The body of literature on violent extremism has established that several key economic, social, and political drivers of violence and conflict are equally applicable to terrorism-related violence.1 Corrupt governance, human rights abuses, inequality, and marginalization are just a few of the grievances that can fuel support for violent extremism. These fall into the category of structural drivers, requiring state-level policy action to make an impact on broad trends of conflict and violence.

These structural drivers are often intertwined with individual-level vulnerability factors, such as a desire for belonging, a search for identity, or demands for quick answers to issues of injustice and inequality. Under these circumstances, individuals can be drawn to easy, black-and-white answers that seem to offer simplicity, clarity, and certainty. Unfortunately, a hallmark of violent extremist ideologies is this binary thinking, stripped of complexity and with an identifiable in-group/out-group dynamic that offers a sense of community and belonging and helps people make sense of the world.

The various structural and individual drivers of violent extremism and their interaction merit a range of responses, of which there have been numerous during the preceding decade. Yet, programs aimed at preventing and countering violent extremism (P/CVE) continue to lack rigor, precision, and adequate evaluation.2 These efforts are notoriously difficult to evaluate because of challenges inherent to measuring the absence of what is be prevented, such as extremist activity or violence. Furthermore, ambiguities concerning what constitutes violent extremism, what works to counter it, and what are the merits of doing so have hampered rigorous appraisals of P/CVE intervention and program effectiveness. With a few notable exceptions, this has resulted in a field based largely on anecdotes and assumptions in lieu of empirical research and practice.3

To increase and add to the knowledge base of empirical research and practice in the P/CVE field, this brief explores a construct from the field of psychology that offers practitioners and policymakers a tested and validated measurement and intervention that has been applied to prevent and counter violent extremism.

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3 For examples of rigor and evaluation in countering violent extremism (CVE) design and implementation, see Beza Tesfaye et al., “‘If Youth Are Given the Chance’: Effects of Education and Civic Engagement on Somali Youth Support of Political Violence,” Mercy Corps, April 2018, https://www.mercycorps.org/sites/default/files/IF%20Youth%20Are%20Given%20the%20Chance_LR_FINAL.pdf.
This psychological construct is known as integrative complexity (IC).

INTEGRATIVE COMPLEXITY EXPLAINED

IC is an empirical, peer-reviewed, and cross-culturally validated measure of the complexity of thinking. Psychologist Peter Suedfeld and colleagues developed the measure, and it has been used for more than four decades to assess changes to the cognitive complexity of parties involved in intergroup conflict and the ways those affect real world outcomes. IC is quantified using a scale of one to seven, with a higher IC score indicating the ability of individuals or groups to acknowledge and integrate multiple viewpoints on a topic, recognizing the ambiguity that may arise as a result of different information. Conversely, a lower IC score indicates a propensity for binary, categorical thinking, in which the individual or group is unable to integrate different perspectives.

Suedfeld's research has shown that complexity of thought manifests in behavior. For example, higher IC can render individuals or groups more amenable to mutual understanding and can predict more peaceful outcomes to conflict. Lower IC, which includes an inability to perceive any validity in others' views or values, intensifies conflict and increases the potential for violence. Decades of research have demonstrated that IC is one of the best psychological predictors of violence in intergroup conflict, including ideologically motivated conflict. As shown in more than 300 articles, a significant drop in the IC of parties involved in intergroup conflict resulted in increased conflict and violence within weeks.

All individuals, however, display higher or lower IC depending on their context; and in certain situations, lower IC can be advantageous or even necessary. For example, in situations demanding urgency and immediacy, lower IC helps individuals make quick decisions while higher IC can yield indecision because of the volume of information one is considering.

How IC Relates to Extremism and Violence

A defining feature of extremist ideology is low complexity of thought that casts issues in binary, absolute terms. Extremist ideologies that espouse violence are even lower in complexity than nonviolent extremist ideologies. Thus, analyzing the IC of extremist discourse helps to discriminate the risk of extremism-related violence.

Individuals experiencing marginalization, inequality, trauma, or identity threat often respond to these and other long-term stressors with lowered complexity of thinking, rendering them more receptive to the low
IC messaging of extremists. Although the majority of individuals do not act on an extremist ideology and turn to violence, an individual’s increasing degree of commitment to violent action is accompanied by a significant decrease in IC. Given that all humans sometimes display low IC in response to certain stimuli, this conceptualization of extremism suggests that many individuals can be susceptible to extremist ideology. Yet, certain characteristics make some instances of low IC more noteworthy than others. For example, when an individual or group exhibits a sudden and sustained drop to low IC regarding intergroup conflict, this indicates that they are becoming more adversarial and less able to negotiate. In these contexts, the potential for conflict and violence increases.

What Individual Vulnerability Factors Can IC Address?

The binary, single perspective on which violent extremist ideologies are built can be appealing to vulnerable individuals whose ability to engage with complexity may already be constricted as a result of the social and psychological stressors in their lives. The following section offers a few examples of social and psychological stressors that can lead to low complexity and constricted thinking. Notably, the existence of these stressors is not an automatic precursor to violent extremism. Rather, they can pave the way for cognitive constrictions on which violent extremist recruiters seize to offer their compelling, low-complexity narratives, comfort, and belonging.

