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**Interventions to improve empathy awareness in sexual and violent offenders:
Conceptual, empirical, and clinical issues**

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Abstract

Interventions that seek to increase empathy are a common feature of programs offered to sexual and violent offenders. Yet, there is little empirical evidence to suggest that they contribute positively to program outcomes. This paper explores the rationale for the delivery of empathy training with violent offenders, describes some of the most commonly used approaches, and reviews the current evidence base relating to effectiveness. It is concluded that while there are strong theoretical grounds for identifying empathy deficits as an important area of criminogenic need, there are considerable difficulties in establishing the extent to which the interventions offered in this area might be considered to be successful in reducing risk.

Keywords: empathy, violence, offender, rehabilitation

Violent offenders form a significant proportion of the prison population and constitute a group that causes considerable public disquiet because of the perceived and actual “risk” that they present to the community upon release. Not only are the effects of violence often catastrophic for victims, but there are also likely to be indirect victims, including those known to the victims, those who witness violent and aggressive behavior, and those who are frightened of the potential for victimization (Lorion, 2000). While it is difficult to obtain a true base rate for violent re-offending, the available data indicates that a significant minority of convicted offenders will go on to commit further violent offenses after release from custody (Dowden, Blanchette, & Serin, 1999; Hanson & Harris, 2000), making the treatment and rehabilitation of known offenders a priority area for many prison administrators.

The last 30 years has seen an accumulation of knowledge about ‘what works’ in offender rehabilitation. This evidence base has been well documented in a series of meta-analytic reviews (and even reviews of meta-analytic reviews) which aggregate the findings from studies that have examined the effects of different program types on the recidivism rates for tens of thousands of offenders. In their summary of this literature, Wormwith, Althouse, Simpson, Reitzel, Fagan, and Morgan (2007) concluded that, on average, programs for offenders lead to larger reductions in recidivism than increased sanctions, that the effect sizes rise when programs are delivered in accordance with a set of human service delivery principles (see Andrews & Bonta, 2006), and that specific types of treatment method, notably cognitive-behavioral interventions, are likely to be the most effective. Such conclusions are now widely accepted and have informed the widespread implementation of offender rehabilitation programs on a world-wide scale, including those aimed specifically at violent offenders.¹ The empirical and controlled evaluation of the effectiveness of such programs is, however, at a very early stage, and there is currently only a limited evidence base from which to draw conclusions about program effectiveness. In the only published meta-analysis of violent offender treatment programs (excluding sexual offender programs), Polaschek and Collie (2004) identified nine program evaluations that included a (matched or randomly allocated) comparison group and reported subsequent recidivism rates.² Of the nine, two were classified as primarily cognitive programs (cognitive skills training and cognitive self change), three as anger management programs, and three as multi-modal programs.

¹ For the purpose of the present paper, the term “violent offender” will also be used to include those offenders who are sexually violent.

² Only four of the studies reported violent recidivism.

Since Polaschek and Collie's (2004) review, at least three other evaluations have been published. In the first of these, Polaschek, Wilson, and Townsend (2005) reported positive treatment outcomes from a New Zealand Violence Prevention Unit, with 32% of the treatment group being reconvicted for a violent offense after release as compared to 63% of a matched comparison group. For those treated participants who were reconvicted, the mean number of days to violent re-offense was more than double that of the comparison group. In the second evaluation, Cortoni, Nunes, and Latendresse (2006) found that completion of a Canadian Correctional Services Violence Prevention Program led to reductions in institutional misconduct charges in the 6-month and 1-year period following program completion, and that those offenders who completed the program had lower rates of recidivism than non-treated offenders. Finally, Serin, Gobeil, and Preston (2009) compared program completers to two control groups (those who completed an alternative program, and those who failed to complete), finding few differences between the groups on a range of measures (including change on measures of treatment targets, institutional misconduct, and post-release returns to custody). According to the authors, these results suggest either that this program was effective only with certain groups of violent offender, or that it failed to meet some of the criteria usually associated with the more effective programs (e.g., program integrity and intensity).

Reductions in recidivism for both adolescent (e.g., Borduin, Henggeler, Blaske, & Stein, 1990; Weinrott, Riggan, & Frothingham, 1997; Worling & Curwen, 2000) and adult sex offenders (e.g., Alexander, 1999; Gallagher, Wilson, Hirshfield, Coggeshall, & MacKenzie, 1999; Hall, 1995; Hanson, Gordon, Harris, Marques, Murphy, Quinsey, & Seto, 2002; Lösel & Schmucker, 2005) have also been reported. These generally suggest that treated sexual offenders have recidivism rates of between 6.5% and 8.0% lower than their untreated counterparts (which represents a 30% to 43% relative reduction in recidivism; see Doren & Yates, 2008), although other studies have reported no statistically significant effect on either the behavior or the attitudes of treated sex offenders (e.g., DiFazio, Abracen, & Looman, 2001; Hanson, Broom & Stephenson, 2004; McGrath, Cann, & Konopasky, 1998).

The relatively small number of studies, the methodological weaknesses inherent in some evaluation designs, and the degree of variation in other features, such as program length, setting, staffing, and basic offender characteristics (e.g., age and risk), all make it difficult to draw any firm conclusion about overall violent offender treatment effectiveness, although it would generally seem that treatment is a worthwhile, if perhaps not evidence-based, activity. While most of the published studies have attempted to address what DiGuiseppe and Tafrate (2003) have called "absolute efficacy," or the question of whether intervention is more

effective than doing nothing, and (to a lesser extent) “relative efficacy” (whether the intervention is more effective than other possible therapeutic interventions), there have been few considerations of what Howells, Day, Williamson, Bubner, Jauncey, Parker, and Heseltine (2005) have referred to as “component efficacy,” or the particular components of an intervention which are most efficacious. This is a particularly important aspect of violent offender treatment given that sexual offender and violent offender treatment programs can (and do) share a common focus in terms of (a) offense-specific problems (e.g., attitudes and beliefs that serve to minimise and justify offending behavior), socio-affective problems (e.g., self-esteem and emotional dysregulation), and (c) relapse prevention skills (Mandeville-Norden, Beech, & Hayes, 2008), although once again they can differ markedly in terms of their orientation, content and intensity. The particular focus of this review is on one area of program content which is widely believed to be critical to the effectiveness of most violent offender intervention programs, namely that of interventions to improve empathy. This is an important component of both violent and sexual offender treatments, and one which is inherent in social problem-solving and interpersonal skills training, as well as a central feature of interventions that are designed to increase awareness about the effects of offending on victims and, as a consequence, raise motivation to change (Hudson, Marshall, Ward, Johnston, & Jones, 1995; Marshall, 1999, 2001; Polaschek & Reynolds, 2001). First, we consider the construct of empathy and how it has been understood, before articulating a rationale for the inclusion of interventions to promote empathy in violent offenders. We then review the published literature on the application of empathy training modules with violent offenders (including sexually violent offenders), before concluding with a discussion some of the methodological issues that have constrained research in this area.

