

Returning to the Fight: What the Literature on Criminal Recidivism Can Contribute to our
Understanding of Terrorist Recidivism

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Abstract

Recent, and welcome, interest in the subject of terrorist disengagement and de-radicalization has revealed that the causes of terrorist recidivism are poorly understood. Studies of terrorist recidivism are virtually non-existent, which is surprising given that most critiques of terrorist de-radicalization programs are anchored in debates about the nature and extent of recidivism in the population of terrorist offenders. We seek to begin to redress this void in the literature by developing a series of theoretical, conceptual, and methodological starting points for thinking about terrorist recidivism that are closely informed by advances in criminology. While we find the definition of recidivism and its causes are often contested in the field of criminology, there are significant lessons that can inform the study of terrorist recidivism.

Keywords: terrorism, recidivism, desistance, re-engagement, disengagement.

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Recently, several prominent terrorists returned to terrorist activity after a period of disengagement. That the terrorists were initially disengaged was never in question. They were apprehended by security forces, and subjected to a period of detention or incarceration. Perhaps, even more worrisome, many of these individuals participated in terrorist risk reduction initiatives (or “de-radicalization” programs). A notable case is that of Salih al Qarawi, a former Guantanamo Bay detainee. Following his release from U.S. custody, al Qarawi participated in Saudi Arabia’s counseling program at the Mohammed bin Nayef Center for Counseling and Advice. Saudi officials judged that al Qarawi was successfully rehabilitated, and that it was safe to release him back into society. Shortly after his release, al Qarawi fled to Yemen and became a high-profile member of al-Qaeda in the Arabian Peninsula.

Cases, such as al Qarawi’s, raise significant questions about the detention and management of terrorist offenders. They raise even more concern about how decisions to release suspected or confirmed terrorists from custody are reached. Since the mid 2000s, counter-terrorism experts and policymakers have increasingly focused their efforts to deter engagement and re-engagement in terrorism on the “de-radicalization” of current and potential terrorists. Whereas *disengagement* refers to the process by which individuals cease terrorist behavior, *de-radicalization* implies a fundamental change in the belief structures that support one’s commitment to a terrorist group’s violent ideology. The logical assumption often associated with de-radicalization efforts is that if we want to ensure a low risk of a detainee returning to the fight (i.e., ensuring they remain disengaged), they must be de-radicalized. A

change in cognition, many assume, will ensure a change in behavior. The problem with this simple assumption, however, is two-fold. First, not all individuals who engage in terrorist activity are necessarily radicalized, and second, many verifiably radicalized terrorists disengage from terrorism (and remain disengaged over the long-term) without ever abandoning their belief in a violent, radical ideology.

At the heart of attempts to evaluate the effectiveness of terrorist risk reduction initiatives is the issue of whether such measures reduce the rate of recidivism among treated and released terrorists. Although the term “recidivism” may carry with it significant definitional challenges and measurement issues, as we will later detail with reference to the literature from criminology, Merriam Webster defines *recidivism* as “a tendency to relapse into a previous condition or mode of behavior.”¹ Thus, terrorist recidivism can broadly be conceptualized as re-engaging in terrorist activity following a period, or window, of disengagement due to any number of potential factors, including, for instance, imprisonment or voluntary exit from a terrorist group. More commonly, however, and most likely due to its conventional use in criminology (which we will later review), the term *recidivism* in the context of terrorism is used to refer to the return to terrorist activity after a period of formal sanction or detention. The more general term, *re-engagement*, is used to describe a return to terrorist activity after a window of disengagement, regardless of whether or not the disengagement was the result of detention or incarceration or due to more voluntary factors (e.g., disillusionment).

To date, much of the discussion surrounding the issue of terrorist recidivism has been preoccupied with issues of prevalence – that is, how many detainees actually re-offend after their release? Answers to this question are frequently posed in response to criticisms of extant de-radicalization programs. For instance, according to Mustafa Alani, Director of Security at the

¹ Recidivism. 2011. In *Merriam-Webster.com*. Retrieved December 5, 2011, from <http://www.merriam-webster.com/dictionary/recidivism>.

Gulf Research Center, approximately 70 percent of those in the Yemeni de-radicalization program have been re-arrested for terrorist offenses, compared to, he claims, only 5-7 percent in the Saudi program (Gardner, 2008).

Relying on recidivism rates, however, as a measure of success is fraught with difficulty, as recidivism itself (at least in the context of terrorism and political violence) has not yet been adequately conceptualized or defined. Moreover, because risk reduction initiatives are often established and run by government agencies, the interpretation of what constitutes recidivism may be influenced by prevailing social and political concerns. Further, the absence of a clear consensus as to how to measure recidivism in the context of terrorism (e.g., is it re-engagement, re-arrest?, re-conviction?), and what factors reduce the risk of recidivism in the context of terrorism, raise profound challenges associated with assessing the effectiveness of risk reduction initiatives. These issues have been discussed in detail elsewhere (e.g., Horgan & Braddock, 2010; Rabasa, 2010). However, there have been few systematic efforts to define, clarify and explain the issue of terrorist recidivism.

In this paper we draw lessons for our understanding of terrorist recidivism from existing research on criminal recidivism. Our paper is structured into six sections. First, in order to frame and contextualize our analysis, we review the issue of terrorist recidivism, noting its salience and the relative absence of research on the topic. Second, we discuss both definitional and measurement issues related to the concept of recidivism, as articulated in the criminology literature. Third, we review the various static and dynamic predictors thought to increase the risk of criminal recidivism. Fourth, we discuss the extent to which these findings from criminology may generalize to terrorism. Informed by our review of the literature on criminal recidivism, we consider the definition and measurement of terrorist recidivism in the fifth section, hypothesize some of its potential predictors in the sixth section, and explore risk

reduction techniques in the seventh section. Finally, we conclude by summarizing our findings and discussing avenues for future research.

Terrorist Recidivism: What We Know and Don't Know

The issue of terrorist recidivism came to the forefront with the opening of a U.S. detention camp at a naval base in Guantanamo Bay, Cuba, in the aftermath of the attacks of September 11, 2001. The camp opened in January 2002 with just 20 detainees. The Department of Defense reported 10 years later that as of January 1, 2012, 779 individuals have been held at Guantanamo Bay (House Armed Services Committee (HASC), 2012). Of these 779 detainees, 600 left the base either through their release or transfer to a foreign government, eight died, and 171 still remain (Thompson, 2012; HASC 2012). Of the 171 detainees who remain at Guantanamo, 36 await trial for war crimes, 46 others are not scheduled for prosecution but are considered dangerous and therefore “indefinite” detainees, and the remainder “cannot” leave because of Congressional restrictions or the belief that their homeland is unfit for reintegration (Rosenberg, 2011; HASC 2012).

A key issue for U.S. policymakers, faced with increasing domestic and international pressure to release those Guantanamo detainees not formally charged, is whether or not these individuals will return to terrorist activity upon their release. As already noted in the introduction, several former detainees transferred into foreign custody have engaged in high-profile acts of terrorism against the U.S. or its allies. Most recently, Mishaal Mohammed Rasheed al Shadoukh, a former Guantanamo detainee repatriated to Saudi Arabia in 2003 and a participant in Saudi Arabia's terrorist rehabilitation program, delivered al-Qaeda in the Arabian Peninsula's (AQAP) ransom demands following the organization's kidnapping of a Saudi diplomat in Yemen (Joscelyn, 2012). Another recent case is that of Ibrahim al-Rubaish, the latest mufti of AQAP, who in 2009 released an audiotape in which he used Islamic doctrine to justify

an assassination attempt on Saudi Prince and Minister of the Interior, Muhammad bin Nayef, and al-Qaeda's use of targeted assassination against "the enemies of Islam," more generally (al-Shishani, 2009). Ibrahim al-Rubaish had, in 2001, been captured by U.S. soldiers and was subsequently detained at Guantanamo Bay until December 2006, when he was repatriated to Saudi Arabia and enrolled in the terrorist rehabilitation program there. In April 2008, al-Rubaish fled Saudi Arabia, allegedly with 11 other former Guantanamo detainees, to join AQAP in Yemen (al-Shishani, 2009).

Individual incidents of former Guantanamo detainees, such as these, engaging in alarming acts of terrorism following their transfer or release, however, mask what is in reality a relatively low estimated rate of recidivism among Guantanamo detainees. According to the latest estimate by the Office of the Directorate of National Intelligence (ODNI), the rate of confirmed or suspected recidivism among former Guantanamo detainees is about 27 percent or 161 individuals out of the 600 released (HASC, 2012). The estimated recidivism rate, however, has been rising up from seven percent in July 2008 to 14 percent in April 2009, and 25 percent in October 2010 (HASC, 2012).

The reason for the increase is twofold. First, there has been a change in how the Defense Intelligence Agency defines re-engagement in terrorist activity. Initially, the agency defined re-engagement as participation in "anti-coalition militant . . . activities in the Afghanistan/Pakistan region" (HASC, 2012, p. 10). Now, the term refers, more generally, to "involvement in terrorist or insurgent activities" aimed at "Coalition or host-nation forces or civilians" (HASC, 2012, p. 10). A second possible reason for the increase is that there are often

lags between the release of a detainee, their re-engagement, and knowledge of the re-engagement via intelligence sources or law enforcement.²

Despite the increase in the estimated rate of recidivism among released Guantanamo detainees, it still pales in comparison to the rate of recidivism in the population of criminal offenders. In the United States, for instance, evidence suggests approximately 45-50 percent of those released from prison are reconvicted within three to six years of their release (e.g., Beck & Shipley, 1989; Baumer, Wright, et al., 2002; Gottfredson & Gottfredson, 1980). Gendreau and Leipziger (1978), Van der Werff (1981), and Baumer (1997) report similar reconviction rates for Canada, the Netherlands, and Malta, respectively. In Great Britain (Kershaw et al., 1999; Lloyd et al., 1994; Walker et al., 1981; Sampsonford & Fairhead, 1980) and West Germany (Ruether & Neufeind, 1982) these numbers are slightly higher (i.e., between 50 and 55 percent). As Baumer, Wright et al. (2002) noted, the degree of variation in criminal recidivism rates across and within countries appears to be relatively small with reconviction rates falling in the 45-55 percent range.

