.

The next section of the paper will offer brief synopses of these theories, frameworks, and approaches. Each section will also discuss how each framework can be used for counter-radicalization via preliminary recommendations for policymakers.

Persuasion Theories, Frameworks, and Perspectives

Discrete Emotions

Although a comprehensive account of the persuasive potency of emotions is beyond the scope of this report, it is important to note how the elicitation of different kinds of emotions can prompt various attitudinal and behavioral outcomes. The discrete emotion perspective dictates that emotions are evolved psychological and biological reactions to environmental stimuli that are either consistent with or contrary to our goals. Depending on the stimulus a person encounters in their environment and appraises as goal-congruent or goal-discordant, they will experience a variety of different responses, the combination of which define the emotion they are feeling. Specifically, emotions are defined via the following criteria:

- Qualitative "feel" – Different emotional experiences feel subjectively distinct
- Physiological changes – Different emotional experiences prompt physical changes (e.g., anger increases adrenaline output)
- Neurological stimulation – Different emotions trigger different kinds of neural activity
- Expression – Different emotions prompt changes in facial expressions and body posture
- Cognitive changes – Different emotions change how we analyze the world around us

Most important with respect to the discrete emotion perspective is that the experience of different emotional states also prompts different *action tendencies*. Action tendencies are behavioral pressures that motivate individuals to act in certain ways in response to emotions. Although they are categorized as being one of two types—approach or avoidance—action tendencies can be further distinguished according to the emotion felt. Table 1 outlines different environmental stimuli that prompt the various emotions, as well as the action tendencies associated with them.

Table 1
Discrete emotions, appraisals, and action tendencies

Emotion	Appraisal	Action Tendency
Anger	Unwarranted obstruction of a goal	Approach: Attack, remove, or reject the source of the obstruction
Fear	Probability of harm to one's body	Avoidance: Retreat from or acquiesce to a threat
Disgust	Probability of harm to one's health	Avoidance: Abstain from interacting with or consuming material that can make oneself ill
Guilt	Violation of personally held moral	Approach: Redress the moral violation
Sadness	Irrevocable failure to achieve a salient goal	Avoidance: Review plan for continued pursuit of goal; regain strength and resources
Envy	Recognition that one's goal (performance or possession of an object) has been achieved by another	Approach: Seek to obtain that which rival possesses; dispossess rival of that which he/she has
Happiness	Acute movement towards a goal	Approach: Bask in continued success toward a valued goal
Hope	Change in probability of goal achievement	Approach: Renew and strengthen efforts towards achieving a valued goal
Pride	Recognition of credit for an achievement by oneself or a group with which one identifies	Approach: Bask in celebration of completion of goal

Note: Adapted from Dillard and Peck, as well as Lazarus, Izard, and Frijda and Kuipers.[1]

[1] James Price Dillard and Eugenia Peck, "Persuasion and the Structure of Affect: Dual Systems and Discrete Emotions as Complementary Models," *Human Communication Research* 27(1) (2001), p. 41; Lazarus, *Emotion and Adaptation*; Izard, *Human Emotions*; Nico H. Frijda, Peter Kuipers, and Elisabeth ter Schure, "Relations among

The specific action tendencies associated with each emotion are critical for issues related to persuasion. Specifically, by targeting and eliciting different emotional responses, message designers can trigger desired behaviors via the action tendencies associated with each emotion and environmental appraisal.

Eliciting emotions via communication to challenge violent extremist ideologies. In contrast to many of the other perspectives and theories outlined in this paper, the discrete emotions perspective can inform the development of all kinds of messages. That is because persuasive messages of all types can highlight different stimuli to arouse different emotions and yield different outcomes.

For counter-radicalization researchers and practitioners, there are a handful of emotions that can be elicited in a manner that can achieve desired outcomes. Recall, however, that emotional experience is contingent on movement towards or restrictions on message recipients' goals. So, as a first step in the successful use of emotions to achieve successful belief, attitude, or behavioral change, it is necessary to *identify and understand the nature of target audiences' valued goals*. This can be achieved through various audience-analysis techniques, including the collection of survey data or interviews with individuals or focus groups. Once salient goals are identified, message designers can elicit emotions that can motivate changes in beliefs, attitudes, or behaviors such that they do not align with extremist groups' ideologies.

There are three emotions that show promise for driving individuals away from violent extremist organizations: anger, hope, and pride. Assuming the valued goals of target audiences are identified prior to developing persuasive messages, each of these emotions can be elicited through persuasive messaging with specific guidelines:

For anger[2]:

1) Highlight extremist acts that obstruct target audiences' ability to achieve valued goals.
2) Target individuals predisposed to agree with the content of a counter-radicalization message with messages that will induce a high level of anger and recommend behaviors that can resolve their anger that require significant effort
3) Target individuals with no predisposition to agree with the content of a counter-radicalization with messages that emphasize the importance of challenging violent extremist behaviors and ideologies and recommend behaviors to resolve their anger that do not require significant effort
4) Incorporate content into anger appeals that communicate the ease with which behaviors that challenge the violent extremist group can be performed (i.e., increase the efficacy of target audiences.

For hope:

Emotion, Appraisal, and Emotional Action Readiness," *Journal of Personality and Social Psychology* 57(2) (1989), pp. 212-228.