1. What is empathy?

Empathy, in some form, has been the subject of considerable theoretical and empirical attention within psychology for much of the history of the discipline (e.g., Titchener, 1911). In spite of this, little consensus has emerged on how the construct should be defined and operationalized. In most cases, empathy is described as the process of taking another person's perspective (commonly referred to as perspective or role taking) and/or experiencing affect that either essentially matches that of another person, or is a response to the other person's emotion and situation, such as sympathy and compassion (often called empathic concern) (Davis, 1994; Eisenberg & Fabes, 1990). In spite of the relationship between these two (although not necessarily dependent, see Dymond, 1949, 1950; Eisenberg, Zhou, & Koller, 2001) dimensions

of empathy, much research attention has tended to fall on either one or the other type of empathic response (i.e., focusing on either the cognitive or emotional aspect), with the result that knowledge about the relationship between the two and how they relate to key outcomes of both a pro- (Batson, 1991) and antisocial nature (Joliffe & Farrington, 2007) has remained largely underdeveloped.

Davis (1994), whose earlier work (Davis, 1980, 1983) has been credited with increasing focus on the multidimensional nature of empathy, presented an organizational model that synthesized previous theory and the often fragmented research in the area. Within his model, the empathy episode is organized into four interconnected constructs or components, with each construct influencing the others (with adjacent constructs having the strongest relationship). First, Davis (1994) suggests that it is important to consider *antecedents*, such as the empathizer's dispositional tendencies for perspective taking and emotional responses, the type of situation (e.g., its strength, such as its emotional valence), and similarity between the empathizer and target. The second construct addresses the *processes* in which an empathizer might engage. Davis suggests that these processes can be understood in terms of the amount of cognitive activity in which an individual engages, running the gamut from what he would consider “noncognitive processes” (e.g., motor mimicry) through “simple cognitive processes” (e.g., classical conditioning) to more “advanced cognitive processes”, including perspective taking (also referred to as role taking).

As a result of these types of processes, the empathizer is said to experience both *intrapersonal* and *interpersonal* outcomes. Intrapersonal outcomes include affective responses which are subdivided into parallel outcomes, where the empathizer experiences the same or quite similar affect to the target, reactive outcomes, where the empathizer experiences affect that is a response to the target, but is not necessarily the same or similar to that of the target, and non-affective outcomes such as accuracy in inferences about the target's perspective. Under interpersonal outcomes, Davis identifies behaviors such as altruism and aggression. A graphical representation of the model (reproduced from Davis, 1994) is provided in Fig. 1.

[Insert Figure 1 about here]

Similar conceptualizations have been proposed, including that of Marshall, Hudson, Jones, and Fernandez (1995), who developed a framework to address the relationship between empathy and sex offending. Like Davis' (1994) work, their model stresses cognitive, affective, and behavioral processes, with four main components comprising the stages of an empathic

response: (a) emotional recognition, (b) perspective taking, (c) emotional replication, and (d) response decision (i.e., a decision to enact behavior, such as the cessation of an aggressive response). In particular, Marshall et al. noted the lack of research investigating emotion recognition in offenders, which they classed as a “prerequisite to the unfolding of empathy” (p. 101).

There is, however, an important difference between Davis (1980), Marshall et al. (1995), and Marshall, Marshall, Serran, and O'Brien (2009) models, particularly with respect to the latter's conceptualization of the empathic response as an invariant staged process (i.e., emotion recognition, perspective taking, emotion replication, and decision outcome). Despite the lack of empirical support for this proposition, it nonetheless fits with developmental theories which describe the acquisition of perspective taking capabilities during childhood and early adolescence (e.g., Piaget, 1965, 1970; Selman, 1971a,b). Stage theories imply qualitative shifts over the course of development and these reflect fundamental changes in interpersonal understanding. Environmental or physiological factors can delay the rate of progression through the invariant stages, although this is said to produce “developmental lags” rather than abnormalities (Nagle, Hecker, Grover, & Smith, 2003). Furthermore, because the stages are integrated hierarchically, failure to build on conceptions in a previous stage may see a child respond to interpersonal problems using lower-level conceptions.

What this means for a multi-component construct like empathy is that deficits will invariably be subject to individual differences as a function of experiencing a developmental lag (Covell & Scalora, 2002). For example, whereas one offender may be extremely deficient in terms of perspective taking abilities, another may have the capacity to perspective take, but be deficient in some other factor (e.g., emotional concern or decision outcome). Such individual differences may help to explain why empathy deficits appear to be context- or victim-specific (e.g., Curwen, 2003; Fernandez & Marshall, 2003; Fernandez, Marshall, Lightbody, & O'Sullivan, 1999; Fisher, Beech, & Browne, 1999; Varker & Devilly, 2007) rather than a fixed trait, consistent over time and across individuals and situations. Individual differences can also help to explain how, for example, some paedophiles (e.g., Ward, Hudson & Marshall, 1995) and rapists (e.g., Pithers, 1994) seemingly use empathy, particularly cognitive empathy, in the commission of their offenses.

The extent to which empathic responses, such as perspective taking and empathic concern, can be considered as effortful or conscious is another important consideration in determining how interventions might be developed. In many cases, empathic responses of a cognitive nature are associated with such controlled processing. Of interest here is Hoffman's

(e.g., 1978a,b, 2000) theory regarding the development of emotional empathy, as well as the role of perspective taking (among other processes) in the arousal of such an emotional response. In Hoffman's view, imagining oneself in the other's place demands higher levels of perceptual and cognitive performance, making it a more voluntary process (although he did caution against the suggestion that this is always the case—see Hoffman, 1982) than other modes of emotional arousal such as mimicry, reflexive crying, and some forms of conditioning (which develop earlier). Similarly, although with specific reference to neuropsychological research, Coricelli (2005) posited the existence of a mechanism to allow “mindreading” (defined as the understanding of the importance of other's mental states in their cognitions and behaviors), which consists of two levels: the first a rather automatic and perceptual stage (perception of physical movement and emotional states in others), and the second consisting of simulative processes which are more voluntary and conscious and involve using the self to understand others. In their review of research investigating emotional and cognitive empathy, however, Hodges and Wegner (1997) argued that although empathic emotional responses are usually thought of as demonstrating a level of automaticity and cognitive processes a level of controllability, such a distinction is not particularly useful. Instead, they provide examples of previous studies that demonstrate that both cognitive and emotional empathy can comprise either or both controlled and automatic components. The implication here is that there will be times when perspective taking or empathic emotion runs relatively easily or with minimal cognitive effort, and others when it may be subjectively felt to be less easy, more conscious, and/or called upon. This work is of particular interest in relation to the implications for offender treatment in so far as it suggests that aspects of empathic responding are effortful, and thus require the individual to be motivated to empathize with the potential victim.

