

# Risk Assessment and the Prevention of Radicalization from Nonviolence Into Terrorism

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This article considers the challenges associated with completing risk assessments in countering violent extremism. In particular, it is concerned with risk assessment of those who come to the attention of government and nongovernment organizations as being potentially on a trajectory toward terrorism and where there is an obligation to consider the potential future risk that they may pose. Risk assessment in this context is fraught with difficulty, primarily due to the variable nature of terrorism, the low base-rate problem, and the dearth of strong evidence on relevant risk and resilience factors. Statistically, this will lead to poor predictive value. Ethically, it can lead to the labeling of an individual who is not on a trajectory toward violence as being “at risk” of engaging in terrorism and the imposing of unnecessary risk management actions. The article argues that actuarial approaches to risk assessment in this context cannot work. However, it further argues that approaches that help assessors to process and synthesize information in a structured way are of value and are in line with good practice in the broader field of violence risk assessment.

*Keywords:* terrorism, radicalization, risk assessment, decision support

On November 5, 2009, Nidal Malik Hasan entered the Fort Hood deployment center in Texas carrying two pistols. Shouting “Allahu Akbar!” he opened fire, killing 12 U.S. soldiers and a U.S. Department of Defense employee and injuring 42 others. Hasan was a U.S. Army psychiatrist. It later transpired that he had been in e-mail contact with a known terrorist recruiter in the 12 months prior to the attack and that the FBI had assessed the e-mails as being benign and not indicative of an individual who may be radicalizing into terrorism—an assessment that was, according to the official review of the attack, incorrect (Webster Commission, 2012).

Four years later, Lee Rigby, a member of the Royal Regiment of Fusiliers, was brutally murdered on the streets

of Woolwich, in the United Kingdom (U.K.). Immediately after the attack, it emerged that the killers, Michael Adebolajo and Michael Adebowale, were known to the intelligence services as having connections to jihadi terrorism. Adebolajo had featured in five investigations run by the British Security Service (MI5) but, in the context of other more pressing security threats, was deemed to be a “low level” person of interest (Intelligence and Security Committee of Parliament [ISCP], 2014).

In the wake of both events, the security agencies were heavily criticized. The criticism leveled was that clear indicators of violence propensity were given insufficient attention and that this led to an underestimation of the risk posed by the individuals. That is, the risk assessment systems deployed had failed to accurately identify the future threat, despite clear risk indicators being present.

Risk assessments of this nature form part of a broader strategy for the early prevention of terrorism, where state agencies (e.g., security, education, health, youth services) and nongovernmental organizations (NGOs) with responsibility for countering violent extremism attempt to intervene in the lives of individuals who have come to their attention as potentially going through the process of violent radicalization. Typically these individuals come to the attention of the relevant organizations through policing and intelligence work (e.g., Brooks, 2011) or based on concerns expressed by health care workers, educators, or members of the community (e.g., Vidino & Brandon, 2012).

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Proponents of risk assessment in this context have argued that it can play a valuable role in counterterrorism, maximizing the efficiency of the counterterrorism effort in directing resources where they are most impactful (Palombi, 2015). Theoretically, individuals identified as being “at risk” can be offered access to diversionary interventions (e.g., Cole, 2014; Cole, Alison, Cole, & Alison, 2013; Pilner, 2013). Although there has been a lack of empirical evidence demonstrating that such interventions work, one review of the U.K. Channel program has reported some successes (HM Government, 2011), and there is growing evidence that community-based early intervention programs can change pro-violence beliefs and attitudes associated with violent radicalization (e.g., Garaigordobil, 2012; Garaigordobil, Maganto, Pérez, & Sansinenea, 2009; Hirschfield, Christmann, Wilcox, Rogerson, & Sharratt, 2012).

However, risk assessment in prevention work poses a range of empirical, ethical, and pragmatic obstacles, which, although relevant to risk assessment with terrorist offenders (Cook & Lounsbery, 2011; Dernevik, Beck, Grann, Hogue, & McGuire, 2009b; Gudjonsson, 2009; Gudjonsson, West, & McKee, 2015; Herrington & Roberts, 2012; Kebbell & Porter, 2012; Meloy, Hoffmann, Guldemann, & James, 2012; Monahan, 2012; Pressman & Flockton, 2012, 2014; Roberts & Horgan, 2008; Silke, 2014), are even more salient when the individual being assessed has not engaged in any unlawful behavior and where the proportion of radicalized individuals who actually transition into violence is very small (Brooks, 2011).