[2] Monique Mitchell Turner, "Using Emotion in Risk Communication: The Anger Activism Model," *Public Relations Review* 33 (2007), pp. 114-119.

1) Identify specific behaviors that target audiences can perform that help them achieve valued goals and are inconsistent with violent extremist propaganda/objectives
2) Indicate how recommended behaviors are superior to those advocated by violent extremists for achieving valued goals
3) Highlight the ease with which recommended behaviors can be performed

For pride:

1) Identify different kinds of groups that target audiences can identify with who do not engage in violent activity
2) Highlight audience goals that the groups have achieved without using violence
3) Emphasize similarities between target audiences and non-violent groups with whom they identify
4) Highlight activities performed by the non-violent group that contradict the violent extremist ideology
5) Identify behaviors that target audiences can perform to support the non-violent group

These recommendations are heavily summarized, and there are nuances to communication intended to arouse emotion that must be considered prior to persuasive message development. Interested message designers should turn to the work of Richard Lazarus and Caroll Izard for a firm grasp on discrete emotions and how they influence behavior.[3]

Goal-Setting and Implementation Intentions

Many theories of motivation are based on the premise that setting a goal is the most important thing a person can do to promote the attainment of that goal.[4] These theories contend that there is a relationship between how much a person intends to perform a given behavior and their actual performance of that behavior. There is ample evidence to suggest simply setting a goal helps people to achieve that goal,[5] but there are also some studies to show that having the intention to do something is not sufficient to guarantee that the behavior is performed. Gollwitzer argued that in addition to setting a goal, individuals must also have specific contingency plans for achieving their goals under different circumstances—these plans are called *implementation intentions*.[6] Gollwitzer's assertion suggests that communicating and coordinating specific contingency plans with message targets would facilitate the adoption of beliefs, attitudes, and intentions consistent with desired behaviors, as well as the eventual performance of those behaviors.

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[3] Richard Lazarus, *Emotion and Adaptation* (New York: Oxford University Press, 1991); See also R. S. Lazarus, "From Psychological Stress to the Emotions: A History of Changing Outlooks," *Annual Review of Psychology* 44 (1993), pp. 1-21.

[3] Carroll E. Izard, *Human Emotions* (New York: Plenum Press, 1977); Carroll E. Izard, *Human Emotions* (New York: Plenum Press, 1977).

[4] E.g., Icek Ajzen, "The Theory of Planned Behavior," *Organizational Behavior and Human Decision Processes* 50 (1991), pp. 179-211; Albert Bandura, *Self-Efficacy: The Exercise of Control* (New York: W. H. Freeman, 1997).

[5] e.g., Paschal Sheeran, "Intention-Behavior Relations: A Conceptual and Empirical Review," *European Review of Social Psychology* 12(1) (2002), pp. 1-36.

[6] Peter M. Gollwitzer, "Implementation Intentions: Strong Effects of Simple Plans," *American Psychologist* 54 (1999), 493-503.

To determine the degree to which implementation intentions affect goal achievement, Gollwitzer and Sheeran[7] performed a meta-analysis of 94 studies involving over 8,000 participants. They found that developing specific implementation intentions has a medium- to large effect on the achievement of a goal.[8] Further, the authors found that implementation intentions have a particularly strong effect on goal attainment for individuals with psychological problems. They hypothesized that the formation of implementation intentions would be particularly useful for helping those with "difficulties regulating their behavior" to achieve salient goals.[9]

Offering suggestions for behavioral implementation to promote counter-radicalization.

As indicated above, research has shown that the development of specific plans for achieving goals has a positive effect on goal attainment. This conclusion suggests that the beliefs, attitudes, and behaviors of those at risk for violent radicalization can be influenced by providing them with specific "roadmaps" for moving away from extremist ideologies. These roadmaps can be provided via several channels, including individualized counseling sessions or media campaigns. Regardless, research on implementation intentions shows that the lynchpin of this strategy involves getting target audiences to develop *specific*, *tangible* strategies for avoiding engagement with violent extremist ideologies.

Moreover, there has been some research to suggest that the development of implementation intentions can be useful specifically for individuals at risk for radicalization. This research has shown that individuals with incomplete self-definitions or depleted senses of self—both of which make them at increased risk for being drawn to an extremist ideology that promises to resolve them—are more likely to engage in promoted behaviors if specific implementation intentions are developed. Even more promising, a meta-analysis of research on implementation intentions and goal attainment has shown that the development of specific plans for achieving goals related to anti-racist behavior significantly predicts the performance of that behavior.

Taken together, these results indicate that counter-radicalization efforts intended to dissuade the adoption of beliefs, attitudes, or behaviors consistent with violent extremist ideologies should highlight *specific* plans of action for achieving goals that are inconsistent with those ideologies.

Self-Monitoring

Like goal-setting and the development of implementation intentions, self-monitoring relates to how individuals come to engage in targeted behaviors. Specifically self-monitoring involves the periodic assessment of whether and how one's behavior is (or is not) consistent with desired goals.[10] Researchers contend that monitoring one's own progress should promote the achievement of desired goals because monitoring will highlight shortfalls between an individual's current state and their desired state. In so doing, it allows them to see when greater effort or self-control is required to achieve goals they set for themselves.