2. The rationale for delivery of empathy interventions

Despite the amount of work published on the relationship between empathic and antisocial behaviors, there remains a dearth of information about how and why empathy deficits (cognitive, affective, or both) are implicated in both violent and sexual crimes (Monto, Zgourides, & Harris, 1998). Some researchers have pointed to the apparent correlation between empathy and offending as evidence of the criminogenic status of empathic responding in offenders, while others have commented on the apparent differences between groups of offenders and the general community, and the mechanisms by which an inability to empathize may increase risk of offending. These arguments are summarized below.

In a meta-analysis of 35 individual investigations³, Jolliffe and Farrington (2004) found support for the inverse relationship between offending and empathy (mean effect size = $-.28$, $p < .0001$); an effect that was statistically significantly stronger for the relationship between cognitive ($-.48$, $p < .0001$) (as compared to affective $-.11$, $p < .004$) empathy and offending. Comparisons between sex offenders and mixed offender groups revealed, contrary to expectations, that the relationship between low levels of assessed empathy and offending was statistically significant for affective empathy in the mixed offender group ($-.19$, $p < .0001$) (for both groups compared with control participants), but not in the sex offender group (results for cognitive empathy for both groups were in the expected directions and significant). Comparisons between violent offenders and nonviolent offenders revealed an overall significant effect ($-.39$, $p < .0001$), which seemed to be related to the relationship with cognitive empathy ($-.62$, $p < .0001$), rather than affective empathy ($-.14$, ns). However, the correlations (for both younger and older groups) became non-significant after intelligence was controlled for, and completely disappeared when controlling for socio-economic status. This suggests that the relationship between low empathy and offending may be a function of the interrelationships among these variables (which are already known to be associated with offending) rather than being causal. As such, any attempt to establish the effects of interventions which aim to improve empathy in groups of violent offenders, independently of intelligence and socio-economic status, may prove unsuccessful.

Nevertheless, a substantial body of empirical literature has demonstrated that particular groups of offenders—most notably sex offenders and violent offenders—have marked deficits in both cognitive and affective empathy (see, *inter alia*, Hanson & Scott, 1995; Jolliffe & Farrington, 2007; Marshall, O'Sullivan, & Fernandez, 1996; Miller & Eisenberg, 1988; Ward, Keenan, & Hudson, 2000; but *cf* Langevin, Write, & Handy, 1988; Marshall & Maric, 1996). This supposition underpins the inclusion of empathy training as a fundamental component of treatment programs that seek to address the criminogenic needs of these offenders (Eisenberg & Fabes, 1990; Hudson et al., 1995; Knopp, Freeman-Longo, & Stevenson, 1992)—the underlying rationale being that increased empathy will have an inhibitory effect upon the individual's motivation to offend as a response to the cognitive or affective dissonance experienced by the offender (e.g., Hildebran & Pithers, 1989) which, in turn, serves to reduce his or her risk of reoffending.

³ Some studies provided more than one effect size (e.g., they measured both cognitive and affective empathy).

Ross and Hillborn (2008) offered a social psychological rationale for the delivery of interventions involving role play—perhaps the most widely used method to train empathy in offender programs (see below). They note, following the work of Bem (1967), the tendency of individuals to attribute to themselves characteristics of the roles they play, and suggest that

“Antisocial individuals who are led to engage in prosocial roles as helpers for others may come to see themselves in a very different light—they may come to see themselves as prosocial rather than anti-social. They begin to attribute to themselves positive, prosocial characteristics which were previously foreign to them. They also come to appreciate the value of prosocial behavior, to recognize the awards it can bring them, and to acquire social skills which can serve as alternatives to their antisocial behaviour” (p. 198).

Ross and Hilborn have further suggested that this can have an influence on personal scripts (Huesmann & Eron, 1989) and self-narratives (Maruna, 2001), such that offenders come to behave in ways that fit their narratives and identity.

Mohr, Howells, Gerace, Day, and Wharton (2007) argued that cognitive empathy, or perspective taking skills in particular, might inhibit aggressive responses to provocation in two ways. First, they might inhibit anger arousal directly in that triggers are perceived as either unintentional or uncontrollable such that the provoker is not blamed for the provocation. As such the ability to perspective take potentially increases the likelihood that the attributions an individual makes when involved in an interpersonal interaction will be less anger-arousing and increases the chance that the individual will see the provocation as unavoidable or justified. Second, high perspective-takers may be able to maintain a high level of cognitive functioning when aroused by an interpersonal provocation, thus reducing the chances that they will act impulsively.

Arguments along these lines emphasize the *process* of empathic responding, linking the way in which cognitive processes can lead to affective outcomes which, in turn, promote aggressive behavior. This is consistent with the cognitive-behavioral model of aggression, and provides a rationale for intervening when the target behavior is what has been termed hostile or anger-mediated aggression (McEllistrem, 2004). What is less apparent is the role that empathy potentially plays in instrumental aggression. Given that instrumental aggression is intended to secure an environmental reward, negative emotional arousal is less likely to be present as an antecedent (Howells, 2008). Day, Howells, Mohr, Schall, and Gerace's (2008)

view on this is that perspective taking deficits for many violent offenders exist as state-induced impairments, in which the individual has the capacity to empathize, but fails to do so because of the influence of a range of different factors (e.g., situational, motivation, drugs, and dysphoric feelings). However, there is also a group for whom pervasive theory of mind or perspective taking deficits may exist which are apparent across a wide range of situations.

In their qualitative analysis of violent offenders, Chambers, Ward, Eccleston, and Brown (2009) identify empathy deficits as associated with one sub-type of under-controlled violent offender, for whom violence is not typically impulsive but occurs in the context of a general lack of care about the harm they have caused, and is associated with a tendency to misjudge the intentions of others, and to attribute malevolent intent when in fact none exists. Chambers et al. argued that individuals of this type may have failed to learn appropriate self-regulatory strategies and morals in childhood. In other words, for under-controlled violent offenders, moral behavior and the capacity to empathize with others has never developed. Marshall et al. (1995) suggested that it may be more useful to consider empathy deficits in sex offenders as being more person- (e.g., their own victims) and group-specific (e.g., other victims of sexual assault), rather than being general deficits, although it is also argued that “directly enhancing sexual offenders' general capacity for empathy is valuable both because some have a limited general capacity and because it allows empathy to be more readily transferred to their victims, the victim's family, and the offender's own family” (Marshall, Marshall, Serran, & Fernandez, 2006, p. 83).

