The Clinical and Forensic Assessment of Psychopathy
A Practitioner's Guide

Edited by

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Experimental Investigations of Information-Processing Deficiencies in Psychopaths: Implications for Diagnosis and Treatment

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In recent years, psychopathy has become an increasingly prominent construct in the field of criminal justice. Its growing importance is due largely to the development and use of the Psychopathy Checklist (PCL; Hare, 1980) and the Psychopathy Checklist-Revised (PCL-R; Hare, 1991), which have afforded clinicians and researchers highly reliable and valid methods for assessing psychopathy (e.g., Hare, 1996). Although their numbers in the general population are small, psychopaths contribute disproportionately to the prison population—on the order of 15% to 25% (Hare, 1996). Moreover, psychopathic offenders (i.e., those who attain high PCL or PCL-R scores) commit more than twice as many crimes and, compared with nonpsychopaths, are two to five times more likely to reoffend (Hare, 1996; Hemphill, Templeman, Wong, & Hare, 1998; Kosson, Smith, & Newman, 1990; Serin, 1996). For example, Quinsey, Rice, and Harris (1995) followed a cohort of offenders for 6 years after their release from prison. These researchers found that over 80% of the psychopaths from this group committed violent offenses during that 6-year period, compared with only 20% of the nonpsychopaths.

Psychopaths' propensity for both violent and nonviolent offending has contributed substantially to interest in the construct. However, investigators have disagreed as to whether psychopathy is primarily a predisposition to commit antisocial acts or reflects a more general affective or cognitive deficit. The latter view is epitomized by the writings of Cleckley (e.g., 1976), which have contributed greatly to the modern conceptualization of psychopathy.
For instance, Cleckley (1976) proposed that antisocial behavior does not constitute an essential feature of psychopathy and, indeed, that psychopaths are not particularly prone to strong impulses or urges of any sort. Rather, given even a relatively modest impulse (i.e., a response set or behavioral goal), psychopaths are unlikely to exercise restraint.

It was also proposed by Cleckley (1976) that the behavioral manifestations of psychopathy result from a profound psychological (i.e., affective and/or information-processing) deficit that acts as a predisposition to behave in ways that are harmful both to the psychopath and society. He acknowledged that psychopaths present a convincing mask of sanity that includes superficial charm, good intelligence, and absence of irrational thinking. Nonetheless, they typically are unreliable, insincere, impulsive, egocentric, afflicted by poor judgment, and relatively incapable of shame or remorse (Cleckley, 1976).

Cleckley (1976) observed that, “in complex matters of judgment involving ethical, emotional, and other evaluative factors . . . the psychopath shows no evidence of a defect. So long as the test is verbal or otherwise abstract, so long as he is not a direct participant, he shows that he knows his way about.” Nevertheless, “when the test of action comes to him we soon find ample evidence of his deficiency” (p. 346). That is, psychopaths have the capacity for sound judgment and genuine affect, but the information required for these activities is less accessible when they are engaged in goal-directed behavior.

Numerous examples exist in the clinical literature. For example: “I always know damn well I shouldn’t do these things, that they’re the same as what brought me to grief before. I haven’t forgotten anything. It’s just that when the time comes I don’t think of anything else. I don’t think of anything but what I want now” (Grant, 1977, p. 60). In summary, although antisocial or criminal behavior may be the most conspicuous feature of psychopathy, the lack of ability to regulate or adjust a response set may be the most integral.

However, notwithstanding the demonstrated utility of the construct, as well as its substantial clinical history, the Diagnostic and Statistical Manual of Mental Disorders (4th ed. [DSM-IV]; American Psychiatric Association, 1994) does not recognize psychopathy as a unique psychiatric diagnosis. Rather, individuals who meet the PCL-R criteria for psychopathy are likely to be diagnosed as suffering from antisocial personality disorder (ASPD). In addition, whereas Cleckley (1976) suggested that psychological factors, rather than criminal and antisocial behavior, are the defining features of psychopathy, the DSM-IV ASPD diagnosis is based primarily on behavioral criteria, such as the repeated commission of illegal acts, deceitfulness, impulsivity, irritability, aggressiveness, and disregard for the safety of self or others.