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[7] Peter M. Gollwitzer and Paschal Sheeran, "Implementation Intentions and Goal Achievement: A Meta-Analysis of Effects and Processes," *Advances in Experimental Social Psychology* 38 (2006), pp. 69-119.
[8] Jacob Cohen, "A Power Primer," *Psychological Bulletin* 112(1) (1992), pp. 155-159.
[9] Gollwitzer and Sheeran, "Implementation Intentions and Goal Achievement," p. 94.
[10] Benjamin Harkin, Thomas L. Webb, Betty P. I. Chang, Andrew Prestwich, Mark Conner, Ian Kellar, Yael Benn, and Paschal Sheeran, "Does Monitoring Goal Progress Promote Goal Attainment? A Meta-Analysis of the Experimental Evidence," *Psychological Bulletin* 142(2) (2016), pp. 198-229.

Given that self-monitoring can influence how one pursues a goal, it follows that messages intended to promote self-monitoring can be tailored to promote the adoption (or avoidance) of desired (or undesired) behaviors. Research in health psychology and communication has illustrated the popularity of this technique, showing that nearly 40% of communicative interventions intended to promote diet and exercise involved participants' monitoring of their progress.[11] Self-monitoring has also been shown to be employed in clinical practice and assessment,[12] as well as energy consumption.[13]

Despite the prevalence of self-monitoring in interventions intended to promote certain behaviors, there has been little work on determining its effectiveness in doing so. One exception is Harkin and colleagues,[14] who showed that when interventions promote self-monitoring, participants tend to engage in self-monitoring more frequently. More importantly, when individuals engage in self-monitoring on a more frequent basis, they are more likely to achieve the goals they set for themselves.

In short, these results indicate that when individuals set goals for themselves and keep track of how well their behaviors are guiding them towards those goals, they are more likely to achieve them.

Narrative Persuasion

A narrative is a "cohesive, causally linked sequence of events that takes place in a dynamic world subject to conflict, transformation, and resolution through non-habitual, purposeful actions performed by characters."[15] For years, communication researchers have attempted to determine whether exposure to narratives induces changes in beliefs, attitudes, intentions, or behaviors consistent with (or opposite to) ideas espoused within narratives. Unfortunately, this research has been historically inconsistent.

Some studies have shown that reading, watching, or listening to a narrative with an embedded persuasive message causes audiences to adopt narrative-consistent perspectives.[16] Other research has failed to identify any link between narrative exposure and persuasion.[17] Even more confusing, most studies that have evaluated the persuasive effectiveness of narratives have

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[11] Susan Michie, Charles Abraham, Craig Whittington, John McAteer, and Sunjai Gupta, "Effective Techniques in Health Eating and Physical Activity Interventions: A Meta-Regression," *Health Psychology* 28(6) (2009), pp. 690-701.

[12] e.g., William J. Korotitsch and Rosemery O. Nelson-Gray, "An Overview of Self-Monitoring Research in Assesment and Treatment," *Psychological Assessment* 11(4) (1999), pp. 415-425.

[13] Wokje Abrahamse, Linda Steg, Charles Vlek, and Talib Rothengatter, "A Review of Intervention Studies Aimed at Household Energy Conservation," *Journal of Environmental Psychology* 25(3) (2005), pp. 273-291.

[14] Harkin et al., "Does Monitoring Goal Progress Promote Goal Attainment?"

[15] Kurt Braddock and James Price Dillard, "Meta-Analytic Evidence for the Persuasive Effect of Narratives on Beliefs, Attitudes, Intentions, and Behaviors," *Communication Monographs* 83(4) (2016), pp. 446-467.

[16] See Hyuhn-Suhck Bae, "Entertainment-Education and Recruitment of Cornea Donors: The Role of Emotion and Issue Involvement," *Journal of Health Communication* 13 (2008), pp. 20-36; Kenneth Mulligan and Philip Habel, "An Experimental Test of the Effects of Fictional Framing on Attitudes," *Social Science Quarterly* 92(1) (2011), pp. 79-99.

[17] See Seoyeon Hong and Hee Sun Park, "Computer-Mediated Persuasion in Online Reviews: Statistical versus Narrative Evidence," Computers in Human Behavior 28(3) (2012), pp. 906-919.

compared them to other forms of communication.[18] Informative though they are, they do not show whether or how exposure to a narrative (or a series of similar narratives) would affect different persuasive outcomes.

In 2016, Braddock and Dillard performed a meta-analysis of narrative research to clarify the situation.[19] Their evaluation of 74 studies related to narrative persuasion showed that exposure to narrative communication positively predicted changes in narrative-consistent beliefs, attitudes, intentions, and behaviors. Braddock and Dillard's results further suggested that neither the fictionality of a narrative (fiction vs. nonfiction) or the medium through which it is presented affects how persuasive it is.

Moreover, the literature on narratives have shown them to be persuasive in a wide array of domains, including political beliefs,[20] health and wellness,[21] philanthropy,[22] attributions of causality,[23] and other issues.

Counter-narratives.