In summary, it would appear that despite what might be considered to be a high degree of enthusiasm among practitioners for the delivery of empathy interventions (“the enhancement of empathy as a treatment goal is taken for granted in most sex offender treatment programs,” Webster, Bowers, Mann, & Marshall, 2005, p. 63), a number of important questions remain about whether deficits are more general or relate only to an offender's own victims (e.g., Beech, Fisher, & Beckett, 1999), and whether offenders can actually develop or improve their capacity to be empathic (e.g., Pithers & Gray, 1996).

3. Interventions to enhance empathy

A wide range of approaches have been used for empathy enhancement (Covell & Scalora, 2002). Some of the more frequently used methods include offenders being given clear descriptions of the known harmful effects that sexual abuse has on its victims, writing hypothetical letters of apology to the victim(s) wherein the offender takes responsibility for the offense, reading victim impact statements or police reports regarding the victim, viewing

videotapes of the victim(s) describing their experiences surrounding the assault, offense re-enactment, and group therapy with role play (role reversal) and feedback (see, *inter alia*, Hildebran & Pithers, 1989; Knopp, 1984; Maletzky, 1991; Marshall, 1993, 1996; Webster et al., 2005).

In addition to program modules that aim to promote victim empathy, some programs also strive to improve general empathy. For example, an empathy module in a violent offender treatment program might aim to increase participants' understanding of perspective taking and how it relates to their violent offending behavior; and to understand the experience and feelings of other individuals. Interventions might begin with a discussion of why empathy is important, and then work through a number of different scenarios involving interpersonal problems or aggressive incidents (often through role plays) in which participants are promoted to consider the actions, thoughts and feelings of other participants. Then content might become more personally relevant (e.g., role playing a parole board appearance, or a job interview where the applicant's criminal history is raised). The final stage is to consider the role of empathy in violence generally, before role playing specific instances involving violent offending.

Interventions, such as forgiveness therapy (see Coyle & Enright, 1997; Lin, Mack, Enright, Krahn, & Baskin, 2004), have also been developed specifically to improve general perspective taking skills (Day, Gerace, Wilson, & Howells, 2008). Other interventions (e.g., two-chair work, role taking, and attribution re-training) have long been used by psychotherapists as a means of conflict resolution. While the efficacy of these interventions with offenders, and in particular violent offenders, has yet to be established, they have been identified as holding some promise (Day et al., 2008a, Day et al., 2008b).

The underlying goal of many of these interventions is often quite clearly related to the more traditional (dual) conceptions of empathy: a vicarious or affective response (following exposure to victim suffering); and inducing perspective taking (in response to defining the harmful effects of the crime). What is missing, however, is a systematic evaluation of these approaches in terms of treatment efficacy (see Marshall et al., 1996), and once again the available evidence to support intervention is somewhat mixed. Webster et al. (2005), for example, in their evaluation of offense re-enactments in sex offender programs, concluded that the differences between treated and untreated groups were not marked, and limited by a lack of suitable measures to assess change. They also noted the potential for such procedures to be used in unethical and unprofessional ways by program providers (see Pithers, 1994).

4. Can empathy be trained? The empirical evidence

Discerning whether intervention can improve an offender's capacity to take another's perspective is not a straightforward exercise for a number of reasons. As noted above, empathy training is commonly provided within a broader multi-modal treatment program (Mulloy, Smiley, & Lawson, 1999), making it difficult to assess the impact of any single component. Moreover, given what is now known, it is highly likely that some offenders can *know* what it means to be empathic without actually *being* empathic.

The way in which empathy is conceptualized and subsequently measured is also problematic (see Covell & Scalora, 2002). A related issue here, of course, is whether the particular measure used by the researcher reflects the elements of empathy incorporated in the treatment component. There has also been criticism regarding the manner in which offenders are allocated to treatment groups (e.g., random assignment, coerced treatment, and offense heterogeneity), and the impact this might have on evaluation outcomes or meta-analytic reviews (Bangert-Drowns, Wells-Parker, & Chevillard, 1997), especially in violent offender treatment programs where considerable participant heterogeneity exists.

A major problem in trying to establish whether empathy can be increased with training is how conceptual difficulties in defining the construct impact on its measurement, the assessment of behavioural and attitudinal change and, more particularly, the role that measurement difficulties might play in explaining the disparities noted in the empirical research. As described above, current conceptualizations depict empathy as a multi-component construct (e. g., Davis, 1983; Marshall et al., 1995; Marshall et al., 2009) incorporating the affective, cognitive, and behavioral domains (Pithers, 1994). Accordingly, a complete empathic response means that the individual has the capacity to take another's perspective, to recognize and vicariously experience the other's emotional state, to experience sympathy for the other's distress, and to avoid focusing on his or her own feelings of anxiety and unease in response to the other's negative emotional state. These elements are evident in more recent models of empathy such as that proposed by Davis and that of Marshall et al., both of which also consider perspective taking a necessary precursor to understanding and experiencing another's emotional state (Nagle et al., 2003). However, it is conceivable that empathy training which seeks to redress general deficits (including perspective taking) may not attend to more specific deficits and thereby compromise the assessment of behavioral and/or attitudinal change. In other words, inconsistencies between studies may be an artefact of treatment focus and how change has been measured.

Further complicating the issue of measurement is the different forms it can take, which range from responses to visual (e.g., facial gestures and pictures) and auditory cues (e.g.,

stories), to behavioural responses to experimenter-manipulated emotions, and self-report questionnaires (Jolliffe & Farrington, 2004). If empathy is a multicomponent construct and individual differences in empathy deficits do exist, then it is unlikely that any single measure of empathy will have sufficient scope to identify all potential deficits (and, as a consequence, complicate any assessment of change following treatment). Consider Marshall et al.'s (1995) staged multi-component model of empathy by way of illustration. At the first stage, emotion recognition, the emotional signals of others must be read or decoded, a task considered necessary for the unfolding of subsequent stages. These signals, particularly those conveyed by the face, provide affective information about basic emotional states or current intentions and play a powerful role regulating social interactions (e.g., Ekman & Rosenberg, 2005; Fridlund, 1994). While there is evidence that, for example, sex offenders, do not accurately recognize the emotional states of others or confuse emotional states (e.g., Hudson et al., 1993; Lisak & Ivan, 1995), the use of facial recognition tasks (e.g., Ekman & Rosenberg, 2005), focus only on this first step of the empathy process. If the offender's empathy deficit is not related to affect recognition but, for example, emotion replication (Stage 3) or response decision (Stage 4), using an affect recognition task may not pick up the initial deficit and subsequently influence any further assessment made following treatment. Similarly, the use of self-report measures that only tap affective (Stage 1) and cognitive empathy (Stage 2), may also fail to account for the other components prior to or following treatment.