On the surface, the rate of criminal recidivism appears to be much higher than the few estimates we have of the rate of recidivism in the terrorist population. As already noted, the latest reported rate of recidivism among former Guantanamo detainees is 27 percent. In Northern Ireland, a report of the Fifth Independent Monitoring Commission (2005) put the rate of recidivism for 430 former paramilitaries released under the terms of the Good Friday Agreement at three percent (for prosecution or conviction of paramilitary offences) and 11 percent (for prosecution or conviction of non-paramilitary offences). Dwyer (2007) found a

² An additional factor worth noting with regard to the estimated recidivism rate for Guantanamo detainees is that, for some, their involvement in terrorism upon their transfer or release may not necessarily constitute re-engagement. Rather it may actually represent their initial foray into terrorism (HASC, 2012), and presumably may be in no small part a consequence of their experiences as detainees.

similar rate of terrorist recidivism (3.6 percent) among former paramilitaries released under the terms of the Good Friday Agreement.

Still, it is unclear from these estimates whether terrorists are less likely to re-engage upon their release than criminals. The relatively low reported rate of recidivism among Guantanamo detainees and other former terrorists, when compared with the criminal population, for instance, may reflect the fact that many of these individuals are operating in “safe heavens” and therefore are able to escape detection. The relatively low rate of recidivism among former terrorists in Northern Ireland, on the other hand, may be explained by the increased politicization of the conflict.

More important than estimating rates of terrorist recidivism, however, are issues surrounding assessing and reducing the risk of terrorist recidivism. The U.S., according to Secretary of Defense Robert Gates is “not particularly good at predicting which [Guantanamo] returnee will be a recidivist.” According to Gates, “Some of those that we have considered the most dangerous and who have been released or who we considered dangerous and potentially going back into the fight have not, and some that we have evaluated as not being much of a danger or risk we have discovered in the fight.”³

Conducting risk assessment of politically or ideologically motivated offenders, such as terrorists, is an exceptionally daunting task. The kinds of analysis associated with traditional risk assessment for criminals, according to Dwyer (2007), are rarely “able to take into consideration the political influences and motivation of the prisoner and how this may change” (p. 779).

Dwyer (2007), for instance, found that strong ties to paramilitary groups engaged in violence

³ House Subcommittee on Oversight and Investigations of the Committee on Armed Forces, Guantanamo Detainee Transfer Policy and Recidivism: Hearing before the Subcommittee on Oversight and Investigations of the Committee on Armed Forces, 112th Cong., 1st sess., 13 April 2011, 23.

increased an individual's risk of re-offending, while strong ties to paramilitary groups who have renounced violence decreased the risk.

Monahan (2012), who focuses on assessing one's risk of terrorism, more broadly (not just after formal sanction), similarly argued that criminal risk assessment techniques, even those for violent offenders, are unlikely to predict one's risk of terrorism. Monahan (2012) identified four potential risk factors for terrorism: ideology, affiliations, personal or group grievances, and moral emotions. However, Monahan (2012) rightly reiterated how the risk factors associated with one's initial foray into terrorism might differ from the risk factors for re-engagement. Moreover, the potential risk factors for re-engagement might also vary with regard to one's role (e.g., bomber, lone actor, messenger) or level of involvement (Monahan, 2012). It is also possible that the risk factors for re-engagement for those who are incarcerated or detained (i.e., the risk factors for recidivism) might differ from the risk factors for re-engagement for those whose decision to disengage was voluntary and due, for example, to disillusionment with a group's members, ideology, or leaders or the desire to start a family.

In one of the very few terrorism-focused analyses of recidivism, Pluchinsky (2008) argued (2008) that terrorists who are driven by religious grievances will be more difficult to "reform" than those with secular motivations because, if they believe that they were operating according to "God's word" and "God's laws," it will be harder for them to accept that what they did "was wrong." Although Pluchinsky's assertions are not based on empirical evidence, they provide a useful starting point for discussion. The key issue for Pluchinsky, i.e. "reform," is itself questionable. For example, for the Afghan Peace and Reintegration Program, success is judged if the "vast bulk of fighters don't go back to the fight" (Ackerman, 2011). Whether they are "reformed" (and presumably "de-radicalized") is a different issue.

At present, there is too little research on terrorist recidivism for us to be able to adequately assess what risk factors drive and sustain it and what sorts of policies reduce the likelihood of it. In thinking about terrorist offenders, reliably distinguishing disengagement from de-radicalization poses significant challenges. Furthermore, the reasons for recidivism in those who have undergone “rehabilitation” efforts are unclear (particularly, what role, if any, participation in the program had on increasing or reducing the risk of re-engagement). One set of reasons might relate to the lack of meaningful metrics for assessing the effectiveness of the programs themselves, while another set of reasons may relate to a more basic failure to grasp how best to achieve behavioral change.

In an effort to deepen our understanding of terrorist recidivism, we now turn to a review of the literature on criminal recidivism. We believe this literature offers important insights with regard to the challenges of conceptualizing and measuring terrorist recidivism and identifying potential risk factors for empirical investigation.

Defining and Measuring Criminal Recidivism

There is no agreed upon definition of recidivism in the criminal context. In the most basic sense, criminal recidivism denotes a return to criminal activity after a lapse. However, when employed by criminologists the term also usually connotes re-arrest, reconviction, or re-imprisonment.⁴

Criminologists and sociologists (e.g., Bushway, 2001; Laub & Sampson, 2001; Maruna, 2001; Kazemian, 2007; Laub, 2011) have noted the lack of a consensus on how to define

⁴ A recent review by the Campbell Collaboration found that most recidivism studies use reconviction as the measure of recidivism (Villettaz, Killias et al. 2006). The National Research Council (2007), on the other hand, implicitly defined recidivism as re-imprisonment (whether as the result of a new offense or a parole violation). Recent articles by Berg and Huebner (2011) and Laub, Nagin et al. (1998) used re-arrest data to measure recidivism. Mears, Wang et al. (2008) defined recidivism as instances in which former inmates commit a new felony that results in correctional supervision (e.g., local jail, state prison, or community supervision).

recidivism and the related concept of criminal *desistance*. According to Laub and Sampson (2001), the absence of a clear conceptual definition of recidivism stems, in part, from the absence of an agreed upon definition of desistance. Without a clear understanding of what it means to desist from (or cease) criminal activity, they point out, it is difficult to determine what it then means to recidivate. As a result, criminologists have defined these terms in what Laub and Sampson (2001) deem “vague,” “arbitrary,” and “idiosyncratic” ways, if they define them at all, before proceeding with their research. Even more troublesome is that several studies demonstrate even minor differences in the definitions of recidivism and desistance produce substantively different results when using the same data set (see Brame, Bushway et al., 2003; Bushway, Thornberry et al., 2003). These definitional issues, therefore, often make it difficult to compare results across individual studies and advance the literature (Bushway, Thornberry et al., 2003; Uggen & Massoglia, 2003). Despite these difficulties, a number of consistencies have emerged.

Many criminologists, for instance, now agree that criminal desistance is best conceptualized as a dynamic *process* rather than a static event (e.g., Weitekamp & Kerner, 1994; Bushway, 2001; Laub & Sampson, 2001; Maruna, 2001; Farrall, 2002; Kazemian, 2007). There are, however, discrepancies in how researchers conceive of this process. Weitekamp and Kerner (1994), for instance, described desistance as a decline in the frequency and variety of offences committed until the point of *termination*, which they define as the permanent cessation of criminal activity. Laub and Sampson (2001) similarly viewed desistance as a gradual transition out of criminal behavior. However, they maintained that desistance continues well past the point of termination. Criminal desistance is a “social transition that entails identity transformation, as from a smoker to a nonsmoker, from a married or coupled person to a divorced or uncoupled person, or from an offender to a non-offender” (Laub & Sampson, 2001,

p. 12). This view is echoed by Farrall and Maruna (2004) who differentiate between *primary desistance* or a lull in criminal activity during one's life course and *secondary desistance*, which is marked by the permanent cessation of criminal activity and a change at the level of personal identity.

If desistance is defined as a long-term process, its measurement, as Maruna (2001) pointed out, is challenging in that it is not marked by a particular event. Observing the absence of crime at one point in time, or even over a period of time, does not preclude its incidence in the future. Individuals may refrain from criminal activity for months, years, or even decades without ever undergoing the sort of identity transformation that some scholars (e.g., Shover, 1996; Laub & Sampson, 2001; Maruna, 2001; Giordano, Cernkovich et al., 2003; Farrall & Maruna, 2004) describe and these individuals may commit criminal offenses in the future.