Given the demonstrated persuasive efficacy of narratives, it naturally follows that counter-narratives—narratives that challenge the themes intrinsic to terrorist narratives—should be useful tools for affecting audience beliefs, attitudes, and behaviors such that they do not align with extremist ideologies. There is little work on the successful development of counter-narratives based on established communication theory, but Braddock and Horgan offered specific guidelines for doing so.[24]

To develop counter-narratives, Braddock and Horgan recommend:

1) Perform content analyses of the targeted extremist narratives to identify themes that resonate within those narratives
2) Avoid reinforcing themes that are emphasized within the targeted extremist narratives
3) Incorporate themes in counter-narratives that highlight incongruities between what the extremist narratives say and what the extremist group does in real life
4) Disrupt analogies that equate elements of the extremist narrative to real-world events

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[18] See Mike Allen and Raymond W. Preiss, "Comparing the Persuasiveness of Narrative and Statistical Evidence using Meta-Analysis," *Communication Research Reports* 14 (1997), pp. 125-131; E. James Baesler and Judee K. Burgoon, "The Temporal Effects of Story and Statistical Evidence on Belief Change," *Communication Research* 21(5) (1994), pp. 582-602; Dean C. Kazoleas, "A Comparison of the Persuasive Effectiveness of Qualitative versus Quantitative Evidence: A Test of Explanatory Hypotheses," *Communication Quarterly* 41(1) (1993), pp. 40-50.

[19] Braddock and Dillard, "Meta-Analytic Evidence for the Persuasive Effect of Narratives on Beliefs, Attitudes, Intentions, and Behaviors."

[20] e.g., Lisa D. Butler, Cheryl Koopman, and Philip G. Zimbardo, "The Psychological Impact of Viewing the Film 'JFK': Emotions, Beliefs, and Political Behavioral Intentions," *Political Psychology* 16(2) (1995), pp. 237-257.

[21] e.g., Fuyuan Shen and Jiangxue (Ashley) Han, "Effectiveness of Entertainment Education in Communicating Health Information: A Systematic Review," *Asian Journal of Communication* 24(6) (2014), pp. 605-616.

[22] Susan E. Morgan, Lauren Movius, and Michael J. Cody, "The Power of Narratives: The Effect of Entertainment Television Organ Donation Storylines on the Attitudes, Knowledge, and Behaviors of Donors and Nondonors," *Journal of Communication* 59(1) (2009), pp. 135-151.

[23] Jeff Niederdeppe, Michael A. Shapiro, and Norman Porticella, "Attributions of Responsibility for Obesity: Narrative Communication Reduces Reactive Counterarguing among Liberals," *Human Communication Research* 37(3) (2011), pp. 295-323.

[24] Kurt Braddock and John Horgan, "Towards a Guide for Constructing and Disseminating Counternarratives to Reduce Support for Terrorism," *Studies in Conflict & Terrorism* 39(5) (2016), pp. 381-404.

5) Disrupt binary themes that are cornerstones of the extremists' ideology (e.g., Muslim vs. the West, Black vs. White)
6) Incorporate themes in the counter-narratives that provide an alternate view of those the extremist narratives target

Cialdini's Modes of Influence

As one of the most influential scholars of persuasion and social influence, Robert Cialdini highlighted six principles that can inform the development of messages intended to gain compliance from message targets. These principles are: reciprocity, commitment/consistency, social proof, scarcity, authority, and liking. The next sections cover five of these (liking is not included due to the complexity of operationalizing it in a counter-radicalization context).

Reciprocity.

The principle of reciprocity in the context of persuasion dictates that people tend to exert effort to pay back a favor that has been done for them.[25] When a message target is in debt to a source, that person is likely to comply with persuasive requests made by the message designer to resolve the discrepancy in benefits received by each party.[26] This has been shown to be particularly effective in social dilemma games whereby resources are limited.[27]

The efficacy of reciprocity has been lauded as an "exceptionally strong" catalyst for persuasion.[28] Empirical research on the motivating tendency of reciprocity has revealed that individuals are so driven by the need to resolve benefit discrepancy that they will often reciprocate to favors that they had not even requested.[29]

The principle of reciprocity has been applied most readily to purchasing behavior. That said, theoretical work has argued that it can be applied not only to active behaviors, but concession behaviors as well. That is, not only does the need for reciprocity drive individuals to give something in return for a favor, it also motivates individuals to concede things if another person has conceded something to them.[30] However, evidence for this conclusion is mixed, as some researchers have found that the magnitude of a concession does not necessarily influence the