The second major source of confusion in attempting to establish whether empathy deficits can be improved is the inconsistency in treatment evaluation or outcomes studies. Outcome evaluations and meta-analytic reviews, the most commonly reported assessments of treatment efficacy, generally use recidivism as the only outcome variable. While the primary goal of treatment is, of course, to reduce recidivism, this type of global analysis ignores arguments in favour of a more inclusive assessment of treatment efficacy that uses multiple measures of treatment success (see Lösel, 2001). A reliance on recidivism data to assess outcomes makes it impossible to determine whether there has been any change on measures that assess program treatment targets and whether these changes reflect *clinical* in addition to *statistical* change.

In their recently published study, Mandeville-Norden et al. (2008) addressed both these issues, first by studying short-term change (i.e., pre- and post-treatment scores) and, second, by assessing for therapeutic improvements at the individual level (i.e., via tests of clinical significance) in a sample of treated sexual offenders. Clinically significant change refers to a move by the individual, in response to therapeutic input, from a dysfunctional range on

particular outcome measures to a functional range (Jacobson, Follette, & Revenstorg, 1984). In addition to a measure of risk (Risk Matrix, 2000, Thornton, Mann, Webster, Blud, Travers, Friendship, & Erikson, 2003), pre-treatment problems and treatment change were assessed using measures of pro-offending attitudes (cognitive distortions, emotional fixation on children, and victim empathy) and levels of socio-affective functioning (self-esteem, emotional loneliness, assertiveness, personal distress, and locus of control). Cluster analysis was used to determine pre-treatment profiles in terms of offender need, producing three distinct groups: Cluster 1 (Medium Needs) included offenders with high levels of victim empathy distortions and no notable socio-affective problems; Cluster 2 (Low Needs) included offenders with self-esteem problems but no other socio-affective difficulties and few problems on the pro-offending measures; and Cluster 3 (High Needs) who displayed global deficits in both domains (i.e., pro-offending attitudes and socio-affective functioning).

Following treatment, between one half and two-thirds of the sample scored within the cut-offs on each of the measures, and while the proportion who had changed to a clinically significant degree (i.e., inferred via reliability analysis) was small, the authors argued that this was to be expected given the high proportion of the sample who scored within the cut-offs following program completion. If one looks specifically at change on the measure of victim empathy, the greatest gains were noted in those designated Medium Needs, with all offenders in this group showing clinically significant change, followed by the High Needs and then Low Needs group.

Mandeville-Norden et al. (2008) make the point that given treatment occurred in a community setting (thus, offenders were likely to pose a lower risk for re-offending), it is difficult to extrapolate to incarcerated sex offenders with higher risk of recidivism or indeed to non-sexual violent offenders. They also highlight the need to examine whether these positive short-term changes will translate to successful longer-term change (via recidivism data). Nevertheless, this study is an example of a research design which, if appropriate measures of empathic responding were incorporated, could produce clinically relevant findings on the impact of empathy interventions.

5. Conclusion

Empathy deficits have been consistently identified by practitioners as an important target in the treatment of violent offenders; and the inclusion of specific program content in this area is a feature of many contemporary violent and sexual offender treatment programs. McGuire (2008), in his recent review of effective interventions for reducing aggression and

violence, concludes that “emotional self-management, interpersonal skills, social problem-solving and allied training approaches show mainly positive effects with a reasonably high degree of reliability” (p.15). Implicit in each of these approaches is the capacity to improve the extent to which perpetrators of violent acts can empathize both with other people and their potential victims. Nevertheless, the lack of rigorously designed studies in which the construct of empathy has been adequately operationalized is problematic. There is simply an insufficient evidence base from which to determine whether empathy-promoting interventions with violent offenders are effective; currently, the field can be characterized as driven more by theory than by data.

Our conclusions from this review are that researchers need to ensure that they use a multi-component definition of empathy, and assess all components of empathy to identify areas of deficit. They need to: (1) ensure that approaches to measurement also match the treatment components offered; (2) conduct both short-term and long-term assessments of change in treatment goals; and (3) investigate the relationship between recidivism and treatment goals. While such recommendations appear straightforward, there are likely to be considerable challenges involved in implementing them in research designs that are able to adequately assess the component efficacy of violent offender treatment programs.

References

- Alexander, M. (1999). Sexual offender treatment efficacy revisited. *Sexual Abuse: A Journal of Research and Treatment*, 11, 101–116.
- Andrews, D. A., & Bonta, J. (2006). *The psychology of criminal conduct*, 4th ed. Cincinnati OH: Anderson.
- Bangert-Drowns, R. L., Wells-Parker, E., & Chevillard, I. (1997). Assessing the methodological quality of research in narrative reviews and meta-analyses. In K. J. Bryant, M. Windle, & S. G. West (Eds.), *The science of prevention: Methodological advances from alcohol and substance abuse research* (pp. 405–429). Washington, DC: American Psychological Association.
- Batson, C. D. (1991). *The altruism question: Toward a social–psychological answer*. Hillsdale, NJ: Erlbaum.
- Beech, A., Fisher, D., & Beckett, R. C. (1999). *An evaluation of the Prison Sex Offender Treatment Programme*. UK Home office Occasional Report Available at www.homeoffice.gov.uk/rds/pdfs/occ-step3.pdf.