Related measurement problems plague the study of recidivism. Recidivism, of course, can be measured by the occurrence of an event (i.e., criminal activity). However, most studies of recidivism use a relatively short follow-up period of about six months to three years.⁵ Although it is true that a large percentage of those who will reoffend do so within the first days, weeks, and months after their release from custody (see e.g., Beck & Shipley, 1989; Langan & Levin, 2002; National Research Council, 2007), it is also true that even more individuals may return to criminal activity later in life post measurement (Brame, Bushway et al., 2003; Laub & Sampson, 2003; Piquero & Benson, 2004; Nagin, Farrington et al., 1995).

Scholars have responded to these measurement issues in a number of ways. Some (e.g., Farrington & Hawkins, 1991) suggested studying desistance as something approximating the

⁵ Gendreau and colleagues' (1996) meta-analysis on the predictors of adult recidivism, for instance, only used a six-month minimum follow-up period. The United States Bureau of Justice Statistics (BJS) 2002 and 1989 reports on recidivism used a three-year follow-up period excluding even documented instances of re-arrest, reconviction, and re-imprisonment that fell outside of the three-year window. Berg and Huebner (2011) used a 46-month follow-up period.

long-term cessation of criminal activity, while others propose that desistance entails temporary hiatuses from offending (e.g., Clarke & Cornish, 1985; Elliott, Huizinga et al., 1989). Several authors, beginning with Fagan (1989), have begun to study desistance as a process that unfolds over time by employing dynamic statistical analyses that model changes in offending over time rather than focusing on the termination event (see also Laub, Nagin et al., 1998; Bushway, 2001; Brame, Bushway et al., 2003). Others (e.g., Benda, 2005; O'Donnell, Baumer et al., 2008; Berg & Huebner, 2011) examine the time to recidivism using survival models, which account for the fact that one cannot observe whether or not an individual will reoffend in the future.

Despite these differences in approach, most researchers agree that increasing the length of follow-up period and collecting data in shorter, more frequent intervals over a significant period of time is critical to improving the measurement of recidivism and desistance (e.g., Barnett & Lofaso, 1985; Blumstein, Farrington et al., 1985; Laub & Sampson, 2001; Kazemian, 2007; National Research Council, 2007). Many (e.g., Sampson & Laub, 1990; Thornberry, 1997; LeBlanc & Loeber, 1998; Laub & Sampson, 2001; Gadd & Farrall, 2004; Kazemian, 2007) even call for the study of “criminal careers” or changes in an individual’s involvement in criminal activity over their life course. Lengthening the follow-up period or taking a life course approach would increase the likelihood that studies observe or “pick up” renewed criminal activity. Collecting data at shorter, more frequent intervals and studying changes in individual involvement over time would help scholars pinpoint just exactly what factors precipitate a return to crime. A recent study by the National Research Council (2007), for instance, maintained that it would be useful for policymakers to know whether the time between offenses is increasing or whether the crimes being committed are becoming less serious as a result of certain interventions or treatments.

An additional issue in measuring recidivism and desistance is that we usually only observe new criminal activity if the individual under investigation self-reports it or is detected by law enforcement and subsequently re-arrested, re-convicted, or re-imprisoned. However, according to criminologists (e.g., Motiuk, Bonta et al., 1986; Lang, Holden et al., 1987; Serin, Peters et al., 1990; Gendreau, Little et al., 1996; Hanson & Bussière, 1996) there are problems with each of these indicators. Self-report measures, which seem to be the most accurate (see e.g., LeBlanc & Fréchette, 1989; Nagin, Farrington et al., 1995), depend on the truthfulness of respondents, many whom may fear re-arrest. Re-arrest measures, on the other hand, do not capture those individuals who reoffend, but escape detection and they may include individuals arrested for crimes they did not commit. Reconviction and re-imprisonment measures pose similar challenges. Some individuals may be convicted of crimes they did not commit and subsequently imprisoned. Others may return to prison for minor parole violations rather than a new offense. It is also true that some individuals reoffend, are arrested for their crimes, but then go on to avoid a conviction or incarceration, “getting off,” perhaps, on a technicality or striking a plea deal. Other individuals may be convicted of minor offenses, such as traffic violations. These individuals are included in recidivism rates if their convictions are not deliberately excluded (Weitekamp & Kerner, 1994).

Who’s at Risk of Returning to Crime?

Andrews and Bonta (1994, 1998) classified the predictors of criminal recidivism into two categories: *static predictors* and *dynamic predictors*. According to the authors, static predictors are the constant characteristics of a criminal offender that never change (e.g. previous convictions, childhood upbringing, etc.), while dynamic predictors are those that may vary over time (e.g., antisocial attitudes, employment status, antisocial associates). Dynamic predictors can be further categorized as “stable,” meaning that they change slowly over time (e.g., alcohol

and drug dependence), or “acute,” meaning they change rapidly (e.g., mood) (Hanson & Harris, 2000). The definition of what exactly constitutes a static versus a dynamic risk factor has been a much confused issue in the literature (Philipse, Koeter et al., 2006). In an attempt to bring some clarity to the issue, Hanson and Harris (2000) note that **while** dynamic predictors are amenable to deliberate intervention, while static predictors are not.

Static Predictors

The literature on criminal recidivism tends to emphasize and agree on the static risk factors for recidivism among criminal adult offenders (Gendreau, Little et al., 1996). These are age with young offenders more likely to recidivate, a history of pre-adult antisocial behavior,⁶ and a lengthy criminal history. Individuals with a history of deviant family members and friends are also more likely to reoffend. The evidence as to whether social class of origin, intelligence, a history of substance abuse, or personality traits are related to one’s risk of recidivism remains weak or mixed, at best.

Age. It is well known that criminal behavior declines with age (Gottfredson & Hirschi, 1990). Research suggests desistance occurs usually during or after adolescence, and that it is an inherently normative phenomenon (Laub & Sampson, 2001). Glueck and Glueck (1943) were the first to examine changes in criminal behavior over the life span. These authors conducted a 15-year follow-up study of 510 male inmates, which found that the percentage of inmates re-arrested decreased from 71 percent in the first five-year follow-up to 57 percent in the third five-year follow-up. This general pattern was consistent with two other studies by the Gluecks, one 15-year follow-up study on 1,000 juvenile offenders (Glueck & Glueck, 1940) and another follow-up study on 500 juvenile offenders (Glueck & Glueck, 1950, 1968).

⁶ Antisocial behavior concerns any act that violates established rules and laws of a particular society – an act that is illegal, no matter what the age of the perpetrator (Connor, 2002). Antisocial behaviors might include, for example, homicide, theft, assault, burglary, and larceny.

This decline in the rate of recidivism revealed by the Gluecks led Hoffman and Beck (1984) to suggest the existence of an age-related “burnout” phenomenon with respect to criminal activity over time. Controlling for other factors related to criminal recidivism such as prior criminal history, Hoffman and Beck (1984) found that recidivism steadily declined as individuals aged. Wolfgang, Thornberry, and Figlio (1987) followed a sample of individuals up to age 30 and found that the peak of offending to be 16, followed by a steady decline in the rate of offending. Similar findings have also been reported across other studies (e.g., Sarnecki, 1985; Farrington, Gallagher et al., 1988; Stattin, Magnusson et al., 1989; Stattin & Magnusson, 1991). Indeed, there is empirical evidence that criminal offenders change with increasing age (e.g., Shover, 1985; Cusson & Pinsonneault, 1986; Shover, Clelland et al., 1986) and thus there may be a direct positive relationship between the aging organism and desistance (Shover & Thompson, 1992).

Gottfredson and Hirschi (1990), in fact, adopted this view, suggesting crime declines with age for all offenders. In their general theory of crime, they argued that the age distribution of crime, including its onset, frequency, and desistance, does not change across time, space, and historical context. They argued that this direct, positive relationship between age and crime cannot be accounted for by any variables available to criminologists. Overall, Gottfredson and Hirschi (1990) noted that decreases in criminal offending are “due to inexorable aging of the organism” (p. 141), and that an individual’s engagement in criminal behavior is not susceptible to events over the life span (e.g., marriage, employment, education, etc.) or any situational or institutional factors (Laub & Sampson, 2001).

Yet, the question still remains, is it really simply one’s age or other factors that are correlated with age that decrease the likelihood of recidivism over time? As Laub and Sampson (2001) noted, aging represents a significant confound to research on the predictors of recidivism

and desistance over time. Moffitt (1993) stated that the age-crime relationship remains “at once the most robust and least understood empirical observation in the field of criminology” (p. 675). Similarly, Hirschi and Gottfredson (1983) noted that this relationship “easily qualifies as the most difficult fact in the field” (p. 553).

Shover and Thompson (1992) offered several possible explanations for the observed relationship between age and desistance. First, they suggested there might be a direct, positive relationship between age and criminal desistance. Second, they argued there might be an indirect effect of age on desistance, whereby it interacts with past experiences to change one’s assessment of risks and rewards associated with crime, subsequently leading to desistance. Shover (1996) similarly argued that changes in offending are associated with age and aging, particularly with respect to one’s changing decision calculus. He noted that criminal careers are related to objective and subjective career contingencies, and specifically two classes of contingencies: the development of conventional social bonds, activities, and rewards and a strengthened resolve and motivation to abandon crime. Shover’s (1996) central thesis was that the meaning of crime and calculus of crime change over the life course as one ages (Laub & Sampson, 2001).