This leaves psychology and the organizations involved in countering violent extremism at an impasse. From a psychological science perspective, there is good reason to argue

that risk assessment for terrorism cannot work and that the involvement of psychology in the development of risk assessment systems is neither empirically nor ethically defensible. From the perspective of those involved in countering terrorism, however, they are tasked with preventing very low probability events and are duty-bound to complete risk assessments, on some level at least, for all individuals who are suspected of being at risk.

The central aim of this article is to begin the process of bridging this impasse by identifying a number of guiding principles that are (a) based on psychological science and existing approaches to violence risk assessment, (b) of practical use to those working to prevent radicalization into terrorism, and (c) ethically defensible.

The article is presented in three sections. First, the article introduces important concepts for risk assessment for terrorism and provides an account of current practice in the field. Second, the core challenges confronted by those seeking to develop novel risk assessment systems for terrorism are identified and discussed. Finally, a number of practice principles are proposed that are relevant to the challenges identified and are based on existing good practice in violence risk assessment.

## Concepts and Context

### Violent Radicalization Into Terrorism

Violent radicalization, as used in this paper, refers to a process of increasing commitment to becoming involved in political violence (McCormick, 2003). As discussed later in this paper, research would suggest that violent radicalization is a complex process involving multiple interacting risk factors, and can vary widely across individuals and contexts (e.g. see Change Institute, 2008). Non-violent radicalization, in contrast, refers to a process of growing commitment to radical, but non-violent, views (Bartlett & Miller, 2012). Nonviolent radicalization is not uncommon in society, may be the manifestation of very real societal challenges, and is often a fulcrum for societal growth.

The distinction is important in the context of this paper. Effective risk assessment tools need to be able to distinguish between individuals who are on violent and non-violent trajectories. This, in turn, requires a body of research that has isolated indicators that are sensitive to the different processes (assuming they are, in fact, different).

### Risk Assessment

The term *risk assessment* refers to any process involving the systematic gathering and interpretation of information pertaining to an individual in order to predict the likelihood that the individual will engage in the behavior of concern in the future (Herrington & Roberts, 2012). In addition to

making risk predictions, risk assessment can also inform risk management decisions and interventions, provide an audit trail for decision-making, help avoid common decision-making errors, and enhance understanding within and across multidisciplinary teams (Helmus & Thornton, 2015; Yang, Wong, & Coid, 2010).

Typically, researchers and practitioners distinguish between three approaches to risk assessment—unaided professional judgment, structured professional judgment, and actuarial approaches (e.g., Dolan & Doyle, 2000; Douglas, Cox, & Webster, 1999). These approaches differ on a number of dimensions but, most important, on the extent to which the risk categorization is subjectively or objectively based. On one end of this spectrum, unaided professional judgment involves risk predictions that are based solely on the professional's experience and knowledge of the individual being assessed, (Roychowdhury & Adshead, 2014). This approach that has been criticized for its proneness to decision-making biases (Dolan & Doyle, 2000; Mossman, 1994).

On the other end of the spectrum, actuarial tools use a highly prescriptive approach to risk assessment that is based on checklists of risk indicators. These indicators are scored using a specified formula, leading to an overall risk prediction (e.g., high, medium, or low risk; Hart, 2003; Hart, Michie, & Cooke, 2007). The advantages of this approach include the objectivity of the decision-making process and the high interrater reliability across evaluators. Its main limitation, however, is that accurate risk predictions require a valid empirical evidence base that has isolated the relevant risk and resilience factors for the behavior of concern (Retterberger & Hucker, 2011). As others have noted, these tools tend to exclude at least some relevant risk factors, undermining their predictive value (Douglas et al., 2014).

Structured professional judgment (SPJ) combines elements of both actuarial and unaided approaches. Evidence-based risk factors are identified, but rather than being combined through an algorithmic formula, they serve to guide the assessor through a process of systematically identifying and interpreting risks, with the overall risk evaluation being based on a broader review of the individual in context (Guy, Packer, & Warnken, 2012). This approach, it has been argued, is more appropriate when completing risk assessment under conditions of uncertainty (e.g., the information available is limited and is of poor quality) in being more flexible and person-centered (i.e., ideographic). Ultimately, this should lead to better decisions (Retterberger & Hucker, 2011).