- Bem, D. J. (1967). Self-perception: An alternative interpretation of cognitive dissonance phenomena. *Psychological Review*, 74, 183–200.
- Borduin, C. M., Henggeler, S. W., Blaske, D. M., & Stein, R. J. (1990). Multisystemic treatment of adolescent sex offenders. *International Journal of Offender Therapy and Comparative Criminology*, 34, 105–113.
- Chambers, J. C., Ward, T., Eccleston, L., & Brown, M. (2009). The pathways model of assault: A qualitative analysis of the assault offender and offense. *Journal of Interpersonal Violence*, 24, 1423–1449.
- Coricelli, G. (2005). Two-levels of mental state attribution: From automaticity to voluntariness. *Neuropsychologia*, 43, 294–300.
- Cortoni, F., Nunes, K., & Latendresse, M. (2006). An examination of the effectiveness of the Violence Prevention Program. Canadian Correctional Services, Research Report R-178.
- Covell, C. N., & Scalora, M. J. (2002). Empathic deficits in sexual offenders: An integration of affective, social, and cognitive constructs. *Aggression and Violent Behavior*, 7, 251–270.
- Coyle, C. T., & Enright, R. D. (1997). Forgiveness intervention with postabortion men. *Journal of Consulting and Clinical Psychology*, 65, 1042–1046.
- Curwen, T. (2003). The importance of offense characteristics, victimization history, hospitality, and social desirability in assessing empathy of male adolescent sex abuse. *Sexual Abuse: A Journal of Research and Treatment*, 15, 347–364.
- Davis, M. H. (1980). A multidimensional approach to individual differences in empathy. *JSAS Catalog of Selected Documents in Psychology*, 10, 85.
- Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology*, 44, 113–126.
- Davis, M. H. (1994). *Empathy: A social psychological approach*. Dubuque, IA: Brown & Benchmark Publishers.
- Day, A., Gerace, A., Wilson, C., & Howells, K. (2008a). Promoting forgiveness in violent offenders: A more positive approach to offender rehabilitation? *Aggression and Violent Behavior*, 13, 195–200.
- Day, A., Howells, K., Mohr, P., Schall, E., & Gerace, A. (2008b). The development of CBT programmes for anger: The role of interventions to promote perspective-taking skills. *Behavioural and Cognitive Psychotherapy*, 36, 299–312.
- DiFazio, R., Abracen, J., & Looman, J. (2001). Group versus individual treatment of sex offenders: A comparison. *Forum on Corrections Research*, 13, 56–59.

- DiGuiseppe, R., & Tafrate, R. C. (2003). Anger treatment for adults: A meta-analytic review. *Clinical Psychology: Science and Practice*, 10, 70–84.
- Doren, D. M., & Yates, P. M. (2008). Effectiveness of sex offender treatment for psychopathic offenders. *International Journal of Offender Therapy and Comparative Criminology*, 52, 234–245.
- Dowden, C., Blanchette, K., & Serin, R. (1999). Anger management programming for federal inmates: An affective intervention. Ottawa, Canada: Correctional Services Canada—Research Branch.
- Dymond, R. F. (1949). A scale for the measurement of empathic ability. *Journal of Consulting Psychology*, 13, 127–133.
- Dymond, R. F. (1950). Personality and empathy. *Journal of Consulting Psychology*, 14, 343–350.
- Eisenberg, N., & Fabes, R. A. (1990). Empathy: Conceptualization, measurement, and relation to prosocial behavior. *Motivation and Emotion*, 14, 131–149.
- Eisenberg, N., Zhou, Q., & Koller, S. (2001). Brazilian adolescents' prosocial moral judgment and behavior: Relations to sympathy, perspective taking, gender–role orientation, and demographic characteristics. *Child Development*, 72, 518–534.
- Ekman, P., & Rosenberg, E. (2005). *What the face reveals: Basic and applied studies of spontaneous expression using the Facial Action Coding System (FACS)*. New York: Oxford University Press.
- Fernandez, Y. M., & Marshall, W. L. (2003). Victim empathy, social self-esteem, and psychopathy in rapists. *Sexual Abuse: A Journal of Research and Treatment*, 15, 11–26.
- Fernandez, Y. M., Marshall, W. L., Lightbody, S., & O'Sullivan, C. (1999). The child molester empathy measure: Description and examination of its reliability and validity. *Sexual Abuse: A Journal of Research and Treatment*, 11, 17–31.
- Fisher, D., Beech, A., & Browne, K. (1999). Comparison of sex offenders to non-offenders on selected psychological measures. *International Journal of Offender Therapy and Comparative Criminology*, 43, 473–491.
- Fridlund, A. J. (1994). *Human facial expression: An evolutionary view*. San Diego, CA: Academic Press.
- Gallagher, C. A., Wilson, D. B., Hirshfield, P., Coggeshall, M. B., & MacKenzie, D. L. (1999). A quantitative review of the effects of sex offender treatment on sexual reoffending. *Psychological Management Quarterly*, 3, 19–29.

- Hall, G. C. N. (1995). Sexual offender recidivism revisited: A meta-analysis of recent treatment studies. *Consulting and Clinical Psychology*, 63, 802–809.
- Hanson, R. K., Broom, I., & Stephenson, M. (2004). Evaluating community sex offender programs: A 12 year follow-up. *Canadian Journal of Behavioural Science*, 36, 85–94.
- Hanson, R. K., Gordon, A., Harris, A. J. R., Marques, J. K., Murphy, W., Quinsey, V. L., et al. (2002). First report of the collaborative outcome data project on the effectiveness of psychological treatment for sex offenders. *Sexual Abuse: A Journal of Research and Treatment*, 14, 169–194.
- Hanson, R. K., & Harris, A. J. R. (2000). Where should we intervene? Dynamic predictors of sexual offence recidivism. *Criminal Justice and Behaviour*, 27, 6–35.
- Hanson, R. K., & Scott, H. (1995). Assessing perspective-taking among sexual offenders, nonsexual criminals, and non-offenders. *Sexual Abuse: A Journal of Research and Treatment*, 7, 259–277.
- Hodges, S. D., & Wegner, D. M. (1997). Automatic and controlled empathy. In W. Ickes (Ed.), *Empathic accuracy* (pp. 311–339). New York: The Guilford Press.
- Hildebran, D., & Pithers, W. D. (1989). Enhancing offender empathy for sexual abuse victims. In D. R. Laws (Ed.), *Relapse prevention with sex offenders* (pp. 236–243). New York: Guildford.
- Hoffman, M. L. (1978a). Empathy, its development and prosocial implications. In C. B. Keasey (Ed.), *Nebraska symposium on motivation*, Vol. 25. (pp. 169–217). Lincoln, Nebraska, Canada: University of Nebraska Press.
- Hoffman, M. L. (1978b). Toward a theory of empathic arousal and development. In M. Lewis, & L. A. Rosenblum (Eds.), *The development of affect* (pp. 227–256). New York: Plenum Press.
- Hoffman, M. L. (1982). Development of prosocial motivation: Empathy and guilt. In N. Eisenberg (Ed.), *The development of prosocial behavior* (pp. 281–313). New York: Academic Press, Inc.
- Hoffman, M. L. (2000). *Empathy and moral development: Implications for caring and justice*. New York: Cambridge University Press.
- Howells, K. (2008). The treatment of anger in offenders. In A. Day, M. Nakata, & K. Howells (Eds.), *Anger in indigenous men*. Annandale, Sydney: Federation Press.
- Howells, K., Day, A., Williamson, P., Bubner, S., Jauncey, S., Parker, A., et al. (2005). Brief anger management programs with offenders: Outcomes and predictors of change. *Journal of Forensic Psychiatry and Psychology*, 16, 296–311.