History of pre-adult antisocial behavior. There also appears to be a strong link between early engagement in antisocial behavior and adult recidivism (see e.g., Hanson, Henggeler et al., 1984; Wiersen & Forehand, 1995; Gendreau, Little et al., 1996; Myner, Santman et al., 1998; Laub & Sampson, 2001). McCord (1980) found in a study of adult offenders who were followed into their forties, that the earlier the age of onset of criminal activity, the more likely subjects were to reoffend as adults. In their meta-analysis of predictors of adult recidivism, Gendreau, Little et al. (1996), similarly concluded that younger individuals who had engaged in crime were more likely to recidivate as adults. Though targeted towards minors, Cottle and colleagues’

(2001) meta-analysis of predictors of juvenile recidivism further corroborated these findings. In fact, there is little disagreement among criminologists that juvenile delinquency is a strong predictor of criminal recidivism in adulthood (Gendreau, Little et al., 1996). However, research also surprisingly suggests that 40-50 percent of adult offenders do not possess juvenile records (Blumstein, Cohen et al., 1986). Others have also highlighted the fact that there is much more heterogeneity in criminal behavior than many think, and that many juvenile offenders do not recidivate as adults (Cline, 1980; Loeber & LeBlanc, 1990). Nevertheless, it is important to consider that not all offenders are the same; high-risk offenders engage in stable levels of crime and do not desist (Blumstein & Cohen, 1987; Laub & Sampson, 2001). Thus, while early onset may strongly predict adult recidivism generally, it is not predictive in all cases.

Criminal history. Related research also shows that those with a lengthy criminal record are more likely to recidivate than first-time offenders (e.g., Gendreau, Little et al., 1996; Zamble & Quinsey, 1997; Langan & Levin, 2002; Rosenfeld, Wallman et al., 2005; Solomon, Kachnowski et al., 2005; Berg & Huebner, 2011). Some might speculate that the relationship may be due to the effects of prolonged incarceration on the individual, but Rosenfeld (2008) points out that this is not likely to be the case. He found in an earlier study that the length of time in prison is not related to recidivism (see Rosenfeld, Wallman et al., 2005). More likely, there is some unobserved factor which caused the offender to commit crimes in the past and will cause him or her to continue to commit crimes in the future. Andrews and Bonta (1994), for instance, argued that antisocial attitudes and antisocial associates are two of the “most meaningful correlates of criminal past and predictions of criminal future” (p. 104). Although there is little contention that there is an association between criminal history and recidivism in the adult population (Gendreau et al., 1996), it should be noted that some studies of juvenile offenders (e.g., Duncan,

Kennedy et al., 1995) reported no relationship between offense history and one's risk of reoffending.

History of deviant family members and friends. Past work also reveals that growing up in a family with members who engage in deviant behavior as well as interacting with delinquent peers increases the likelihood of criminal recidivism. For example, meta-analytic and single study evidence (e.g., Bonta, Law, & Hanson, 1998; Gendreau, Little, et al., 1996; Hanson & Harris 1998; Russo, 1994) suggests that deviant lifestyle-history variables, including dysfunctional family backgrounds marked by criminality on the part of family members and sexual and emotional abuse, neglect, and negative relationships with parents, are important predictors of criminal recidivism among general offenders as well as mentally disordered offenders. Moreover, several studies indicate that substance abuse on the part of parents increases the odds of juvenile recidivism (e.g., Rutter & Giller, 1984; Niarhos & Routh, 1992). Social- interactional approaches to understanding antisocial behavior suggest deviant family members and peer networks are, at least partly, responsible for directly training children early on to perform antisocial behaviors (Forehand, King, Peed, & Yoder, 1975; Patterson, 1982; Patterson, Debaryshe, & Ramsey, 1990; Snyder, 1977; Wahler & Dumas, 1984). As children model these behaviors, they learn to interact with their social worlds in an antisocial manner (Patterson et al., 1990). A large number of studies indeed point to delinquent peer groups as particularly potent training grounds for delinquent acts and substance use (e.g., Elliott et al., 1985; Hirschi, 1969; Huba & Bentler, 1983; Kandel, 1973). Key referents, including family members and friends, are thought to provide the attitudes, motivations, and rationalizations that reinforce antisocial behavior and offer the opportunities to participate in delinquent behaviors (Patterson et al., 1990).

Social class of origin. The evidence as to whether one's social class of origin is related to his or her risk of recidivism remains mixed (Myner, Santman et al., 1998). Social class of origin has been a cornerstone of various sociological theories of crime, which suggest it is one's initial social location within society that shapes their engagement in criminal activity (Andrews & Bonta, 1994; Gendreau, Little et al., 1996). Moreover, a number of studies suggest socioeconomic status is a predictor of recidivism, especially among juveniles, with those from poor social and economic environments and living in disadvantaged neighborhoods being more likely to recidivate than those from higher socioeconomic backgrounds (e.g., Rutter & Giller 1984; Oberwittler, 2004; Kubrin & Steward, 2006). However, several authors (e.g. Ganzer & Sarason, 1973; Thornberry & Farnworth, 1982; Loeber & Dishion, 1983; Tittle & Meier, 1990; Tittle & Meier, 1991) have challenged this view, demonstrating that social class of origin is a weak predictor of recidivism. Shover (1996) disagreed arguing, "No other aspect of their circumstances is so profoundly important for virtually every other aspect of their lives" (p. 30). Consistent with Shover (1996), meta-analytic findings indeed indicate those from lower socioeconomic backgrounds are at greater risk for reoffending (e.g., Cottle, Lee et al., 2001; Gendreau, Little et al., 1996).

Intelligence. It has long been suggested that criminals are less intelligent than non-offenders (Goddard, 1920). Herrnstein and Murray (1994) argued that intelligence as measured by the intelligence quotient (IQ) has substantial and largely immutable effects on criminal activity and that maximum punishment is inherently more effective for those at lower levels of intellectual functioning. A number of studies have similarly demonstrated a correlation between IQ and delinquency (e.g., Hirschi & Hindelang, 1977; Herrnstein & Murray, 1994). Gendreau and colleagues' (1996) meta-analysis of adult recidivism predictors, however, found only a modest association between IQ and recidivism. Moreover, while the assumption that those who are less

intelligent need stricter sanctions for their crimes has permeated many correctional policies and practices, there is evidence to suggest more intelligent individuals may benefit more from harsher sanctions (e.g., Cullen, Gendreau et al., 1997; Benda, Flynn et al., 2001). Indeed, as noted by several authors, the effectiveness of treatment programs on reducing recidivism depends on the degree to which they match the learning styles and abilities of offenders (Andrews & Bonta, 1994; Benda, Flynn et al., 2001). As pointed out by Benda, Flynn et al. (2001), intelligence is important to criminal interventions in so far as they identify those who require special programs tailored to their capabilities. Related to this idea, Gendreau, Little et al. (1996) maintain that the real emphasis should be on testing the relationship between one's practical intelligence - that is, his or her ability to learn from experiences, solve life problems, and handle his or her feelings - and recidivism. Intelligence, when measured by IQ, is an immutable characteristic that cannot be influenced by treatment.

History of substance abuse. Many criminals engage in some form of substance abuse. In Maruna's (2001) study, for instance, over 90 percent of long-term offenders (whether they eventually desist or not) reported that at some point in the past they had been "addicted or dependent" on alcohol or drugs. Although a number of studies maintain that a history of substance abuse increases one's risk of juvenile recidivism (e.g., Loeber & Dishion, 1983; Dembo, Williams et al., 1991; Niarhos & Routh, 1992; Duncan, Kennedy et al., 1995; Myner, Santman et al., 1998), other studies suggest no significant differences in juvenile recidivism rates among those with and without a history of substance abuse (e.g., Wooldredge, Hartman et al., 1994; Wierson & Forehand, 1995). Cottle, Lee et al.'s (2001) meta-analysis revealed that a history of substance abuse was predictive of juvenile recidivism, however substance use was not. With regard to the adult population, Dowden and Brown (2002) noted in a meta-analytic study, that prior convictions for substance abuse were not associated with an increased risk of

recidivism. Dowden and Brown (2002) further argued a history of substance abuse is only likely to predict recidivism if substance abuse is a reason for an individual's involvement in crime.

Personality traits. Past research suggests a clear link between certain personality traits and criminal conduct (Andrews and Bonta 1994). Studies by Schuessler and Cressy (1950), Waldo and Dinitz (1967), Tennenbaum (1977), Gottfredson and Hirschi (1990) and Simourd et al. (1991) all showed that antisocial personality, particularly the presence of traits related to impulsivity and self-management skills, are related to criminality. Empirical studies are conclusive in their findings that high levels of psychoticism are positively related to criminality regardless of age (e.g., Aleixo & Norris, 2000; Daderman, 1999; Heaven, 1996; Heaven & Virgen, 2001; Romero, Luengo, & Sobral, 2001). Psychoticism, which is associated with tough-mindedness, non-conformity, inconsideration, recklessness, hostility, anger, and impulsivity (Eysenck, 1977), has been found to be negatively related to the personality dimensions of agreeableness and conscientiousness (Eysenck, 1992; Costa & McCrae, 1992). Consistent with these findings, other studies indicated long-term offenders score lower than the general population on agreeableness and conscientiousness (see also Farrington & Hawkins, 1991; Nagin, Farrington et al., 1995). Maruna (1998, 2001) confirmed key differences in the personality traits of criminal offenders, but further and importantly argued that personality traits are not related to the likelihood of recidivism or desistance. In a sample of long-term offenders Maruna (2001) found no differences in the personality traits of those who continued to reoffend and those who did not. It would seem then that while certain personality traits may be associated with the likelihood of being a criminal offender, they are not necessarily a predictor of recidivism among criminals.