Another strength of the SPJ approach is that it draws attention to, and caters for, the complementary processes of assessment and management. Where risk assessment refers to the process of gathering and interpreting information on relevant factors and understanding why they may become violent, risk management involves strategies taken to ad-

dress these factors and eventualities. These risk reduction strategies can include, for example, ongoing monitoring, diversionary interventions that focus on changeable (dynamic) risk factors, and safety planning around potential targets (for a wider discussion, see Douglas et al., 2014). There are other advantages to the SPJ approach, which are dealt with later in this article.

## Current Practice

Most of the discussion on risk assessment for terrorism has focused on the assessment of known terrorist offenders (i.e., risk assessment after becoming involved) where assessment is used to inform the sentencing, rehabilitation, and reintegration of offenders (e.g., Gudjonsson, 2009; Pressman & Flockton, 2012, 2014; Roberts & Horgan, 2008). Risk assessment tools have been developed for working with terrorist offenders, including the Violent Extremist Risk Assessment (Pressman & Flockton, 2012, 2014) and the Extremism Risk Guidance 22+ (Lloyd, 2012; Pickering, 2012; Silke, 2014), and attempts have been made to develop practice guidelines for psychologists engaged in this work (Gudjonsson, 2009; see also Dernevik et al., 2009a, 2009b; Dhont, Van Hiel, Pattyn, Onraet, & Severens, 2012; Gudjonsson, 2009; Gudjonsson et al., 2015).

Less attention has been paid to risk assessment in the prevention of violent radicalization into terrorism. This said, a number of publically available guidelines have been developed specifically for this prevention context. The U.K. government has developed the *vulnerability assessment framework*, primarily for use by staff in the education and health sectors, local authorities, and youth services to help them identify individuals “before illegality occurs” (HM Government, 2012, p. 2). The system considers vulnerability on three levels: (a) factors that promote engagement, including emotions and cognitions that leave the individual susceptible to recruitment into terrorism; (b) intent factors that indicate readiness to use violence, including dehumanization of those targeted by terrorists; and (c) capability to cause harm, referring to individual skills and competencies and access to networks and equipment. No information is available as to how these factors were isolated, and no reference to empirical evidence on violent radicalization is included with the guidance.

The European Union-funded project SAFIRE developed the *observable indicators of possible radicalisation* guidance based on consultation with 28 individuals involved in counter-radicalization work (e.g., police officers, social workers, and teachers; Pilner, 2013). The 21 indicators are clustered under five thematic areas: identity and identity seeking; ingroup–outgroup differentiation; pro-violence social interactions, including distancing from friends and family; change in persona and; association (e.g., with extremist groups). Reference is made to right-wing terrorism, Islamic

radicalization, and general nonspecified radicalization, suggesting that the developers view the tool as being applicable across a range of hazards.

The *Identifying Vulnerable People* (IVP) system developed in the United Kingdom presents a list of indicators “drawn from the existing literature on extremism and violence” (Cole et al., 2013, p. 2). It draws together a number of so-called red flag behaviors (i.e., membership of nonviolent radical groups, contact with known extremists, advanced military training, overseas combat experience) and other factors (e.g., cultural and/or religious isolation, isolation from family, risk-taking behaviors, isolated peer group, hate rhetoric, political activism). These were distilled from “open source background material on convicted violent extremists,” and the developers recommend that “even a single factor should prompt the practitioner to seek advice from their line manager” (Cole et al., 2013, p. 7; see also Cole & Cole, 2009). The IVP appears to have been designed to reduce the risk of “home grown” terrorism, though reference is made more broadly to “international terrorism” in the guidance (Cole et al., 2013, p. 3).

All three systems encourage an approach to risk assessment that is broadly in line with the SPJ approach. However, none of the guidelines draw explicitly on the wider strengths of the SPJ approach, and in particular they provide no guidance on the process of information gathering, case formulation, or risk management, which characterize the SPJ ethos (Douglas, 2014; Douglas et al., 1999; Douglas, Hart, Webster, & Belfrage, 2013; Douglas et al., 2014).