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This chapter discusses why psychopaths should be considered distinct from other ASPD individuals for the purposes of diagnosis and treatment. Central to these arguments is the distinction between cognitive deficiencies and cognitive distortions. According to Kendall and Dobson (1993), a cognitive deficiency involves a lack or deficit in some specific type of information-processing activity (e.g., amnesic disorders, which entail an inability to learn new information or to recall previously learned information). Cognitive distortions, on the other hand, are the result of intact, but dysfunctional, processes (e.g., excessively negative thoughts about oneself, one’s current life situation, and one’s future [the negative cognitive triad]; Beck, 1967, 1976).

We hypothesize that psychopaths’ diminished ability to anticipate potential adverse consequences of their actions and profit from past experience results from several related cognitive deficiencies, rather than from cognitive distortions. One of these is a deficit in response modulation (Patterson & Newman, 1993), which entails brief and relatively automatic shifts of attention from the organization and implementation of goal-directed behavior to the evaluation of the ongoing behavior or the current response set (see also Newman & Wallace, 1993). This type of attentional shift is an automatic information-processing activity in that it involves a fast, fairly effortless process, which can occur in parallel with other information-processing activities (e.g., Schneider, Dumais, & Shiffrin, 1984). Such processes are activated automatically and do not require conscious control or attention to function properly (e.g., Schneider & Shiffrin, 1977).

One important function of response modulation is the initiation of self-regulatory processes. Self-regulation entails three conceptually distinct phases: (a) self-monitoring, or carefully observing one’s own behavior; (b) self-evaluation, or comparing one’s observed performance with one’s performance standards; and (c) self-reinforcement, or one’s positive or negative reactions to the self-evaluation (Kanfer & Gaeckle, 1986). Each of these phases entails controlled information processing (Kanfer & Gaeckle, 1986), which is a relatively slow processing mode that requires effort and conscious attention (e.g., Schneider et al., 1984). Should attention be drawn elsewhere, a controlled process (e.g., adding a column of numbers) ceases to operate.

When self-regulatory processes are functioning properly, behavior that is judged to be appropriate is continued. If available information indicates that a relatively minor modification is necessary, then the appropriate adjustments are made in the ongoing behavior. Finally, if the behavior is judged to be inappropriate or maladaptive, then it is inhibited and replaced with another response strategy or set.
EXPERIMENTAL EVIDENCE

This section reviews research (see also Newman, 1998) that is relevant to the hypothesis that: (a) the automatic direction of attention to stimuli or information occurs less readily in psychopaths, but (b) this is only true when the information is peripheral to ongoing goal-directed behavior or a current response set. In other words, when engaged in goal-directed behavior, information that is not salient with respect to the immediate behavioral goal is less likely to attract the attention of psychopaths than of nonpsychopaths. It is this specific attentional deficiency that constitutes the psychopaths' impairment of the response modulation process (i.e., that causes psychopaths to be impaired in their ability to shift attention automatically from the organization and implementation of goal-directed behavior to the evaluation of that behavior).

As a consequence of this attentional deficiency, the controlled processing of peripheral stimuli also is impaired. That is, this attentional deficit results in a decreased ability to evaluate and suspend if necessary, the current goal-directed behavior or response set (i.e., engage in controlled self-regulation). We believe that this—rather than a more general intellectual, motivational, or affective deficit—is the core feature of psychopathy.

Participants in the experiments described next were male prison inmates who were diagnosed using the PCL (Hare, 1980) or PCL-R (Hare, 1991; see chap. 3). Following the usual procedure (Hare, 1991), psychopaths were those having PCL-R scores of greater than or equal to 30.

In addition, we have used the Welsh Anxiety Scale (Welsh, 1956) to subdivide psychopaths and nonpsychopaths into high- and low-anxious subgroups. This procedure has allowed us to examine and control for the potentially confounding effects of anxiety (see Newman & Brinkley, 1997; Schmitt & Newman, 1999).