- Hudson, S. M., Marshall, W. L., Wales, D., McDonald, E., Bakker, L. W., & McLean, A. (1993). Emotional recognition skills of sex offenders. *Annals of Sex Research*, 6, 199–211.
- Hudson, S.M., Marshall, W. L., Ward, T., Johnston, P.W., & Jones, R. L. (1995). Kia Marama: A cognitive–behavioural program for incarcerated child molesters. *Behaviour Change*, 12, 69–80.
- Huesmann, L. R., & Eron, L. D. (1989). Individual differences and the trait of aggression. *European Journal of Personality*, 3, 95–106.
- Jacobson, N. S., Follette, W. C., & Revenstorf, D. (1984). Psychotherapy outcome research: Methods for reporting variability and evaluating clinical significance. *Behaviour Therapy*, 15, 336–352.
- Jolliffe, D., & Farrington, D. P. (2004). Empathy and offending: A systematic review and meta-analysis. *Aggression and Violent Behavior*, 9, 441–476.
- Jolliffe, D., & Farrington, D. P. (2007). Examining the relationship between low empathy and self-reported offending. *Legal and Criminological Psychology*, 12, 265–286.
- Knopp, F. H. (1984). *Retraining adult sex offenders: Methods and models*. Syracuse, NY: Safer Society Press.
- Knopp, F. H., Freeman-Longo, Y. E., & Stevenson, W. (1992). *Nationwide survey of juvenile and adult sex offender treatment programs*. Orwell, VT: Safer Society Press.
- Langevin, R., Write, P., & Handy, L. (1988). Empathy, assertiveness, aggressiveness, and defensiveness among sex offenders. *Annals of Sex Research*, 1, 533–547.
- Lin, W., Mack, D., Enright, R.D., Krahn, D., & Baskin, T.W. (2004). Effects of forgiveness therapy on anger, mood, and vulnerability to substance use among impatient substance-dependent clients. *Journal of Consulting and Clinical Psychology*, 72, 114–1121.
- Lisak, D., & Ivan, C. (1995). Deficits in intimacy and empathy in sexually aggressive men. *Journal of Interpersonal Violence*, 10, 296–308.
- Lorion, R. P. (2000). Exposure to urban violence: Shifting from an individual to an ecological perspective. In N. Schneiderman, & M. A. Speers (Eds.), *Integrating behavioral and social sciences with public health* (pp. 97–113). Washington, DC, US: American Psychological Association.
- Lösel, F. (2001). Evaluating the effectiveness of correctional programs: Bridging the gap between research and practice. In G. A. Bernfield, D. P. Farrington, & A.W. Leschied (Eds.), *Offender rehabilitation in practice* (pp. 67–92). Chichester, UK: Wiley.

- Lösel, F., & Schmucker, M. (2005). The effectiveness of treatment for sexual offenders: A comprehensive meta-analysis. *Journal of Experimental Criminology*, 11, 117–146.
- Maletzky, B. M. (1991). *Training the sexual offender*. Newbury Park, CA: Sage.
- Mandeville-Norden, R., Beech, A., & Hayes, E. (2008). Examining the effectiveness of a UK community-based sexual offender treatment programme for child abusers. *Psychology, Crime and Law*, 14, 493–512.
- Marshall, W. L. (1999). Current status of North American assessment and treatment programs for sexual offenders. *Journal of Interpersonal Violence*, 14, 221–239.
- Marshall, W. L. (1993). A revised approach to the treatment of men who sexually assault adult females. In G. C. Nagayama-Hall, R. Hirschman, J. R. Graham, & M. S. Zaragoza (Eds.), *Sexual aggression: Issues in etiology, assessment, and treatment* (pp. 363–388). Washington, DC: Taylor and Francis.
- Marshall, W. L. (1996). Assessment, treatment, and theorizing about sex offenders: Developments over the past 20 years and future directions. *Criminal Justice and Behavior*, 23, 162–199.
- Marshall, W. L. (1999). Current status of North American assessment and treatment programs for sexual offenders. *Journal of Interpersonal Violence*, 14, 221–239.
- Marshall, W. L. (2001). Adult sexual offenders against women. In C. R. Hollin (Ed.), *Handbook of offender assessment and treatment* (pp. 333–348). Chichester, West Sussex, UK: John Wiley & Sons, Ltd.
- Marshall, W. L., Hudson, S. M., Jones, R., & Fernandez, Y. M. (1995). Empathy in sex offenders. *Clinical Psychology Review*, 15, 99–113.
- Marshall, W. L., & Maric, A. (1996). Cognitive and emotional components of generalized empathy deficits in child molesters. *Journal of Child Sexual Abuse*, 5, 101–110.
- Marshall, W. L., Marshall, L. E., Serran, G. A., & Fernandez, Y. M. (2006). *Treating sexual offenders: An integrated approach*. New York: Routledge.
- Marshall, W. L., Marshall, L. E., Serran, G. A., & O'Brien, G. A. (2009). Self-esteem, shame, cognitive distortions and empathy in sexual offenders: Their integration and treatment implications. *Psychology, Crime and Law*, 15, 217–234.
- Marshall, W. L., O'Sullivan, C., & Fernandez, Y. M. (1996). The enhancement of victim empathy among incarcerated child molesters. *Legal and Criminological Psychology*, 1, 95–102.
- Maruna, S. (2001). *Making good: How ex-convicts reform and rebuild their lives*. Washington, DC: American Psychological Association.