### Challenges for Risk Assessment of Violent Radicalization Into Terrorism

These guidelines have additional limitations, which reflect the broader challenges confronted by any evaluator completing a risk assessment for terrorism. These are discussed in more detail in the next sections. First, they do not specify the risk being predicted. Second, the guidelines do not have a clear theoretical premise for the link between risk factors and terrorism, and the evidence used to identify risk factors is weak. Finally, all have set lenient thresholds for categorizing individuals as being at risk. Such thresholds will inevitably lead to the incorrect categorization of a large number of individuals as being “high risk.”

#### Challenge 1: Risk (Hazard) Specification

An important initial step in risk assessment is to specify the risk, or risks, of concern. This is because the evidence on psychology and risk would suggest that risk models do not perform equally well across forms of behavior, even when these behaviors are highly correlated (e.g., Fernandes, Hatfield, & Soames Job, 2010; Fernandes, Job, & Hatfield, 2007). For example, one study that looked at five forms of

risky driving (speeding, reckless driving, not wearing seatbelts, drunk driving, and cautious driving) reported variations in the clusters of risk factors that provided the best model fit for each behavior (Sarma, Carey, Kervick, & Bimpeh, 2013).

One way of conceptualizing the source of the problem here is to consider risk modeling. Theoretically, the best performing risk assessment systems are based on predictive models within which a set of risk factors (predictors) have been shown to be associated, causally or noncausally, with the primary outcome being predicted (the criterion; Roberts & Horgan, 2008). Variation in the predictors, both individually and in combination, will have been shown to correctly identify an acceptable proportion of those who go on to offend (sensitivity) and those who do not go on to offend (specificity). However, when the system is applied to another behavior, the model’s predictive value will be maintained only where the risk and resilience factors for the initial behavior also hold for the new behavior.

The difficulty for risk assessment in counterterrorism is the heterogeneous nature of the hazard (Herrington & Roberts, 2012; Monahan, 2012; Roberts & Horgan, 2008) and, consequentially, uncertainty as to how to best specify a genuinely meaningful outcome to be predicted. The uncertainty here stems from two facets of the terrorism phenomenon.

On one level, there are many different forms of terrorism. The opening section of this article, for instance, presented two different forms of threats—one from an *insider* (in the case of Hasan) and a second from two British converts (in the cases of the Woolwich attackers). One review of 176 terrorist groups operating between 1990 and 1994 reported that they represented 33 different ideologies and had varying areas of operation (e.g., domestic or international), organizational structure, size, and lethality (average number of fatalities per attack; Cook & Lounsbury, 2011). Furthermore, there are variations in the trajectories from nonviolence into violence across geographic context and form of terrorism (for a review, see Change Institute, 2008). This means that the risk factors for one form of terrorism (e.g., insider threats from employees) may or may not have predictive value for a second form of terrorism (e.g., threats from within the community). This resonates with research on violence risk assessment, with large-scale reviews (e.g., meta-regressions) reporting that tools performed best when used to assess populations similar in core demographic profile to the validation samples used when constructing the tools (e.g., Singh, Grann, & Fazel, 2011).

On another level, one may need to look beyond the form of terrorism and also ask: What is the behavior of concern? A number of researchers, for example, have stressed the importance of distinguishing between *being involved in terrorism* (which encompasses a wide range of both nonviolent and violent roles within an organization) and *engaging*

*in terrorist behavior* (which is more specifically about violence potential; e.g., Horgan, 2005; Taylor, 1988, 2010).

Attempting to predict involvement in specific roles within a terrorist organization is problematic when assessing individuals who are not involved in terrorism at the time of the assessment. This is because one cannot assume a direct linear pathway between the early stage risk factors for engagement in terrorism and the role(s) an individual will take up after transitioning into terrorism. Horgan put this succinctly. Referring to the three phases in the life of the terrorist (becoming, being, and disengaging from terrorism), he argued that “answering questions about why people become involved in terrorism . . . may have little bearing on the answers that explain what they do (or are allowed to do) as terrorists (or something else)” (Horgan, 2008, p. 4).

### **Challenge 2: Identifying Risk and Resilience Factors**

In addition to difficulties constraining the outcome variable, a second difficulty for those completing risk assessments for terrorism is the lack of authoritative evidence on the risk and resilience factors that influence the individual’s future risk propensity. In the absence of a valid evidence base, the selection of risk indicators can become arbitrary.