Dynamic Predictors

Scholars (e.g., Andrews & Bonta, 1994; Gendreau, Little, et al., 1996) have only recently begun to empirically assess the dynamic factors associated with recidivism. Criminologists had long-focused on investigating the importance of static predictors given that these factors can be easily measured cross-sectionally (Gendreau et al., 1996). Determining whether dynamic factors are related to recidivism, on the other hand, requires longitudinal data or the close qualitative analysis of particular individuals over time. Additionally, there is little consensus amongst scholars regarding the measurement of these specific risk factors (Gendreau et al., 1996). A number of scholars (e.g., Gendreau et al., 1996; Ward & Stewart, 2003), however, have stressed that dynamic predictors must be studied precisely because they offer the greatest promise of treatment. One cannot, for instance, change whether a particular individual comes from a lower social class or has a lengthy criminal record (static risk factors). However, it is possible to change whether one harbors pro-criminal attitudes or maintains social ties to delinquent peer groups (dynamic risk factors).

Andrews and Bonta (1994) further categorized dynamic risk factors into “criminogenic” needs and “non-criminogenic” needs. According to the authors, criminogenic needs are those dynamic factors risk factors that when changed reduce the likelihood of recidivism for a given individual (e.g., antisocial attitudes, values and behaviors). Non-criminogenic needs, on the other hand, are dynamic factors (e.g., increasing feelings of self-worth, reducing anxiety) that may make individuals more receptive to treatment and improve their general welfare, but that cannot, in their own right, reduce the likelihood of recidivism (Bonta & Andrews, 2003).

In their meta-analysis of the predictors of general adult recidivism, Gendreau and colleagues (1996) found that dynamic factors, as a broad category, were highly predictive. Based on their findings, these authors suggested that dynamic factors could no longer be ignored.

Dynamic risk factors include antisocial attitudes or values, antisocial associates, lack of social achievements (namely, marriage and stable employment), and to a lesser extent, educational attainment, personal distress variables (e.g., low self-esteem, alienation anxiety, depression, tension), and substance abuse and addiction. We now review each of these dynamic risk factors in greater detail.

Antisocial attitudes and antisocial associates. Some of the most important dynamic factors thought to be associated with increased recidivism include antisocial attitudes and ties to antisocial family members or friends (associates) (Andrews & Bonta, 1994). According to the Differential Association (DA) Theory (Sutherland, 1939, 1947), individuals engage in criminal behavior because they deem such behavior appropriate. As such, Andrews and Bonta (1994) maintained that criminal behavior “reflects the presence of cognitions favorable to criminal activity” (p. 104). These cognitions or antisocial attitudes are the result of individuals’ close interactions with antisocial others. The causal chain in DA theory runs from associates to attitudes to behavior (Sutherland, 1947). That is, individuals interact with antisocial friends, family members, etc., whereby they acquire antisocial attitudes. In turn, they then engage in antisocial behavior (Andrews & Bonta, 1994).

However, Andrews and Bonta (1994) maintained that the effect of antisocial associates on behavior is not always indirect via the development of antisocial attitudes. Interactions with antisocial associates may, for instance, lead individuals to define situations in certain ways that encourage criminal activity irrespective of attitudes (Andrews & Bonta, 1994). Indeed, a number of studies suggest there is a positive association between recidivism and deviant peer influences such as gang affiliation (e.g., Archwamety & Katsiyannis, 1998; Cottle et al., 2001; Hoge et al., 1996; Katsiyannis & Archwamety, 1997; Myner, Santman et al., 1998).

Based on their 1996 meta-analysis, which found that antisocial associates and antisocial cognitions, values and behavior are two of the strongest predictors of recidivism, Gendreau, Little et al. (1996) strongly supported DA theory. Several authors (e.g. Glueck & Glueck, 1950; Gottfredson & Hirschi, 1990) have criticized DA theory and the impact of antisocial associates, in particular, on methodological grounds. Glueck and Glueck (1950), for instance, maintain that the fact that criminals like to associate with other criminals - or that “birds of a feather flock together” - is interesting in its own right, but not an explanation of delinquency.

Social achievements. Related research, however, has shown that social achievements (especially marriage and stable employment), which result in the establishment of pro-social ties and alter the incentives to participating in criminal activity, reduce the likelihood of recidivism (Laub & Sampson, 2001; Sampson & Laub, 1993). In their 1996 meta-analysis, Gendreau et al. found social achievements (which included marriage, stable employment, education, income and address) to be one of the strongest predictors of adult recidivism. In particular, empirical findings consistently point to the importance of a good marriage in reducing the likelihood of reoffending (e.g., Knight & Osborn, & West, 1977; Farrington & West, 1995; Gibbens, 1984; Horney, Osgood, & Marshall, 1995; Laub, Nagin, & Sampson, 1998; Maume, Ousey, & Beaver, 2005; Mischkowitz, 1994; Rand, 1987; Sampson & Laub, 1993; Sampson, Laub, & Wimer, 2006; Warr, 1998), as well as engagement in other antisocial behaviors (e.g., drinking, drug use, etc.) (Knight et al., 1977; Osborn & West, 1979; West, 1982). Other studies maintained that stable employment is also particularly likely to have a strong negative effect on recidivism (Farrington et al., 1986; Glaser, 1969; Irwin, 1970; Sampson & Laub, 1993; Shover, 1985, 1996; Uggen, 2000; Wright et al., 2001).

In their age-graded theory of informal social control, Sampson and Laub (1993) suggested that salient life events and pro-social ties in adulthood can mitigate, at least to a

certain degree, criminal trajectories set in motion during childhood. Their central thesis is that social bonds, especially those related to a cohesive marriage and stable employment, account for a reduction in criminal behavior independent of differences in criminal proclivities. When individuals are bound by positive ties to various social institutions, these institutions create a sense of obligation and restraint that bring to bear significant consequences for continuing to engage in criminal behavior (Sampson, Laub et al., 2006). Moreover, such bonds lead to significant changes in the everyday routines and patterns of association of former criminals (Sampson, Laub et al., 2006). The well-established and routine activities related to marriage and stable employment result in lower exposure to deviant peer groups and crime in general (Hindelang, Gottfredson et al., 1978; Warr, 1998). With respect to marriage, wives may exert direct social control over their husbands by limiting time “with the guys” (Sampson, Laub et al., 2006). Some (e.g., Giordano, Cernkovich et al., 2002; Sampson, Laub et al., 2006) have also suggested that getting married and holding a stable job can alter one’s identity through a cognitive transformation; that is, these life changes connote the idea of getting “serious” about one’s life and assuming a new role. In addition to marriage and employment, these pro-social bonds can also take the form of ties to children, other family members, and positive adult friends (Trasler, 1979; Sampson & Laub, 1993; Bales & Mears, 2008).

In support of these findings, Horney et al. (1995) found in a study of monthly data over a two to three-year period for convicted felons that differences in criminal offending were related to certain life circumstances including employment and marriage. Farrington and West (1995) similarly concluded that marriage decreased the offending rates of working-class males in London. A study by Berg and Huebner (2011) argued, somewhat differently, that the negative association between positive ties to relatives (including a spouse or a larger extended family) and recidivism washed away when one controlled for post-release employment. Family ties,

they contended, are crucial, but only in helping individuals find work independent of their education and prior employment history (Berg & Huebner, 2011). Using a nationally representative sample of 12,000 individuals between 14 and 22 years of age, Pezzin (1995) argued the decision to refrain from criminal activity was a function, in part, of expectations of current and future earnings. She also demonstrated that individuals who had higher earnings from a legal job were more likely to cease criminal activity, suggesting the “pull” of legal behavior along with the costs of illegal behavior are important for understanding desistance from crime (Laub & Sampson, 2001).

It is important, however, to note that the buffering effects of social bonds on the likelihood of recidivism may be subject to a selection process (Gottfredson & Hirschi, 1990; Sampson and Laub 2001). For instance, it may be that individuals are prone to crime in their youth and desist in adulthood at about the same time they would settle down and marry or secure a legal job. Marriage and employment, therefore, might not reduce the likelihood of recidivism, but merely be symptomatic of desistance. Using an experiment to address the issue of selectivity, however, Uggen (2000), showed that those 27 years of age and older were more likely to desist from crime when given employment and that the effect was stronger than in younger cohorts. Uggen (2000) demonstrated that the effects of salient “turning points” in the life course, especially employment, are age graded and indeed associated with the risk of recidivism.

Educational attainment. Whether educational attainment is related to one’s risk of recidivism, independent of employment and earnings, warrants further investigation. Two meta-analyses, one by Gendreau, Andrews, Coggin, and Chanteloupe (1992) and the other by Gendreau et al. (1996), suggested a lack of educational attainment only poses a minor risk for recidivism. Using survival models, Berg and Huebner (2011) showed that not having a high

school education does not mean one is more likely to recidivate or recidivate quickly. Yet, other researchers (e.g., Adams et al., 1994; Boudin, 1993; Harer, 1995; Stillman, 1999; Fabelo, 2000) have demonstrated that recidivism rates are substantially lower for the more educated. MacKenzie (2006) similarly found that adult academic and vocational programs reduce an individual's risk of recidivism. Others (e.g. Gerber & Fritsch, 1994; Gaes et al., 1999; Cullen & Gendreau, 2000, Wilson et al., 2000; Aos et al., 2006) concluded that these programs matter because they increase employment opportunities. Locher and Moretti (2004) argued, an education "increases the returns to legitimate work, raising the opportunity costs of illicit behavior" and possible incarceration (p. 155-156). In short, the evidence as to whether educational attainment is related to recidivism remains mixed. A potential reason for the contradictory findings may have to do with the fact a number of these studies have been criticized by researchers (e.g., MacKenzie, 2006; Wilson et al., 2000) on methodological grounds.