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[25] Robert B. Cialdini, "The Science of Persuasion," *Scientific American Mind* 14(1) (2004), pp. 70-77.
[26] Martin S. Greenberg, "A Theory of Indebtedness," in Kenneth J. Gergen, Martin S. Greenberg, and Richard H. Willis, eds., *Social Exchange: Advances in Theory and Research* (New York: Plenum Press, 1980), pp. 3-26.
[27] S. S. Koromita, J. A. Hilty, and C. D. Parks, "Reciprocity and Cooperation in Social Dilemmas," *The Journal of Conflict Resolution* 35(3) (1991), pp. 494-518.
[28] Maurits Kaptein, Panos Markopoulos, Boris de Ruyter, and Emile Aarts, "Personalizing Persuasive Technologies: Explicit and Implicit Personalization using Persuasion Profiles," *International Journal of Human-Computer Studies* 77 (2015), pp. 38-51.
[29] Jeannine M. James and Richard Bolstein, "The Effect of Monetary Incentives and Follow-Up Mailings on the Response Rate and Response Quality in Mail Surveys," *Public Opinion Quarterly* 54(3), pp. 346-361.
[30] Robert B. Cialdini, Joyce E. Vincent, Stephen K. Lewis, Jose Catalan, Diane Wheeler, and Betty Lee Darby, "Reciprocal Concessions Procedure for Inducing Compliance: The Door-in-the-Face Technique," *Journal of personality and Social Psychology* 31(2) (1975), pp. 206-215; Edwina S. Uehara, "Reciprocity Reconsidered: Gouldner's 'Moral Norm of Reciprocity' and Social Support," *Journal of Social and Personal Relationships* 12(4) (1995), pp. 483-502.

effectiveness of the foot-in-the-door persuasive technique (i.e., preceding a large request with a smaller one).[31]

Nevertheless, knowledge of how the need for reciprocity affects audiences can inform the design of persuasive messages. Specifically, emphasizing a discrepancy between what an audience member receives and what the message source has received in return may prompt a motivation to resolve this discrepancy by performing (or avoiding) a specific behavior.

Highlighting reciprocity for the purpose of counter-radicalization.

The concept of reciprocity hinges on the idea that individuals engage in a desired behavior in exchange for something that they have received. Interestingly, research has shown that individuals will even trend towards reciprocating favors they have not asked for. Though there is no empirical work on the use of reciprocity as an element of counter-radicalization efforts, the psychological processes associated with reciprocity that have been identified in other domains suggests that "negotiations" with those at risk for engaging in violent activity have a better chance at succeeding if message targets are made aware of something they have received from those who wish for them to avoid violence.

As such, counter-radicalization efforts may benefit from including communicative elements that highlight the benefits enjoyed by message targets coupled with the implicit suggestion that those benefits can be "paid back" by avoiding violent activity. Message designers should be careful, however, not to make the demand for "payback" too overt, as this could arouse psychological reactance in message targets that would induce them to do the opposite of what message designers wish.[32]

Commitment and consistency.

Commitment-making involves linking individuals to specific opinions or behaviors,[33] often by asking that those individuals make a pledge to adopt those opinions or engage in those behaviors. When individuals make these commitments, they often feel the need to think or act in a way that is consistent with them.[34] This need for consistency can be particularly strong when a commitment has been made in public or has the potential to be publicly revealed.[35]

Researchers have explained the connection between committed action or opinion and the enactment of those actions or opinions using several psychological mechanisms. First, some researchers have contended that when individuals commit to engaging in a behavior, their beliefs and attitudes related to that behavior become more salient to them and remain stable over time.[36] Moreover, when an individual's attitudes are made public, they are more likely to remain

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[31] Daniel J. O'Keefe and Scott L. Hale, "The Door-in-the-Face Influence Strategy: A Random-Effects Meta-Analytic Review," *Annals of the International Communication Association* 21(1) (1998), pp. 1-33.
[32] Jack W. Brehm, *A Theory of Psychological Reactance* (New York: Academic Press, 1966).
[33] Charles A. Kiesler, *The Psychology of Commitment* (New York: Academic Press, 1971).
[34] Robert B. Cialdini, *Influence: Science and Practice* (Boston: Allyn & Bacon, 2001).
[35] Ibid.
[36] Ibid.; Michael S. Pallak, David A. Cook, and John J. Sullivan, "Commitment and Energy Conservation," in Leonard Bickman, ed., *Applied Social Psychology Annual* (Beverly Hills, CA: Sage, 1980), pp. 235-253.

committed to them than attitudes that have remained private.[37] Other researchers have found that individuals who have publicly committed to opinions or actions are vulnerable to persuasion via information that is consistent with their positions and are more resistant to persuasion via information that contradicts their publicly stated positions.[38] Finally, when an individual makes a public commitment to an action or opinion, they may be more susceptible to maintain the action or opinion they committed to because of social pressure from those who were audience to their commitment.[39]

Given the clear motivational pressure exerted by making a public commitment, it can be used to promote advocated behaviors (or dissuade audiences from engaging in unwanted behaviors). If a message designer can elicit commitment—particularly public commitment—to adopt (or avoid) specific beliefs, attitudes, intentions, or behaviors, they can exert persuasive pressure on target audiences towards these outcomes.

Emphasizing commitment and consistency for counter-radicalization.

The implications of the research on verbal commitment and behavioral consistency are clear—if an individual makes a commitment to engage (or avoid) a behavior, they are more likely to do so. The relationship between commitment and behavioral consistency is even more pronounced if the commitment to behavior is publicly known.

In line with this principle, developers of messages meant to induce changes in beliefs, attitudes, or behaviors in the domain of counter-radicalization would do well to secure verbal commitments from message targets that they will not engage in violent activity on behalf of an extremist ideology. Moreover, if these commitments could be made public, they are even more likely to promote positive psychological, cognitive, and behavioral outcomes.[40]

Social proof.