To illustrate the role of evidence in the development of risk assessment systems, it is worth considering the evolution of the Historical Clinical Risk Management-20, Version 3 (HCR-20V3; Douglas et al., 2013), which is widely used in forensic, correctional, and psychiatric settings (Douglas, 2014; Douglas et al., 1999). The system draws on the SPJ approach and encourages the practitioner to consider the risk posed by the individual based on 20 historical, clinical, and risk management factors (Douglas et al., 2014). It is important to note that when completing the most recent revision of the system, the team had access to more than 2,500 relevant empirical studies, with almost 300 of these specifically relevant to one or more of the indicators included in the HCR-20V3 (Guy & Wilson, 2007). They could also draw on studies exploring the predictive utility of earlier versions of the HCR (Douglas et al., 2014) and advice from subject matter experts (e.g., de Vogel, van den Broek, & de Vries Robbé, 2014).

The evidence base underpinning the understanding of risk and resilience factors that determine whether an individual will become involved in terrorism is paltry in comparison to that available to Douglas et al. (2013). This is largely due to difficulties accessing samples (Dernevik et al., 2009b; Fishman, 2010) and data (Sageman, 2014), as well as pragmatic and ethical barriers to conducting research on sensitive topics (Horgan, 2012b; Silke, 2001, 2003). Where empirical research has been conducted, this has either tended not to systematically isolate relevant risk and resilience factors for terrorism (Roberts & Horgan, 2008) or has identified risk

factors that are so broad that they lack discriminatory value (e.g., Bakker, 2006; Copland, 2005; Dean, 2007). Reflecting on this evidence base, Kebbell and Porter (2012) have argued that “there is not sufficient evidence to create a risk assessment model to predict who is intending to commit violent extremism and distinguish them from those who are not” (p. 212; see also Herrington & Roberts, 2012; Monahan, 2012).

It could be argued that this emphasis on empirical evidence is being overstated and that there are alternative ways of isolating risk indicators. For example, it has been suggested that risk factors can be distilled from theories or identified from on-the-ground practitioner knowledge (Grann & Långström, 2007). However, in high-risk environments where there are potentially very adverse consequences of both false positives and false negatives, these approaches should complement, not replace, empirical evidence.

### **Challenge 3: Screening Out True Negatives (Specificity)**

Two important measures of the performance of a risk assessment system are its sensitivity and specificity. Sensitivity refers to the ability of the tool to accurately identify those who are at high risk of transitioning into terrorism (true positives), whereas specificity refers to the accurate identification of those who are not at risk (true negatives; Bowen, 2011; Constantinou, Freestone, Marsh, & Coid, 2015; Douglas et al., 1999). A system that performs optimally will be able to do both—screen out those who are low-risk and those who are high-risk.

The challenge for risk assessment for terrorism is that, in the absence of a strong evidence base, and confronted by with potentially devastating consequences of “missing” a true positive case, the existing risk assessment guidelines set out earlier have prioritized sensitivity at the expense of specificity. Here indicators are so general that lead to the correct classification of those who will go on to become involved in terrorism but also a large number of innocent individuals who will not.

This, it has been noted, can “waste resources, increase community tension, reduce the public’s perception of the integrity of the police and security services and . . . potentially encourage more extreme behavior in communities” (Kebbell & Porter, 2012, p. 213). Moreover, it adds little to attempts to protect society, because the true positive threats remain “hidden” in the mass of false positives.

For example, take a system that ultimately succeeded in supporting the evaluator in predicting 90% of those who subsequently transitioned into terrorism but incorrectly classified 25% of those who did not do so as being likely future terrorists. Where this system is used to assess a population of 1,000 youths, and where 10 of those went on to offend,

the system would have correctly classified nine of these but incorrectly classified 247 others.

This is not a hypothetical scenario. In its review of the Rigby murders, the Intelligence and Security Committee of Parliament reported that a risk-monitoring project given the pseudonym *Programme CONGO* in the report had been created in 2008 to “identify individuals of emerging risk” and “to manage individuals falling below the threshold for full investigation, but for whom some form of ongoing assessment was required” (ISCP, 2014, p. 23). However, according to the unit responsible for administering CONGO, “the volume of individuals that met the criteria was too great to apply the process effectively” (ISCP, 2014, p. 23).