- McEllistrem, J. E. (2004). Affective and predatory violence: A bimodal classification system of human aggression and violence. *Aggression and Violent Behavior*, 10, 1–30.
- McGrath, R. J., Cann, S., & Konopasky, R. (1998). New measures of defensiveness, empathy and cognitive distortions for sexual offenders against children. *Journal of Interpersonal Violence*, 18, 3–18.
- McGuire, J. (2008). A review of effective interventions for reducing aggression and violence. *Philosophical transactions of the Royal Society B*, 1–21.
- Miller, P. A., & Eisenberg, N. (1988). The relation of empathy to aggressive and antisocial behaviour. *Psychological Bulletin*, 103, 324–344.
- Mohr, P., Howells, K., Gerace, A., Day, A., & Wharton, M. (2007). The role of perspective taking in anger arousal. *Personality and Individual Differences*, 43, 507–517.
- Monto, M., Zgourides, G., & Harris, R. (1998). Empathy, self esteem, and the adolescent sexual offender. *Sexual Abuse: A Journal of Research and Treatment*, 10, 127–140.
- Mulloy, R., Smiley, W. C., & Lawson, D. L. (1999). The impact of empathy training on offender treatment. *Forum on Corrections Research*, 11(1), 1–7.
- Nagle, D. W., Hecker, J. E., Grover, R. L., & Smith, M. G. (2003). Perspective taking and adolescent sex offenders: From developmental theory to clinical practice. *Cognitive and Behavioral Practice*, 10, 73–84.
- Piaget, J. (1965). *The moral judgment of the child*. London: Routledge and Kegan Paul.
- Piaget, J. (1970). *Genetic epistemology*. New York: Norton.
- Pithers, W. D. (1994). Process evaluation of a group therapy component designed to enhance sex offenders' empathy for sexual abuse survivors. *Behaviour Research and Therapy*, 32, 565–570.
- Pithers, W. D., & Gray, A. S. (1996). Utility of relapse prevention in treatment of sexual abusers. *Sexual Abuse: A Journal of Research and Treatment*, 8, 171–260.
- Polaschek, D., & Collie, R. (2004). Rehabilitating serious violent adult offenders: An empirical and theoretical stocktake. *Psychology, Crime and Law*, 10(3), 321–334.
- Polaschek, D. L. L., & Reynolds, N. (2001). Assessment and treatment: Violent offenders. In C. R. Hollin (Ed.), *Handbook of offender assessment and treatment* (pp. 415–431). Chichester: Wiley.
- Polaschek, D. L. L., Wilson, N. J., & Townsend, M. R. (2005). Cognitive behavioural rehabilitation for high-risk violent offenders: An outcome evaluation of the Violence Prevention Unit. *Journal of Interpersonal Violence*, 20, 1611–1627.

- Ross, R. R., & Hillborn, J. (2008). *Rehabilitating rehabilitation: Neurocriminology for treatment of antisocial behavior*. Ottawa, Ontario, Canada: Cognitive Centre of Canada.
- Selman, R. L. (1971a). The relation of role taking to the development of moral judgment in children. *Child Development*, 4, 79–91.
- Selman, R. L. (1971b). Taking another's perspective: Role-taking development in early childhood. *Child Development*, 42, 1721–1734.
- Serin, R. C., Gobeil, R., & Preston, D. L. (2009). Evaluation of the persistently violent offender treatment program. *International Journal of Offender Therapy and Comparative Criminology*, 53, 57–73.
- Thornton, D., Mann, R., Webster, S., Blud, L., Travers, R., Friendship, C., et al. (2003). Distinguishing and combining risks for sexual and violent recidivism. *Annals of the New York Academy of Sciences*, 989, 225–235.
- Titchener, E. B. (1911). *A text-book of psychology*. New York: The Macmillan Company.
- Varker, T., & Devilly, G. J. (2007). Types of empathy and adolescent sexual offenders. *Journal of Sexual Aggression*, 13, 139–149.
- Ward, T., Hudson, S. M., & Marshall, W. L. (1995). Cognitive distortions and affective deficits in sex offenders: A cognitive deconstructionist interpretation. *Sexual Abuse: A Journal of Research and Treatment*, 7, 67–82.
- Ward, T., Keenan, T., & Hudson, S. M. (2000). Understanding cognitive, affective, and intimacy deficits in sexual offenders: A developmental perspective. *Aggression and Violent Behavior*, 5, 41–62.
- Webster, S. D., Bowers, L. E., Mann, R. E., & Marshall, W. L. (2005). Developing empathy in sexual offenders: The value of offence re-enactments. *Sexual Abuse: A Journal of Research and Treatment*, 17, 63–77.
- Weinrott, M. R., Riggan, M., & Frothingham, S. (1997). Reducing deviant arousal in juvenile sex offenders using vicarious sensitization. *Journal of Interpersonal Violence*, 12, 702–728.
- Worling, J. R., & Curwen, T. (2000). Adolescent sexual recidivism: Success of specialized treatment and implications for risk prediction. *Child Abuse and Neglect*, 24, 965–982.
- Wormwith, J. S., Althouse, R., Simpson, M., Reitzel, L. R., Fagan, T. J., & Morgan, R. D. (2007). The rehabilitation and reintegration of offenders: The current landscape and some future directions for correctional psychology. *Criminal Justice and Behavior*, 34, 879–892.

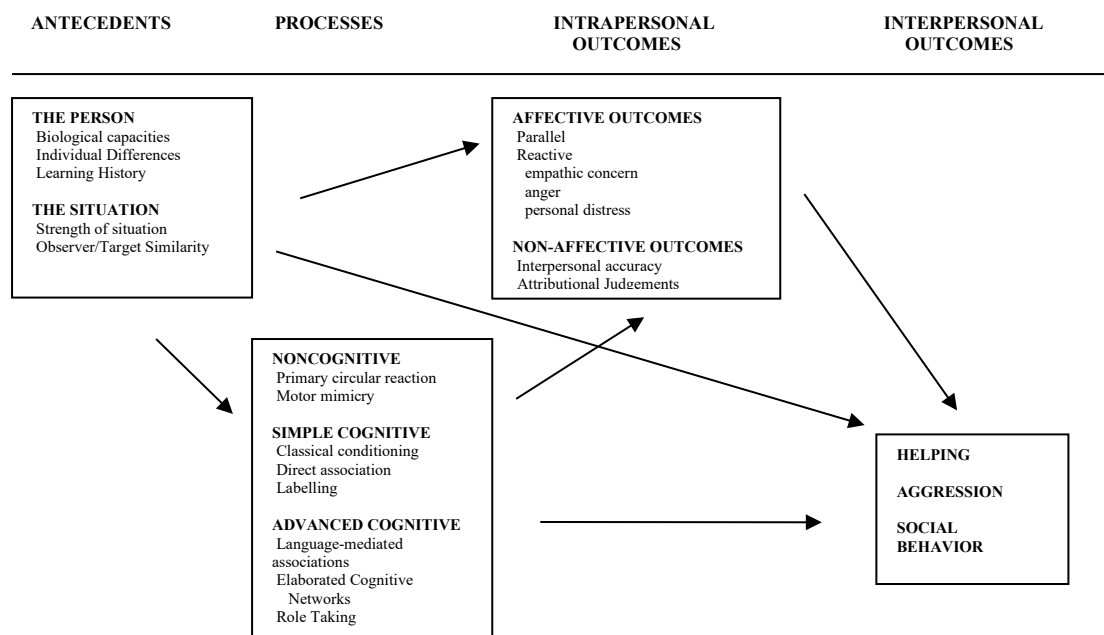


Figure 1. Davis's (1994) model of empathy.