Family Problems

The stress of dysfunctional family relationships can predispose young people to seek belonging with peer groups, gangs, or the “fictive kin” of a violent extremist group. The predisposition to outside peer groups is especially acute when families fail to keep young people safe from abuse or neglect and the young person’s attachment bond to caregivers is conflicted with the fear of being harmed. Of all emotions, fear has the greatest impact in lowering cognitive complexity and altering how the brain processes information. In search of safety and the comfort of a substitute family, young people can become susceptible to the familial narrative of a violent extremist group.

Trauma

Although trauma is a broad term that can encompass many different types of jarring events, the experience of violence, whether personal or to one’s family and friends, is one of the most potent traumatic events that can increase vulnerability to lowered cognitive complexity. The experience of trauma can isolate individuals from their social circles and society, making it easier for violent extremist recruiters to offer appealing messages of belonging, stability, and structure. In this context, an individual may fuse emotionally with the mutual sufferings of their in-group at home or abroad, which further lowers complexity of thought and can be used by radicalizers and recruiters to legitimize violence.

Identity Threat

Perhaps the most pervasive individual vulnerability factor to lowered cognitive complexity is a sense of threat to the values an individual deems important, often arising from globalization’s intermingling of
These insights provide the foundation to understand how changing specific processes of thinking may translate into positive behavioral change. The next section outlines how IC interventions can facilitate this positive change.

**Operationalizing IC as a P/CVE intervention**

An IC intervention centers on addressing the binary structure of thinking that emphasizes one value to the exclusion of other values, particularly values that define the identities of “my group” versus “other groups.” The intervention is applicable across a variety of contexts because it does not focus on the content of an ideology or belief system. Rather, it emphasizes the structure of thinking and how an individual processes and integrates different viewpoints. In its agnostic measure of cognitive structure, an IC intervention can therefore be applied in many contexts of polarization, whether it is violent extremism, sectarianism, or any other intergroup conflict.

IC interventions offer a customizable framework of engagement that can be applied in a variety of settings. Group interventions are typically done in up to eight cumulative sessions organized in stages (box 1). The interventions first focus on changing constricted social perceptions by exploring controversial topics using multimedia and group activities to elicit the way people instinctively react. They then involve group activities and metacognitive reflection that open the lens on social reality, thus transforming obstacles and emotions that limit complexity and offering an opportunity to practice applying cognitive openness to differing perspectives. As IC interventions focus on the structure of thinking, this allows for precise and predictive measurement using...
Box 1. Integrative Complexity in Kenya

An integrative complexity (IC) intervention was trialed in Eastleigh, Nairobi, Kenya, in January 2014 with 24 participants from Kenya and Somalia. Of the 24 participants, eight participants were identified as vulnerable to extremism, according to independent assessments based on recent activity or alignment with extremist groups or ideology. Six of the eight were former al-Shabaab members. The intervention consisted of a 16-contact-hour course over four days that enabled participants to enact through group activities their socially shared thinking and emotions regarding extremism-related topics as it related to their own values. It consisted of three transformation steps. The first, differentiation, focused on the ability to perceive multiple viewpoints or dimensions of an issue through a broader focus that includes senses, body, emotions, and movement. The second, value pluralism, enabled participants to uncover some validity in the values that undergird other viewpoints, even the extreme ones, without sacrificing their own or others’ differing values. The third and last step, integration, fostered the ability to discover linkages or frameworks to make sense of different viewpoints. The course was evaluated through pre- and posttesting and was found to significantly increase IC in written responses to Paragraph Completion Tests. Participants also displayed an improved ability to perceive validity in different viewpoints in oral presentations.


IC at Work

IC interventions have been used in cultural contexts as diverse as Scotland and Sweden to Kenya and Pakistan, from 14-year-old teenagers to adults of all ages.

- In Scotland, IC intervention has been used to reduce and prevent Protestant-Catholic sectarianism hindering tolerance and peace.

- In Sweden, IC intervention is offering a way to promote psychosocial health through social capital and community resilience in the face of far-right polarization.

- In Kenya, IC intervention has been used to build the resilience of at-risk youth, including former al-Shabaab members, to help them critically assess terrorism narratives that justify the use of violence.

- In the United Kingdom and Finland, IC intervention is used in secondary school curriculums and communities to address social polarization and promote media literacy that enables students to think critically about extremist ideology.

- In Bosnia and Herzegovina, Kosovo, and Macedonia, IC intervention is used to help youth identified as at risk of hate crime, extremism, or separatism emerge from ethnic separatist and violent extremist allegiances.