#### Challenge 4: The Low Base-Rate Problem

The 9/250 ratio in the earlier example might seem acceptable given the nature of the threat. However, the sensitivity/specificity challenge is compounded by the *low base-rate problem* (Herrington & Roberts, 2012; Kaufmann, 2010; Monahan, 1981; Pressman & Flockton, 2014; Roberts & Horgan, 2008). A central concept here is the positive predictive value (PPV) of a test, which refers to the proportion of individuals categorized by the test as high risk who subsequently engage in the risk behavior. Statistically it is calculated by the following formula: True Positives/(True Positives + False Positives).

For example, take a scenario where the base rate of involvement in terrorism in a population of 100 people is grossly inflated to 20% of the population and the risk assessment tool correctly identifies 90% (sensitivity = .9) of those who actually transition into terrorism and correctly excludes 70% of those who do not (specificity = .7). Based solely on the sensitivity and specificity values, the tool

appears to perform well. However, when the base rate is taken into consideration, the tool’s overall positive predictive value (PPV) is poor (.43) and it is incorrect six times in 10 (worse than chance; see Figure 1). If the base rate of terrorism drops to 10% of the population, the overall accuracy of the tool decreases to one in four. Given that the true base rate for “involvement in terrorism” in the West is negligible, on a purely statistical level, actuarial risk assessment systems cannot work.

#### Guiding Principles

There are ethical concerns that arise when psychologists develop or endorse risk assessment systems that may not accurately discriminate between those who will and will not become involved in violence. This is particularly the case when this poor predictive value can result in individuals who will never become involved in violence being categorized as at high risk.

Yet psychology also has an opportunity to contribute to the peace and security of citizens and states in advising on counterterrorism practices. This includes making specific recommendations on how risk assessment in terrorism prevention work can be more firmly rooted in good practices developed in the broader field of violence risk assessment. The remainder of this article considers a number of guiding principles that are cognizant of the aforementioned challenges and are compatible with existing good practice.

The argument that underpins these practice principles is that one should not “value” risk assessment solely on its ability to correctly predict those who will and will not become involved in terrorism later. Rather, one should think more broadly about the opportunity to systematize the collection and processing of information. One should empha-

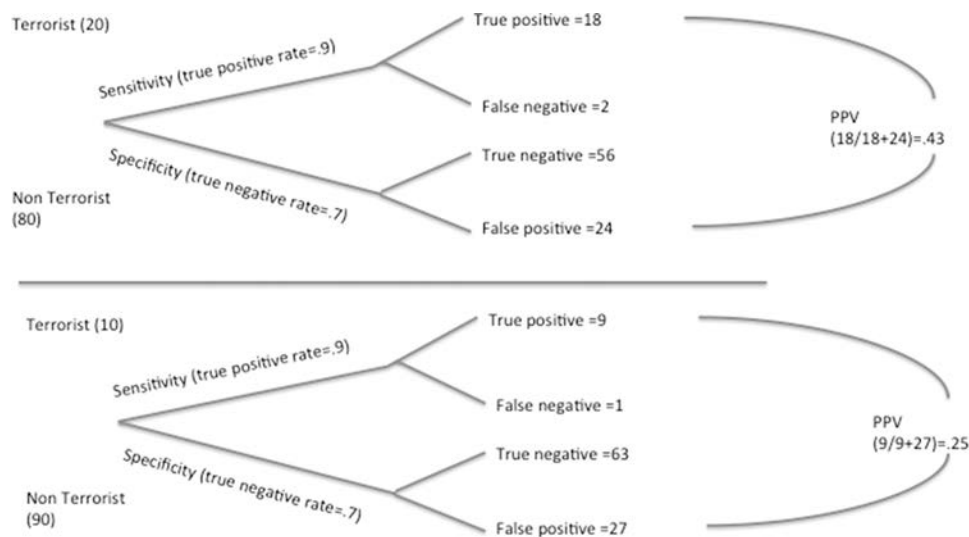


Figure 1. The low base-rate problem, positive predictive value (PPV), and risk assessment. This figure is based on knowledge trees produced in Szumkler (2001). See the online article for the color version of this figure.

size a person-centered (rather than statistical) approach to risk assessment that involves careful formulation of risk based on information that is, where possible, theory and evidence based and that is not confined to a tick-box exercise. In doing so, risk assessment becomes about promoting both information processing and decision making and at the very least should help reduce decision-making biases.