The principle of social proof (or consensus) dictates that when individuals see other people expressing a specific belief/attitude or engaging in a specific behavior, they are more likely to adopt that belief/attitude or engage in that behavior themselves.[41] One simple explanation for

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[37] Wokje Abrahamse and Linda Steg, "Social Influence Approaches to Encourage Resource Conservation: A Meta-Analysis," *Global Environmental Change* 23 (2013), pp. 1773-1785.

[38] Charles A. Kiesler and Joseph Sakumura, "A Test of a Model for Commitment," *Journal of Personality and Social Psychology* 3(3) (1966), pp. 349-353.

[39] Anne Mrike Lokhorst, Carol Werner, Henk Staats, Eric van Dijk, and Jeff L. Gale, "Commitment and Behavior Change: A Meta-Analysis and Critical Review of Commitment-Making Strategies in Environmental Research," *Environment and Behavior* 45(1) (2013), pp. 3-34; Glen Shippee and W. Larry Gregory, "Public Commitment and Energy Conservation," *American Journal of Community Psychology* 10(1) (1982).

[40] Of course, message developers should respect the privacy of message recipients. Without receiving permission to make commitments public (or without message targets making their commitments public themselves), their commitments should be kept private.

[41] Icek Ajzen and Martin Fishbein, *Understanding Attitudes and Predicting Social Behavior* (Englewood Cliffs, NJ: Prentice-Hall, 1980); Cialdini, "The Science of Persuasion"; Feng Zhu and Xiaoquan (Michael) Zhang, "Impact of Online Consumer Reviews on Sales: The Moderating Role of Product and Consumer Characteristics," *Journal of Marketing* 74(2) (2010), pp. 133-148.

consensus's motivational force is the natural tendency for individuals to conform to those around them.[42]

However, more recent research has attributed the tendency for people to think and act like those around them to the proof value attached to others' beliefs, attitudes, and intentions. Specifically, it is thought that when individuals are uncertain about how to think or act in a given situation, they will look to others around them to demonstrate the "proper" beliefs, attitudes, or behaviors.[43]

The persuasive implications of social proof and/or consensus are obvious. If an individual is uncertain about how he should think or act, modeling desired beliefs, attitudes, or behaviors as a form of social proof is likely to result in that individual mimicking or replicating those persuasive outcomes. These outcomes are particularly likely if the individuals demonstrating the targeted beliefs, attitudes, or intentions to the message recipient are similar to or valued by that message recipient.

Offering social proof to promote counter-radicalization.

Within social contexts, consensus and social proof are strong drivers of our behaviors. This is no different in the realm of violent radicalization, where involvement with extremist organizations is often driven by social connections to those already involved.[44]

Just as individuals can be motivated to adopt extremist beliefs, attitudes, or behaviors to remain consistent with peers who have already done so, so too can they be motivated to avoid these outcomes if their valued others have similarly disavowed such ideologies. As such, counter-radicalization practitioners may benefit from emphasizing that message targets' valued others (to be determined through audience analysis practices) do not adhere to extremist ideologies or engage in violent behaviors. This practice may be particularly useful when target audiences are in unfamiliar situations, as this is when individuals are most likely to use social proof as an indicator for the proper beliefs to adopt or behaviors to perform.

Scarcity.

The notion of assumed scarcity relates to the value that individuals put on targeted objects, goals, or opportunities.[45] Often discussed in the context of business and marketing, the principle of scarcity suggests that individuals will attribute greater value to something if they believe that it is limited in quantity. This is typically seen when advertisers promote their products as "being available for a limited time," "available only while supplies last," or are only of "a limited release."[46] Within the marketing literature, there is substantial evidence to suggest that these persuasive tactics are effective; emphasizing the scarcity of a product or service has been shown

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[42] Solomon E. Asch, "Studies of Independence and Conformity: A Minority of One against a Unanimous Majority," *Psychological Monographs: General and Applied* 70(9) (1956), pp. 1-70.

[43] Curtis D. Hardin and E. Tory Higgins, "Shared Reality: How Social Verification Makes the Subjective Objective," in R. M. Sorrentino and E. T. Higgins, eds., *Handbook of Motivation and Cognition, Vol. 3* (New York: The Guilford Press), pp. 28-84; Cialdini, *Influence, Science and Practice*.

[44] Marc Sageman, *Leaderless Jihad* (Philadelphia, PA: University of Pennsylvania Press, 2008).

[45] Cialdini, *Influence, Science, and Practice*.

[46] Michael Lynn, "Scarcity Effects on Value: A Quantitative Review of the Commodity Theory Literature," *Psychology & Marketing* 8(1) (1991), pp. 43-57.

to positively influence consumers' attitudes about those products and services and increase their likelihood of purchasing them.[47]

Researchers have identified several psychological processes that might explain why perception of scarcity might positively influence persuasion. Markopoulous and colleagues argued that commodity theory[48] is the most prominent framework used to explain these psychological processes. Commodity theory contends that individuals desire scarce items because they increase their feelings of uniqueness or distinctiveness—traits that most individuals value.

To extend the notion of assumed scarcity beyond the commercial realm, message designers can treat valued outcomes in the same way that marketers treat products. Specifically, if message designers can emphasize that the achievement of a particular goal, adoption of a particular attitude, or performance of a particular behavior is rare, it may be possible to cue the feelings of uniqueness or distinctiveness that drive scarcity's persuasiveness.