- In Pakistan, IC intervention has helped disengage young militants who fought with and were

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33 Boyd-MacMillan et al., “I SEE!”


conditioned by the Taliban and helped deepen resilience and critical thinking for reintegrated former Taliban fighters.38

IC Results: Cross-Cultural, Cross-Violent Extremism Replication

Over the past nine years, more than 80 IC interventions have been empirically assessed in Bosnia and Herzegovina, England, Finland, Kenya, Kosovo, Macedonia, Pakistan and Scotland, with efforts underway in Sweden and in the planning phase in Northern Ireland.39 Although each IC intervention addresses the extremism or social polarization relevant to the specific region and context and requires cultural tailoring, each instance so far has yielded positive gains comparing pre- and posttest results (fig. 1). These gains in IC have been achieved with consistent, significant results with a variety of groups, including detained violent extremists, former violent extremists, young people identified as at risk, and the wider population in secondary schools and community centers. Control groups, as well as one uncompleted IC intervention, do not show comparative gains.40 Assessments of IC interventions show the following:41

- Each IC intervention shows significant pre- and posttest gains in IC with large size effects.
- Participants’ oral data, which is less stressful for participants to generate, show higher IC gain (scores ranging around 3.5) and around 25 percent of participants showing higher IC scores from 4 to 7, which indicate an improved ability to find links between differing viewpoints and overarching frameworks to encompass multiple causes, conditions, and dimensions.
- The results also show significant gains in related measures such as value complexity,42 resilience,43 cognitive empathy,44 and social identity complexity.45

Figure 1. Mean IC Course Results Across Diverse Groups and Contexts

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40 Savage et al., “Developing Critical Thinking Through Cognitive Complexity and Value Pluralism.”
42 Value complexity is the ability to integrate different viewpoints and maximize more than one value in tension regarding an issue. For further information, see Shalom H. Schwartz and Klaus Boehnke, “Evaluating the Structure of Human Values With Confirmatory Factor Analysis,” Journal of Research in Personality 38, no. 3 (2004); Philip E. Tetlock, “A Value Pluralism Model of Ideological Reasoning,” Journal of Personality and Social Psychology 50, no. 4 (1986). See also Liht and Savage, “Preventing Violent Extremism Through Value Complexity.”
43 Resilience is a measure of the ability to cope with and recover from stressors. For more information, see Kathryn M. Connor and Jonathan R.T. Davidson, “Development of a New Resilience Scale: The Connor-Davidson Resilience Scale (CD-RISC),” Depression and Anxiety 18, no. 2 (September 2003): 76–82.
44 Cognitive empathy is an individual’s emotional reaction to the experiences of others and their ability to understand the perspective of others. For more information, see Mark H. Davis, “Measuring Individual Differences in Empathy: Evidence for a Multidimensional Approach,” Journal of Personality and Social Psychology 44, no. 1 (January 1983): 113–126.
45 Social identity complexity refers to an individual’s ability to identify with a diverse array of social groups that do not completely overlap. For more information, see Sonia Roccas and Marilynn Brewer, “Social Identity Complexity,” Personality and Social Psychology Review 6, no. 2 (May 2002): 88–105.
SUSTAINED IMPACT

Most importantly for any program attempting behavioral change, IC interventions have shown lasting impact. In Bosnia and Herzegovina, independent monitoring of 10 IC courses across the country, in which mixed groups of Muslim Bosniaks, Serbs, and Croats participated, found sustained impact at six months and one year after implementation. This impact has manifested in decreased prejudice toward other ethnicities and desistance from hate speech and hate crime, with each participant showing evidence of using IC to improve their relationships and lives.46

Tangential to P/CVE, teachers in Scotland provided qualitative evidence showing significant behavioral change and improvement in school performance up to two years after the IC intervention. The impact was particularly evident in disruptive, underachieving, or disadvantaged students in a variety of contexts, including secondary schools, prisons, and a residential institution.47

BALANCING IC INTERVENTIONS WITH OTHER NECESSARY INTERVENTIONS

IC interventions offer a tested and validated approach to conducting and evaluating P/CVE programs in a variety of contexts and against a spectrum of extremist ideologies. Given that IC is a measure of how people process information versus what they think, IC interventions avoid stigmatizing any group, transcend contested definitions about violent extremism, and offer a content-agnostic way to address the lower cognitive complexity that can render individuals vulnerable to violent extremist ideologies.

IC interventions can further be applied in a variety of settings. For example, they have been implemented with community groups, schools, and prisons and in professional settings. They have also been used to augment the skills of P/CVE intervention providers, contributing to broader efforts to improve behavioral change, project implementation, and evaluation.

Nevertheless, IC interventions are not the panacea to all issues of violent extremism. The political, economic, and social drivers that fuel violent extremism must be addressed on their own merits. Yet, a range of individual vulnerability factors can make individuals susceptible to adopting a polarized, shared mindset that attracts them to violent extremist ideologies and facilitates committing acts of violent extremism. In this context, IC interventions offer an indirect approach that can positively impact behavior. Of use to practitioners and policymakers alike, the IC construct also provides a helpful framework to assuage a wide range of stressors that lead to low-complexity thinking, which can be used to assess, evaluate, and validate other P/CVE interventions with critically necessary rigor.

46 Savage and Andrews Fearon, “Intervention in Fragile Contexts.”
47 Boyd-MacMillan et al., “I SEE!”
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