### **Guiding Principle 1: Statistical Approaches Cannot Work**

Earlier in this article a distinction was made between two dominant approaches to risk assessment: actuarial risk assessment, where risk identification is based on a prescribed list of risk indicators and risk categorization is based solely on a numeric score, and structured professional judgment (SPJ), where risk identification is *informed* by these risk indicators but where the evaluator develops a risk narrative and engages in careful case formulation for the individual being assessed in making the overall risk prediction.

This distinction is important because the challenges set out here impact in more profound ways on actuarial tools than on approaches using SPJ. The value of actuarial tools is evaluated based on their predictive performance, which in turn is determined by clear risk specification and access to a set of risk and resilience factors that are valid in predicting this outcome. As set out earlier, these conditions are difficult to meet in the context of terrorism, and when combined with the low base-rate problem, it is clear that actuarial approaches to risk assessment are not appropriate or ethical in the terrorism prevention context.

### **Guiding Principle 2: Focus on Structured Judgment and Case Formulation**

This difficulty with “identification” has led a number of commentators to point to the potential value of approaching risk assessment for terrorism through SPJ systems, specifically referencing the HRC-20 as an example (e.g., Dernevik et al., 2009b; Roberts & Horgan, 2008). SPJ does not rely on statistical assumptions and the application of group-based estimates to individuals. Rather, it relies on the ability of the evaluator to develop a meaningful appreciation for the risk propensity of the individual.

This appreciation is developed through careful case formulation. Case formulation refers to the “integration of case material into an explanatory framework for a given individual under evaluation” (Douglas et al., 2014, p. 103). It is characterized by a person-centered approach where the evaluator forms specific hypotheses around the causal link between risk factors and behavior for that individual and develops an overall narrative for this relationship (Hart & Logan, 2011).

Case formulation may enhance risk assessment for violent radicalization into terrorism, a claim that has been supported where SPJ approaches have been deployed for other forms of violence (e.g., in relation to the HCR-20; Douglas et al., 2014; Hart & Logan, 2011). It encourages a deeper and more meaningful understanding of the individual and his or her risk potential. In practice, evaluators consider both the *presence* of factors and the *relevance* of risk factors for the individuals being assessed (Logan, 2014). This emphasis on relevance is lacking in the current risk assessment guidelines, which may encourage assessors to base risk predictions solely on the presence of risks such as “dependence on communication technology” (Pilner, 2013, p. 2) “risk taking behaviors . . . such as drug abuse” (Cole et al., 2013, p. 8), and “feelings of grievance and injustice” (HM Government, 2012, p. 2) without developing a holistic appreciation of exactly how this conveys an increased risk for the individuals being assessed.

### **Guiding Principle 3: Risk Assessment Must Involve Risk Specification**

One of the key barriers to risk assessment for terrorism is answering the question: What exactly are we trying to predict? In the case of risk assessment for radicalization into terrorism, two clear options arise. First, one can attempt to predict whether or not an individual will become involved in terrorism (so “involvement” as the outcome), a juncture in the life of the individual that marks the end of the process of violent radicalization and the commencement of a behavioral commitment to violence. The disadvantage of this is that it tells nothing of the violence potential of the individual, the consequences of violence, and how best to prevent specific forms of violence.

Second, one can attempt to predict a specific behavior (e.g., will engage in shootings, bombings, or other form of violence), which would allow for consideration of potential lethality. However, as noted earlier, this is also problematic, because the factors that explain why an individual may radicalize into terrorism may not necessarily account for what the person does once involved (Horgan, 2008).

Lessons can be learned from the approach to risk specification used in SPJ. For example, the HCR-20V3 requires an initial risk specification that can focus on the question, Does the individual pose a risk of future violence? However, during the process of answering this question, the evaluator considers specific forms of violence that can occur and under what conditions they may occur (i.e., risk scenarios; Douglas et al., 2013; Logan, 2014).

In line with this, risk assessment for terrorism should, in the first instance, attempt to predict whether an individual is at risk of becoming involved in terrorism. If, during the evaluation, an opinion is formed that the individual is at

risk, then the assessment should also consider what roles the individual may take up and his or her violence potential.