Eliciting perceptions of scarcity to promote counter-radicalization.

The persuasive potency of scarcity is based on the premise that having a particular item (or securing a particular service) renders an individual to be distinct or unique from his/her peers. Because the principle of scarcity has been studied most extensively in the context of commercial goods and services, there is no research on how it could be used to dissuade the adoption of beliefs, attitudes, or non-commercial behaviors. However, in contexts where uniqueness would be a valued trait among target audiences (e.g., in many Western cultures), it may be useful to highlight how thinking or behaving in a certain way would make a person distinct from those around them.

In this way, the notion of scarcity can be invoked by counter-radicalization message designers by highlighting the rarity with which *other* individuals have resisted the persuasive appeal of extremist propaganda. In addition to giving the individual a sense of empowerment if they successfully resist the extremist groups' appeals to affect their beliefs, attitudes, and behaviors, highlighting the groups' past persuasive successes can have the added effect of triggering psychological defenses against the groups' propaganda in the form of psychological reactance.[49]

Authority.

Generally speaking, individuals tend to follow recommendations from those they perceive as experts in a given subject domain.[50] Researchers have attributed the tendency for individuals to

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[47] J. Jeffrey Inman, Anil C. Peter, and Priya Raghubir, "Framing the Deal: The Role of Restrictions in Accentuating Deal Value," *Journal of Consumer Research* 24(1) (1997), pp. 68-79; Martin Eisend, "Explaining the Impact of Scarcity Appeals in Advertising: The Mediating Role of Perceptions of Susceptibility," *Journal of Advertising* 37(3) (2008), pp. 33-40.

[48] Timothy C. Brock, "Implications of Commodity Theory for Value Change," in Anthony G. Greenwald, Timothy C. Brock, and Thomas M. Ostrom, eds., *Psychological Foundations of Attitudes* (New York: Academic Press, 1968), pp. 243-275.

[49] Kurt Braddock, "Vaccinating Against Hate: Using Attitudinal Inoculation to Confer Resistance to Persuasion by Extremist Propaganda," (under review).

[50] See Stanley Milgram, *Obedience to Authority* (London: Tavistock, 1974); Thomas Blass, "Understanding Behavior in the Milgram Obedience Experiment: The Role of Personality, Situations, and their Interactions," *Journal of Personality and Social Psychology* 60(3) (1991), pp. 398-413.

follow authority figures' recommendations and actions to the need for harmony within social communities.[51] Still, some researchers have shown that authority recommendations and orders can elicit "boomerang effects," whereby individuals either ignore an authority figure's message or engage in behaviors opposite to those advocated.[52]

Moreover, the influence of authority is heavily impacted by cultural factors. Whereas some cultures place significant value on input from those seen as community, spiritual, or political leaders, other cultures emphasize the importance of autonomy and "going one's own way."[53]

In terms of persuasive communication, authority can be (and has been) invoked to convey knowledge or expertise about a given subject. If belief, attitude, or behavioral change is the goal of the message designer, then having the message disseminated by someone that the audience perceives as an authority in that subject may yield positive persuasive results (given the appropriate cultural context).

Eliciting perceptions of authority to promote counter-radicalization.

As with many of the other persuasive guidelines outlined above, the concept of authority has been studied most extensively in the realm of marketing. In that domain, it has been shown that when authority figures (i.e., experts) promote a product or service, it can induce audiences to purchase that product or service.

In the realm of counter-radicalization, however, the relationship between authority and persuasion is not as clear-cut. Specifically, appeals to authority may be useful in collectivist cultures where message targets expressly value group decision-making and deference to spiritual and political leaders. However, in individualist cultures, where autonomy and volitional freedom are paramount, appeals to authority may not be as effective.

As such, those wishing to advocate peaceful beliefs, attitudes, or behaviors through authority figures should (a) do so in collectivist cultures, and (b) ensure that the leader through which counter-radicalization messages are distributed are respected by target audiences.

Attitudinal Inoculation

In contrast to the theories and perspectives outlined above, inoculation theory presents a framework for preventing audiences from adopting unwanted beliefs, attitudes, intentions, or behaviors. Specifically, inoculation theory contends that individuals can resist persuasion if they are warned of imminent challenges to their existing mindsets and are provided information that they can use to refute those attempts.[54] Attitudinal inoculation is based on the premise that when

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[51] Andre Modigliani and Francois Rochat, "The Role of Interaction Sequences and the Timing of Resistance in Shaping Obedience and Defiance to Authority," *Journal of Social Issues* 51(3) (1995), pp. 107-123; Cialdini, 2001

[52] Kathleen Fuegen and Jack W. Brehm, "The Intensity of Affect and Resistance to Social Influence," in E. S. Knowles and J. A. Linn, eds., Resistance and Persuasion (Mahwah, NJ: Lawrence Erlbaum, 2004), pp. 39-63.