Personal distress. A significant amount of controversy has surrounded the degree with which personal distress variables (i.e. adverse personal reactions to another's emotional condition (Batson, 1987) (e.g., low self-esteem, alienation anxiety, depression, tension, psychiatric symptomatology)) are able to predict criminal recidivism (e.g., Tittle & Meier, 1990; Andrews & Bonta, 1994; Herrnstein & Murray, 1994; Gendreau, Little et al., 1996). However, it is not uncommon to find treatment programs in correctional facilities that attempt to alleviate offenders' personal distress (Gendreau & Andrews, 1990; Hoge, Leschied et al., 1993; Gendreau, Little et al., 1996). Although future research should seek to confirm these findings, Gendreau and his colleagues' meta-analysis (1996) found that personal distress variables were only weakly predictive of criminal recidivism among adult offenders. As noted by Bonta, Law, and Hanson (1998), personal distress should not be expected to significantly influence criminal behavior because it likely does not affect the degree with which individuals experience crime as utilitarian

and rewarding. Gendreau, Little et al. (1996) concluded that there is little reason to believe that treatment programs aimed at relieving offenders' personal distress are successful in reducing their risk for recidivism. Gendreau et al. (1996) also found, contrary to Phillips et al. (1988) that psychiatric symptomatology was in no way related to an offender's risk of recidivism.

Substance abuse and addiction. Finally, there is some evidence that individuals' substance abuse and addiction precludes the establishment of pro-social bonds, impedes desistance, and increases the likelihood of recidivism (Dowden & Brown, 2002). Gendreau and colleagues (1996) meta-analysis found substance abuse to be a significant and potent predictor of general recidivism. Dowden and Brown (2002) reached the same conclusion in a more recent meta-analysis. They further showed that combined drug/alcohol abuse and drug abuse were much stronger predictors than isolated alcohol abuse. Sustained drug and alcohol abuse may interfere with the establishment of a good marriage or prevent one from sustaining stable employment. Moreover, as Maruna (2001) and others (e.g., Zamble & Quinsey, 1997) pointed out, criminal behavior and drug use are often "inseparable." Individuals are likely to have a hard time refraining from drugs and alcohol while running in criminal circles. Likewise, those who want to desist are unlikely to do so successfully while they are still addicted to alcohol or illegal drugs. As such, there is a greater need for those studying desistance to also study addiction (Maruna, 2001).

Generalizability to Terrorism

We have several good reasons to believe the literature on criminal recidivism provides a useful reference point for thinking about how to conceptualize and measure terrorist recidivism and identifying some of its potential causes. The distinction between disengagement and de-radicalization in the terrorism studies literature, for instance, maps, to a certain extent, on to

the concepts of primary and secondary desistance in criminology.⁷ In addition, several scholars (e.g., Bovenkerk, 2011; Mullins, 2010; Rabasa et al., 2010) have recently underscored certain similarities between criminal organizations and terrorist groups that may permit researchers to derive hypotheses regarding the likely factors and psychological processes associated with decisions to permanently cease terrorist activity. For example, Bovenkerk (2011) pointed out that most members of terrorist groups, like those affiliated with street gangs, join in their youth when there may exist heightened needs for thrill seeking and participation in risky, adventurous behavior. In addition, criminal gangs and terrorist groups both combine criminality, to varying degrees, with a cohesive organizational structure (Bovenkerk, 2011). In a similar vein, LaFree and Dugan (2004) recently highlighted similarities between the study of terrorism and crime, more generally. LaFree and Dugan (2004) noted that the study of both is interdisciplinary, both terrorism and crime are socially constructed phenomenon, both are perpetrated primarily by young males, and both undermine social trust. In fact, similarities, such as those mentioned above, have led several researchers (e.g., Mullins, 2010, Bovenkerk, 2011, & La Free and Miller, 2008) to turn to criminology to inform their understanding of terrorist rehabilitation and desistance in the past.

Nevertheless, there are differences between terrorists and criminals that should not be discounted. Most notably, many terrorists are motivated in their use or facilitation of violence by a political or religious ideology and, unlike criminals, most operate (to varying extents) as part of a formal organization. Due to their commitment to use violence on behalf of a political or religious cause, terrorists are also more likely to view themselves as altruists than common criminals (LaFree & Dugan, 2004). We also know that terrorists are less likely than criminals to

⁷ For a more in-depth discussion of this comparison, see the discussion by Altier, Horgan and Thoroughgood (2012).

be mentally ill (at least at the point of initial involvement) or socio-economically deprived (Mullins, 2010).

Mindful of such differences, we now consider the conceptualization and measurement of terrorist recidivism, some potential risk factors for terrorist recidivism that warrant empirical testing, and possible risk reduction techniques in light of our review of the literature on criminal recidivism.

Defining and Measuring Terrorist Recidivism

As already noted, terrorist recidivism generally connotes a return to terrorist activity after formal sanction or detention, whereas the broader concept of terrorist re-engagement refers to re-involvement following any period of disengagement, whether it be related to one's incarceration or not. We believe this distinction in terminology is indeed useful and reflects the convention in criminology, which distinguishes between recidivism and re-offending.

Of greater concern, and perhaps a reflection of the absence of a consensus regarding the measurement of criminal recidivism, is how one goes about measuring terrorist recidivism. Similar methodological concerns surround the use of self-report, re-arrest, re-conviction and re-imprisonment data to measure terrorist recidivism as those we noted earlier regarding the measurement of criminal recidivism. For instance, some former terrorists may re-engage, without ever being detected, arrested or imprisoned. Further, with regard to terrorism, researchers, practitioners and policymakers, especially those with access to classified information, may have information that leads them to "suspect," but not necessarily know an individual is re-engaged. In fact, such information has led the U.S. Department of Defense to report estimated recidivism rates for Guantanamo detainees based on non-confirmed as well as confirmed and suspected cases (HASC, 2012).

An additional complication is that while common criminals suspected or known to have re-offended are able, in most instances, to be arrested in their host state, the same is not true for terrorists. Former Guantanamo detainees, for instance, who are released into foreign custody and subsequently re-engage outside of the U.S. may not be easily detected or arrested for their crimes. They may continue to operate in “safe havens” and domestic as well as international interests and laws may preclude their detection and/or arrest. For this reason, it seems that, with regard to terrorist recidivism, clear evidence of an individual’s re-engagement rather than re-arrest, re-conviction or re-imprisonment would provide the most useful and accurate measure of terrorist recidivism. However, if re-engagement rates are used to estimate the recidivism rate, we strongly believe that evidence of the individual’s re-engagement should be verifiable, and therefore public and transparent.

Potential Risk Factors for Terrorist Recidivism

In this section, we identify some testable hypotheses as to the potential risk factors for terrorist recidivism based primarily upon our review of the literature on criminal recidivism. Our conjectures should be viewed as a starting point for future empirical inquiry, given the lack of empirical data and studies on terrorist recidivism to date. In addition, although we begin with and review potential static predictors, we maintain, similar to Genedreau et al. (1996) and Andrews and Bonta (1994) with regard to criminals, the key emphasis in the risk assessment and treatment of terrorists should be on the dynamic predictors. The benefit of focusing on dynamic predictors is twofold. First, it is likely to result in a more meaningful and accurate assessment of the risk of recidivism for a given terrorist. Second, it opens up the possibility of designing targeted interventions to reduce the risk of recidivism.

Static Predictors of Terrorist Recidivism

It seems likely that terrorists, just like criminals, may be less likely to recidivate as they age. Like criminals (Shover, 1985, 1996), certain terrorists may experience a gradual “aging out” effect whereby previous experiences lead to their increased capacity to make calculated decisions and sufficiently weigh the associated costs and benefits of their continued involvement in terrorism. Further, those who join terrorist organizations for non-ideological reasons, such as thrill seeking, may, like criminals, be increasingly more likely to leave terrorism behind as they age due their desire to adopt a more conventional lifestyle. Consistent with Laub, Sampson, et al.’s age-graded theory of criminal desistance (Laub & Sampson, 1993; Sampson and Laub, 1993; Laub, Nagin, & Sampson, 1998), those who are not necessarily closely tied to the group’s ideology may experience a shifting focus towards getting married, having a family, and holding a stable job. In turn, these factors may contribute to the establishment of pro-social bonds and a more conventional social identity that reduces the likelihood of re-engaging in terrorism. In addition, terrorists, like criminals, are often exposed to excessive levels of violence, and thus may be more likely to experience feelings of burnout over time, contributing to their “aging out” of terrorism.

A mitigating factor for the terrorist (as opposed to most criminals), however, is ideology. We would expect that the relationship between age and recidivism would be weaker among the most ideologically committed terrorists. Former terrorists who are deeply committed to the organization’s or movement’s ideology may be more likely to return to the fight, despite an increased capacity to make calculated decisions, the desire to marry, have a family etc. and a growing sense of “burnout.” Instead of abandoning the cause altogether, they might, for instance, re-engage in or move to a more facilitative or leadership role as they age. We therefore offer the following testable hypothesis and corollary:

H1: Former terrorists are less likely to re-engage as they age.

C1: The negative relationship between age and terrorist re-engagement is tempered by ideological commitment.