An initial series of experiments was designed to examine the extent to which psychopaths are able to use peripheral or nonsalient information to alter the primary focus of their ongoing goal-directed behavior or response set. It was predicted that psychopaths would be less able than nonpsychopaths to alter their goal-directed behavior. One experiment (Newman, Patterson, & Kosson, 1987) utilized a computerized card game that afforded participants the opportunity to win money. By making the initial probability of winning quite high, a response set to play additional cards, and thus win more money, was established. However, the probability of winning decreased and that of losing increased as the game progressed. Hence, the participants had to alter their response set (i.e., stop playing additional cards).

As predicted, psychopaths played more cards and lost more money than did nonpsychopaths: Psychopaths were less likely to alter their response set based on the changing probabilities of the computer game, although it clearly was in their best interests to do so (see also Siegel, 1978). This sort of maladaptive response perseveration (i.e., difficulty in altering an established response set) is characteristic of the real-world behavior of the psychopath and has been observed in children who were assessed as having psychopathic tendencies (Fisher & Blair, 1998; O'Brien & Frick, 1996).

In a second study of the psychopath’s difficulty in altering a response set (Newman & Kosson, 1986), participants were to press a button when designated target numbers appeared on a computer monitor and not press when nontarget numbers appeared. However, in one condition, participants won money for correct responses (button presses), which established a response set to press the button. In the other condition, participants lost money for incorrect responses, but did not win money for correct responses. Hence, a strong response set to press the button was not established in the second condition.

In the condition in which a strong set to press the button was established, psychopaths made more incorrect responses (i.e., they failed to inhibit the button-press response when a nontarget number was present). In the condition involving punishment only, psychopaths and nonpsychopaths did not differ in their task performance. This result suggests that psychopaths have difficulty in evaluating and appropriately altering their behavior primarily when a strong response set has been established or they have a clear behavioral goal.

We also have studied several other control conditions. In one, the task design induced participants at the outset of the task to process both reward and punishment contingencies. We expected this manipulation to prevent the opportunity for reward from becoming the dominant focus, thus eliminating the need to alter a response set while performing the task (Newman, Patterson, Howland, & Nichols, 1990). Other variations have promoted the processing of peripheral information by using relatively long intertrial intervals, thereby providing ample time to process less salient information (Arnett, Howland, Smith, & Newman, 1993; Newman et al., 1987). The task performance of psychopaths and nonpsychopaths
did not differ under these conditions, which served to minimize the need to engage in response modulation to alter a response set (for a review, see Newman & Wallace, 1993).

This first set of experiments demonstrated that psychopaths apparently are motivated and able to make adaptive use of information (including cues for punishment) when there is no need to alter their response set. However, they tend to experience difficulties when it is necessary to process information or task requirements that are peripheral to an established response set or behavioral goal.

A second set of experiments was designed to examine the extent to which psychopaths actually fail to pause to process peripheral information. This was accomplished by recording response times after correct (i.e., rewarded) and incorrect (i.e., punished) responses. By subtracting response times following rewarded responses from response times following punishment, it was possible to determine how long participants suspended their goal-directed behavior to process unexpected, negative feedback.

In one experiment (Newman et al., 1990), participants performed a version of the number recognition task described earlier (i.e., Newman & Kosson, 1986). The main variation was that, following the response feedback, they were required to press a button a second time to initiate the next trial. Participants could spend as much (up to 5 seconds) or as little time as they liked processing the response feedback. As predicted, low-anxious psychopaths paused less following punished responses and made more incorrect responses than did low-anxious nonpsychopaths.

Moreover, for both psychopaths and nonpsychopaths, the longer that participants paused after punishment relative to pauses following reward, the fewer incorrect responses they made. Thus, the length of pausing following a punished response is an index of the extent to which feedback that is inconsistent with, or peripheral to, the current response set is processed.