[53] Bernard M. Bass, "Leadership: Good, Better, Best," *Organizational Dynamics* 13(3) (1985), pp. 26-40; Ricarda B. Bouncken, Aim-Orn Imcharoen, and Wilma Klaasen-ven-Husen, "What Does Collective Mean for Leadership and Teamwork Performance? An Empirical Study in Professional Service Firms," *Journal of International Business and Economics* 7(2) (2007).

[54] William J. McGuire, "The Effectiveness of Supportive and Refutational Defenses in Immunizing and Restoring Beliefs against Persuasion," *Sociometry* 24(2) (1961), pp. 184-197; William J. McGuire and Demetrios Papageorgis,

message targets perceive the threat that future persuasive attempts to their current beliefs, attitudes, and behaviors, they are motivated to defend against those challenges.

The first part of an inoculation message includes a warning to message recipients that their beliefs are likely to be challenged and that the source of the challenge has been successful in persuading others like them. Following this threat, message recipients are exposed to weakened versions of the arguments that pose a challenge to their current beliefs and attitudes, as well as counter-arguments against those challenges.[55]

Often called the "grandfather" of all approaches for promoting resistance to persuasion, inoculation theory has been proven effective in a wide range of domains. To illustrate, consider that inoculation messages have facilitated the maintenance of desired beliefs, attitudes, intentions, and behaviors in politics,[56] personal health and well-being,[57] public discourse,[58] agriculture,[59] animal rights,[60] and multiple other contexts.[61] Decades of research on the topic have shown it to be a reliable method for preventing persuasion.

Inoculating against beliefs and attitudes consistent with violent extremist ideologies. As indicated above, attitudinal inoculation is one of the most time-tested and reliable methods of promoting resistance to persuasion. Given its utility, it is surprising that it has not been extensively tested as a method of dissuading the adoption of beliefs, attitudes, or behaviors consistent with extremist ideologies.

In a recent exception, Braddock demonstrated that attitudinal inoculation confers resistance to persuasion by extremist propaganda by increasing psychological reactance in response to the propaganda and reducing the extremist group's credibility.[62] This is promising for the purposes

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"The Relative Efficacy of Various Types of Prior Belief-Defense in Producing Immunity against Persuasion," *The Journal of Abnormal and Social Psychology* 62 (1961), pp. 327-337; William J. McGuire and Demetrios Papageorgis, "Effectiveness of Forewarning in Developing Resistance to Persuasion," *The Public Opinion Quarterly* 26(1) (1962), pp. 24-34.

[55] For examples, see Joshua A. Compton and Michael Pfau, "Use of Inoculation to Foster Resistance to Credit Card Marketing Targeting College Students," *Journal of Applied Communication Research* 32(4) (2004), pp. 343-364; Kimberly A. Parker, Stephen A. Rains, and Bobi Ivanov, "Examining the 'Blanket of Protection' Conferred by Inoculation: The Effects of Inoculation Messages on the Cross-protection of Related Attitudes," *Communication Monographs* 83(1) (2016), pp. 49-68.

[56] e.g., Chasu An and Michael Pfau, "The Efficacy of Inoculation in Televised Political Debates," *Journal of Communication*, 54(3) (2004), pp. 421-436.

[57] Parker et al., "Examining the 'Blanket of Protection'"; John A. Banas and Stephen A. Rains, "A Meta-Analysis of Research on Inoculation Theory," *Communication Monographs* 77(3) (2010), pp. 281-311

[58] Wei-Kuo Lin and Michael Pfau, "Can Inoculation Work against the Spiral of Silence? A Study of Public Opinion on the Future of Taiwan," *International Journal of Public Opinion Research* 19(2) (2007), pp. 155-172.

[59] Michelle L. M. Wood, "Rethinking the Inoculation Analogy: Effects on Subjects with Differing Preexisting Attitudes," Human Communication Research 33(3) (2007), pp. 357-378.

[60] Robin L. Nabi, "'Feeing' Resistance: Exploring the Role of Emotionally Evocative Visuals in Inducing Inoculation," Media Psychology 5(2) (2003), pp. 199-223.

[61] For a comprehensive listing of studies that have evaluated the effectiveness of inoculation in multiple contexts, see Banas and Rains, "A Meta-Analysis of Research on Inoculation Theory" and Josh Compton, "Inoculation Theory," in James Price Dillard and Lijiang Shen, eds., The SAGE Handbook of Persuasion: Developments in Theory and Practice (Thousand Oaks, CA: Sage, 2013), pp. 220-236.

[62] Ibid.

of counter-radicalization, but it is imperative to remember that inoculation has specific steps associated with it. These include:

1) Warning message targets of impending threats to their current beliefs and attitudes by extremist propaganda
2) Expose message targets to weakened versions of the arguments in the extremist propaganda
3) Offer message targets the tools needed to challenge extremist propaganda in the form of evidence that refutes the propaganda's claims

Conclusions

Research on persuasion and social influence has identified several methods for affecting target audiences' beliefs, attitudes, and behaviors. This report highlights some of these methods and how they might be implemented to reduce audience adherence to extremist ideologies. Still, it should be noted that this report offers only a synopsis of these strategies and how they might be applied. Their successful implementation in the counter-radicalization context requires that (a) the strategies are subjected to empirical assessment via experimentation, and (b) counter-radicalization practitioners engage with the wider literature on each strategy, much of which is cited in this report.