It also seems plausible that, like criminals (Hanson, Henggeler et al., 1984; Wierson & Forehand, 1995; Gendreau, Little et al., 1996; Myner, Santman et al., 1998; Laub & Sampson, 2001), former terrorists may be more likely to re-engage if they have a history of pre-adult involvement in terrorism. Although it is clear from the literature on criminal recidivism that the relationship between juvenile offending and reoffending later in adulthood is strong, it is not entirely clear what the underlying dynamic is (e.g., antisocial attitudes, antisocial associates). However, it seems plausible that those who begin their criminal careers at an early age are more likely to harbor antisocial attitudes or lack pro-social associates. A similar dynamic might be at work for those who begin their involvement in terrorism at an early age. They may come from a broken home or one where involvement in terrorism is supported and condoned. Alternatively, although they might not necessarily have been radical when they became involved in terrorism, instead joining a group for the sense of belonging or kinship it provided, it is likely that, over time, these individuals might have become strongly committed to the group's ideology and established ties to its members. They may develop a strong commitment to a violent, radical ideology and ties to others who also espouse that ideology. Further, individuals who become involved in terrorism at a young age and, for instance, as a result drop out of school, may have fewer alternatives outside of the group later in life. The "sunk costs" these individuals may have invested in the group and their involvement in terrorism, more broadly, early on may raise the perceived costs to sustained disengagement and precipitate their perpetual return to terrorism, despite intervention. We therefore offer the following testable hypothesis:

H2: Former terrorists are more likely to re-engage if they became involved in terrorism at an early age.

For somewhat similar reasons, we also would conjecture, based on the literature on criminal recidivism (e.g., Gendreau, Little et al., 1996; Zamble & Quinsey, 1997; Langan & Levin, 2002; Rosenfeld, Wallman et al., 2005; Solomon, Kachnowski et al., 2005; Berg & Huebner, 2011), that those with a long history of involvement in terrorism are more likely to re-engage. Just as with criminal recidivism, however, we caution that while a history of terrorist involvement may be related to the likelihood of re-engagement, there may be a reflection of some other omitted variable (e.g., a strong ideological commitment, limited alternatives outside of the terrorist group, the “sunk costs” of prolonged involvement) responsible for both the terrorist’s long history of involvement and his or her continued involvement. It is also true that terrorists who have been involved in terrorism or a terrorist group for a long time are more likely to incur “sunk costs” as a result of their membership, which may make it difficult to not return to terrorism or a terrorist group. For instance, they may have been involved in a series of crimes unbeknownst to law enforcement for which they have not yet been arrested or prosecuted or they may face the threat of serious reprisal by the terrorist group if they do not return because they possess sensitive information. For all of these reasons, it seems likely:

H3: Former terrorists are more likely to re-engage if they have a long history of involvement in terrorism.

Similar to criminals who are more likely to engage if they have a family history of criminal or deviant behavior (Bonta, Law, & Hanson, 1998; Gendreau, Little, et al., 1996; Hanson & Harris, 1998; Russo, 1994), former terrorists may be more likely to re-engage if they have a history of family members or peers involved in terrorism. Certain individuals may become involved in terrorism and continue to remain involved because they are socialized into terrorism

at a young age. Witnessing the attitudes and behavior of key family members or friends involved in terrorism, they might grow up believing that they have a moral duty or obligation to participate in the group or “fight for the cause.” They may be taught at a very young age by family members or friends to believe in a terrorist group’s or cause’s underlying violent, radical ideology. These individuals may have little contact with individuals who don’t support the terrorist group or its cause. They also may have few alternative sources of social support outside of the group on which to rely should they indefinitely disengage. We therefore offer the following testable hypothesis:

H4: Former terrorists are more likely to re-engage if they have a history of family (or peer) involvement in terrorism.

The empirical evidence linking one’s social class of origin to his/her likelihood of recidivism seems a bit mixed in the criminology literature. However, there appears to be enough evidence to consider the possibility of a significant association with regard to terrorism. Recall, however, that unlike common criminals, terrorists are not drawn disproportionately from the lower social classes (Mullins, 2010, Krueger & Maleckova, 2010). Nevertheless, it is possible that those former terrorists who *do* come from a lower socio-economic background may be more likely to re-engage. It is probable that, given their economic and likely related educational background that these individuals may believe that they have limited alternatives outside of the terrorist organization. As such, they may be more inclined to re-engage upon their release from custody than pursue an alternative path in conventional society. We therefore propose:

H5: Former terrorists are more likely to re-engage if they come from a poor socio-economic background.

The evidence linking one’s intelligence (as measured by IQ), personality traits and a history of substance abuse to criminal recidivism is rather weak. As such, we do not believe that

these will be strong predictors of recidivism in the terrorist population. This is especially true with regard to personality characteristics as past research shows that (with the possible exception of the lone-actor population), terrorists are less likely to suffer from mental and psychopathic illness than criminal offenders (e.g., McCauley & Segal, 1987; Taylor & Quayle, 1994; Merari, 2005; Post, 2007), though it remains plausible that long-term engagement in terrorism may have negative psychological consequences (Horgan, 2009).

Dynamic Predictors of Terrorist Recidivism

With regard to the dynamic predictors of terrorism, we posit, based on our review of the literature on criminal recidivism, especially Andrews and Bonta (1994) and Gendreau et al. (1996), three potential dynamic predictors of terrorist recidivism: 1) a strong commitment to a violent, radical ideology, 2) ties to individuals supportive of a terrorist cause or organization, and 3) social achievements.

We view an individual's commitment to a violent, radical ideology that supports or provides justification for the use of terrorism as somewhat akin to harboring antisocial attitudes or values in the criminology literature. As noted by Andrews and Bonta (1994), the possession of antisocial attitudes or values provide the rationale for engaging in criminal activity; they establish "the standards of conduct." In the context of terrorism, it is the violent, radical ideology which is used to justify terrorism. Individuals, who believe in a violent, radical ideology, are more likely to have trouble in seeing that their behavior is wrong. In their eyes, it is justified. Further, a deep commitment to a terrorist cause means that they are more likely to want to continue pursuing that cause for altruistic reasons, despite the consequences they may incur (e.g., imprisonment, inability to have a family, having to live in secrecy). We therefore propose:

H6: Former terrorists are more likely to re-engage if they possess a strong commitment to a violent, radical ideology.

Second, we speculate that those former terrorists who retain ties to the terrorist organization or individuals supportive of the terrorist cause or their past involvement in terrorism are more likely to re-engage. Similar to criminals with ties to antisocial friends and family (Andrews & Bonta, 1994), connections to an active terrorist organization may provide former terrorists with ample opportunities for re-engagement, while retained ties to members of an active terrorist organization or those supportive of terrorism may increase or reinforce a former terrorist's belief in the violent, radical ideology. Further, constantly seeing individuals, and in some instances, friends and family members engaging in terrorist activity may cause former terrorists to believe that such behavior is morally acceptable (if they don't already believe so). We therefore posit:

H7: Former terrorists who retain ties to members of an active terrorist organization or individuals supportive of terrorism are more likely to re-engage.

Third, the literature on criminal recidivism highlights the role that social achievements and the development of pro-social bonds play in reducing the likelihood of recidivism (Laub & Sampson, 2001). We believe that a similar sort of relationship is likely to hold with regard to terrorism. Social achievements among former terrorists, such as stable employment, a good education, or a healthy marriage and family, should reduce the likelihood of recidivism. The relationship between social achievements and the risk of recidivism is multifaceted.

First, as suggested in the literature on criminal recidivism (Laub & Sampson, 2001), to the extent that they increase one's interaction with individuals not supportive of terrorist activity, social achievements are likely to result in the development of pro-social bonds. These social bonds are likely to have a buffering effect by aiding in the development of pro-social attitudes, which cause individuals to question their involvement in terrorism and/or commitment to a radical, violent ideology. Second, for those individuals whose involvement in

terrorist organization is motivated by a desire for kinship and belonging, the establishment of a career or the development of one's own family through marriage, may provide those individuals seeking social bonds with an alternative 'home' outside of the terrorist organization. Finally, for those individuals who depend on their participation in terrorism for their primary source of income or those who believe that they lack alternatives outside of the terrorist group, stable employment outside of the organization, for instance, may provide them with a new opportunity and a viable 'way out' of terrorism.

However, as with the effect of age, we would caution that the effect of these social achievements are likely to be mitigated, in part, by a strong commitment to a violent, radical ideology. The ideologically motivated and ideologically committed terrorist is likely to be less susceptible to the influence of others than those who are disillusioned with the ideology or those whose involvement is driven by other needs (e.g., belonging, social bonds, and money). We therefore offer the following testable hypothesis and corollary:

H8: Former terrorists who possess certain social achievements (e.g. stable employment, a good education, a healthy marriage and family) are less likely to re-engage.

C2: The positive relationship between social achievements and terrorist re-engagement is tempered by ideological commitment.

Finally, we do not believe that personal distress or substance abuse are likely to be potential predictors of terrorist recidivism. As noted earlier, the evidence linking personal distress variables to criminal recidivism is exceptionally weak (Gendreau et al., 1996). With regard to substance abuse, although it is a relatively consistent predictor of criminal recidivism, we are not certain that the same relationship would necessarily hold with regard to terrorism, at least generally speaking. Although some terrorist groups (e.g., the Weather Underground) have a clear drug sub-culture, many terrorist groups (e.g., the Provisional IRA) actively screen recruits

to eliminate those with substance abuse problems. Such individuals may pose a security risk. Although further empirical study is needed, it seems that, if a relationship between substance abuse and terrorist recidivism exists, it is likely to be conditional on the terrorist group to which an individual belongs.