#### **Guiding Principle 4: Harness Theories**

The lack of empirical evidence should not be used as a reason to avoid designing risk assessment systems. As Herrington and Roberts noted, even in the absence of a strong empirical base, risk assessment can be guided by theories, including those validated in other settings (Herrington & Roberts, 2012; see also Gudjonsson, 2009). These theories can augment understanding gleaned from the evidence that does exist. Again, the most recent version of the HRC-20 provides a useful reference point here. The manual accompanying the system presents evaluators with descriptions of a number of theories that can be used to guide case formulation, including theories of personality, social cognition, social disorganization, and offender decision-making (Douglas et al., 2013), and the developers noted that evaluators “can choose other defensible formulation frameworks” (Douglas et al., 2014, p. 103).

Although the evidence base on terrorism may be lacking, broad explanatory theories have been used to better understand radicalization into terrorism, including social movement theory (e.g., Dalgaard-Nielsen, 2008), social cognitive theory (e.g., Ginges, 2009), and the social ecology model (e.g., Centers for Disease Control and Prevention, 2015). Specific theories and models of violent radicalization have also been proposed (for reviews, see Borum, 2011a, 2011b; Monahan, 2015). These theories, and others, can be used to guide individualized risk assessment, in conjunction with the empirical evidence available.

#### **Guiding Principle 5: Supervision and Training Is Necessary**

Risk assessments are completed in a range of settings and by personnel and teams from both government bodies and nongovernmental organizations. Although psychologists may be involved in assessments, this is not necessarily the case. As such, one cannot assume that the personnel involved have any experience of, or expertise in, formal risk assessment.

Research would suggest that training has the potential to improve knowledge of the hazard and associated risks, analytic skills, and confidence in completing risk assessments (e.g., see Storey, Gibas, Reeves, & Hart, 2011). Supervision by more experienced staff is also of value in this context. Supervision can ensure that evaluators have access to ongoing support when completing assessments and making decisions around risk management (e.g., DeAngelis, 2014). High-quality feedback can also improve performance by bringing alternative perspectives to the process.

#### **Guiding Principle 6: There Are Values to Risk Assessment Beyond “Identification”**

The value of risk assessment in counterterrorism is not restricted to case identification. During a scoping exercise on risk assessment completed by Sarma and Pelzer with a number of security agencies in 2015 (Sarma & Pelzer, 2015), officers highlighted the following additional benefits of access to a SPJ risk assessment system for their day-to-day work:

1. It would provide a clear audit trail that articulates the basis for each decision made, thus protecting the evaluator from unfair criticism later, should an individual turn to violence. This would also help address conservative approaches, where the tendency is toward categorizing most individuals as “high risk” “just in case” (see also ISCP, 2014).

2. It would enhance the effectiveness of evaluators who are new to the role and who can use the system, training, and support material to maximize their effectiveness.

3. It would establish a minimum information requirement. Evaluators would be empowered not to form an opinion on risk where the quality and quantity of the information available is clearly insufficient to do so. This decision could be justified with reference to the minimum data requirements of the system being used.

4. It would become part of a shared and coherent risk management strategy both within agencies and across agencies, leading to clarity of purpose. It would also facilitate communication on risk decision-making between agencies.

#### **Conclusions**

In their review of the murder of Lee Rigby, the ISCP (2014) recognized the many difficulties encountered by evaluators when completing risk assessments in the counterterrorism context. However, the committee also asserted that the security services had an obligation to complete assessments despite these challenges (ISCP, 2014). The Webster Commission’s report into the Fort Hood attack reached a similar conclusion, stating that the FBI “must be vigilant in detecting potential threats and activities to the extent permitted by law, with an eye toward early intervention and prevention” (Webster Commission, 2012, p. 20).

The argument put forward in this article is that although there are many significant barriers to conducting risk assessment of those who are suspected of being on a trajectory toward violent radicalization, these barriers should not discourage psychologists from participating in the development of novel risk assessment systems. Certainly, there are good empirical and ethical reasons why psychology should be cautious in this endeavor. However, there are also steps that can be taken to ensure that risk assessment is more



firmly rooted in existing good practices. Ultimately this should lead to a better understanding of the risks that individuals may pose, allowing for decisions that are more appropriate and justifiable.

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