While we have offered several testable hypotheses regarding the predictors of terrorist recidivism, we would like to emphasize that this list should not be viewed as exhaustive, but merely as a starting point based upon our review of the literature on criminal recidivism. Because many terrorists are, in fact, motivated and mobilized by an acceptance of underlying ideology, it seems that the likelihood of recidivism for some terrorists is also likely to be shaped by changes in the social and political context and the organization to which he or she belonged (e.g. Taylor & Horgan, 2006). Changes in the political context, for instance – the opening up of political negotiations – may shape individual beliefs about the necessity of violence and influence an individual's desire to resort to terrorism. He or she might now view politics as opposed to violence as the way forward. For others, particularly those whose involvement was motivated by the need for kinship, disintegrating relations between members of an organization may reduce their likelihood of re-engagement as they are no longer likely to derive a 'social benefit' from re-engagement in the terrorist organization. The important point here is that focusing on the rationale for terrorism for the individual may provide a meaningful way to assess his or her risk of re-engagement as organizational and political circumstances change.

Reducing the Risk of Terrorist Recidivism

The above hypotheses, if they hold, suggest that reducing the risk of terrorist recidivism requires: 1) weakening an individual's commitment to a violent, radical ideology as well as his or her bonds to others that support that same ideology and 2) facilitating his or her acquisition of

certain social achievements (e.g., stable employment, a family, an education) and development of pro-social bonds.

Given, however, that individuals' reasons for engaging in terrorism differ (e.g., commitment to the ideology, need for belonging), as might their reasons or risk factors for re-engaging, the question becomes: How do we assess an individual's risk and design targeted interventions that take into account individual motivation? We believe, similar to Mullins (2011), that Andrews (1989) and later Andrews' and his colleagues' (1990; 1994) argument that reducing criminal recidivism requires adherence to four principles: *risk, need, responsivity and professional discretion* offers some guidance here.

With regard to the first principle, risk, Andrews, Bonta, et al. (1990) maintained that studies have shown that there are known antecedents of criminal activity and recidivism, which we have reviewed here. Assessments of risk, according to Andrews, Bonta et al. (1990) should not be based on these risk factors and not on clinical judgments alone, for past work has shown that professional judgments, even by the most competent practitioners, are poor predictors of future criminality (see e.g., Meehl, 1954; Little & Schneidman, 1959; Dawes, Faust et al., 1989; Glover, Nicholson et al., 2002).

Once those who have the highest risk of recidivating have been identified, they should, according to Andrews, Bonta, et al. (1990), receive the highest level of treatment - that is, the most attention and intensive service possible. Those at a lower risk for recidivism, on the other hand, require less care. Although the risk principle is usually applied with regard to who is more likely to reoffend upon release, it may also be applied to the timing of intervention. A 2007 report by the National Research Council, for instance, argues that since we know released criminals are at the highest risk of reoffending during the initial days, weeks, months, and year after their release, treatment should be the most intense during this period. According to the

report, a “person should not leave prison without an immediately available person and plan for post-release life” including counseling, enrollment in drug treatment programs, parole supervision, assistance finding work, mentors, assistance obtaining identification, clothes, housing, etc. (National Research Council, 2007). The same, of course, is likely to be true of disengaged terrorists. They need a strong support system in place as they adapt to their new role and those at a greater risk of returning to the fight are more likely to need more care.

With respect to the second principle, need, Andrews and his colleagues (1990) argued that the types of service or treatment that an individual offender receives should be tailored to his or her criminogenic needs. As a reminder, criminogenic needs are those dynamic factors that when changed reduce an individual’s propensity to engage in criminal activity (Andrews & Bonta, 1994). Thus, different individuals may have very different criminogenic needs. Certain needs may be criminogenic in some individuals, but not others (Andrews & Bonta, 1994). Initiatives should be aimed at first identifying, and then reducing or eliminating an offender’s particular criminogenic needs through, for instance, changing antisocial attitudes, breaking associations with antisocial peers or family members, increasing self-control, treating substance abuse, and altering the perceived costs/rewards to criminal behavior (Andrews, 1989). For those engaging in terrorism, of course, this would mean first identifying, and then focusing on and addressing those factors responsible for the individual’s initial and continued involvement in terrorism. What particular function or what need does involvement in terrorism serve for the individual in question? How can we reduce his/her propensity to resort to terrorism by eliminating or reducing that need or fulfilling it in another legal, non-violent manner?

The third principle, responsivity, holds that treatment should be delivered in such a way that it matches the offender’s learning style and abilities (Andrews et al., 1990). Specifically, interpersonal sensitivity, interpersonal anxiety, verbal intelligence, and cognitive maturity

should be considered when determining the nature of treatment (Andres & Bonta, 1994). Andrews (1989), Andrews and Bonta (1994), and others (e.g., Gendreau, Little et al., 1996; Allen, Mackenzie et al., 2001; Taxman, 2008) argue that cognitive-behavioral therapy (CBT) and social learning approaches have the greatest potential to lower one's risk of recidivism. According to Andrews, Bonta, et al. (1990) these approaches "shift the density of the incentives and disincentives for criminal and noncriminal acts in the favor of noncriminal alternatives" (p. 201). Treatment should include modeling and the reinforcement of anti-criminal behavior, the development and practice of new skills, role-play, verbal guidance, and the provision of resources (Andrews, 1989). Similarly, Allen, Mackenzie et al. (2001) hold that moral reconnection therapy and reasoning and rehabilitation programs - two types of CBT - reduce recidivism. The first, moral reconnection therapy (MRT) increases an offender's moral reasoning ability through confrontation, stressing delayed gratification, and an emphasis on the means in addition to the ends. Reasoning and rehabilitation seeks to improve an offender's cognitive skills including his or her ability to identify potential consequences of certain behaviors and engage in means-end reasoning (Allen et al., 2001). Andrews further argues that other approaches, besides CBT, such as group interactions without the presence of a leader to dissuade pro-criminal attitudes; approaches guided by deterrence theory (i.e. fear of punishment or retribution) or labeling theory (i.e. the idea crime is a self-fulfilling prophecy driven by minority stereo-types); isolated community service programs, or restitution are unlikely to be rehabilitative as are "client-centered counseling" (where the psychotherapist just listens) or "unstructured psychodynamic therapy" (Andrews, 1989, p. 16). A recent report by the National Research Council supports these claims. The report concludes that, to date; only CBT and treatment for substance abuse (especially when combined with criminal supervision) have been shown to be effective in reducing recidivism. The empirical evidence for all other forms of treatment is not

methodologically sound because these studies are subject to selection bias - that is, they do not allow for random assignment into the treatment and control groups (National Research Council, 2007). While there are no studies of the role that CBT plays in reducing the risk of recidivism among former terrorists, CBT is a key part of certain de-radicalization programs, like the Saudi initiative. A more important take away point here is that the nature of the treatment should be tailored in such a way to account for differences in the education and learning style of the terrorist and perhaps, his or her openness to change.

The fourth and last principle, professional discretion, allows for an override of the first three principles in unique cases that do not “fit the formula” (Andrews & Bonta, 1994). Andrews (1989) notes that ethical, legal, and humanitarian factors should be taken into consideration when applying and implementing principles one through three. This point easily seems applicable to terrorism where one must be sensitive to differences in culture and political beliefs. Risk reduction initiatives that are not sensitive to these differences may only backfire, increasing a terrorist’s commitment to his or her group and perhaps, its violent, radical ideology.

Assessing whether certain treatments, programs, or other interventions are successful at reducing recidivism is tricky. As already mentioned, the individuals who participate are usually not selected at random. When this is true, it is impossible to determine whether differences in the recidivism rate are due to the effects of the treatment, program, or intervention on the behavior of participants or inherent differences between participants and non-participants. Experimental research can help circumvent these problems, but it may pose a number of ethical problems (e.g. denying certain treatments to those who need/want them).

Conclusion

Based upon our review of the literature on criminal recidivism, we have offered a definition and method of measurement for terrorist recidivism and hypothesized a number of

potential risk factors. The empirical investigation of these hypotheses, we believe, is a fruitful avenue for future research.

In closing, we would like to reiterate a point made by Rosenfeld (2008) with regard to criminal recidivism that we believe is essential for how we think about estimated rates of terrorist recidivism. Rosenfeld (2008) cautions that the criminal recidivism rate is a poor predictor of how well we are rehabilitating offenders because it “confounds successes with failures.” According to Rosenfeld, if we believe that some repeat offenders are not amenable to rehabilitation and that most first-time offenders usually desist, then an ideal criminal justice system - which reserves prison for those who cannot be rehabilitated in other ways - would have a high rate of recidivism.⁸ The system would have isolated and confined those individuals not likely to change their ways under any circumstances. A low recidivism rate, on the other hand, might signal the unnecessary imprisonment of individuals likely to respond to other forms of treatment such as CBT. In response to these issues, Rosenfeld (2008) calls for future research to identify and test the effects of various treatments or interventions on different sub-sets of the prison population (e.g. first-time offenders, career criminals, etc.). He further cautions that, although recidivism warrants our immediate attention, high rates of recidivism may occur alongside a high or low incidence of crime in the general population and the larger picture must be considered. The same is true with regard to terrorism. Even if an alarming percentage of terrorists released from prison may return to terrorism, the question is whether we have effectively isolated and offered alternative, effective forms of treatment (e.g., de-radicalization programs) to those most likely to change.

⁸ This is true unless, of course, as Rosenfeld (2008) points out, these criminals are sentenced to life or death.

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