In another study (Newman & Howland, 1987), a computerized version of the Wisconsin Card Sorting Task was used. Participants' task was to sort four-symbol stimulus displays on the basis of color, shape, or number of symbols. After 10 consecutive correct responses, the rule for sorting the displays was changed without warning (e.g., from sorting based on color to sorting based on shape). This required participants to revise their established sorting strategy or response set on the basis of feedback that was inconsistent with that set. Low-anxious nonpsychopaths paused after rule changes, whereas low-anxious psychopaths did not. Again, we conclude from these results that psychopaths tend to pause less and process less fully information that is peripheral to the current response set (see also Arnett, Smith, & Newman, 1997).

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Furthermore, because the extent of processing of the peripheral information was related to the length of pausing, limited-capacity controlled processes were indicated as the processes that were not utilized as fully by psychopaths as by nonpsychopaths. This is because an automatic process would not be dependent on the suspending of goal-directed activity and information processing, but rather would proceed in parallel with other processing activities. In consequence, we suggest that psychopaths' voluntary or controlled processing of peripheral (i.e., non-salient) information is inadequate. This conclusion is consistent with our hypothesis that, when engaged in goal-directed behavior, psychopaths are impaired in their ability to engage in controlled processing of the sort that is a requisite for adaptive self-regulation.

It is also noteworthy that, in all the results reported previously, there was no benefit to the psychopaths for failing to alter their response sets. Indeed, it was the psychopath, and no one else, who was deprived of monetary gain due to the failure to engage in adaptive self-regulation. Therefore, the failure to process peripheral information in these studies cannot plausibly be construed as arising from self-serving or antisocial motivations because it was detrimental to no one but the psychopath.

A current focus of our research is to determine the extent to which psychopaths' failure to process fully or utilize information that is peripheral to the current response set is associated with involuntary/automatic as well as with voluntary/controlled processes. Before reviewing our results, we discuss several experiments by other investigators that are also relevant to this research question.

In one study, Jutai and Hare (1983) examined event-related brain potentials (ERPs) that were evoked by brief tones. The index of the extent to which attention was directed to the tones was the amplitude of the N100 ERP component, which is considered to reflect primarily the involuntary or automatic direction of attention (e.g., Näätänen, 1988). Participants heard the tones either while not engaged in any other activity or while playing video games; they were told that the tones were not relevant to their task of scoring as many points as possible in the video games.

Psychopaths and nonpsychopaths did not differ in N100 amplitude when the tones were presented in the absence of a competing activity (i.e., playing a video game). Conversely, when the competing activity was introduced, the amplitude of psychopaths' N100 was significantly less than that of nonpsychopaths. That is, relative to nonpsychopaths, psychopaths were deficient in their involuntary or automatic direction of attention to the tones. Furthermore, this study demonstrated that psychopaths and nonpsychopaths do not differ substantially with respect to the automatic direction of attention when attention is not already allocated to the attain-
ment of a behavioral goal. Rather, the disparity is evident when the eliciting stimulus is peripheral to ongoing goal-directed behavior.

Cleckley (1976) and others have proposed that an "inability to experience or appreciate the emotional significance of everyday life events" (Williamson, Harpur, & Hare, 1991, p. 260) is a fundamental deficit associated with psychopathy. Williamson et al. (1991) examined this proposition in an experiment in which participants were asked to determine whether a string of letters was a word or nonword. Previous studies have shown that words having affective significance are identified more quickly than are words lacking a strong emotional valence. From the hypothesized emotional processing deficit, it was predicted that this effect would be less apparent in psychopaths than in nonpsychopaths. Indeed, psychopaths did manifest smaller behavioral and electrocortical differences in their responses to the words that had strong emotional significance. This experiment demonstrated that the emotional significance or meaning of the stimulus item—which was peripheral to participants' manifest task of identifying the letter strings as words or nonwords—had less influence on psychopaths' reactions.

Recently, we (Newman, Schmitt, & Voss, 1997) used a computerized task developed by Gernsbacher and Faust (1991; Experiment 3) to examine whether the meaning of affectively neutral peripheral information would affect the task-relevant information processing to a lesser degree in psychopaths than in nonpsychopaths. Participants were to determine whether two sequentially presented stimuli (e.g., the word coat followed by the word shirt) were conceptually related. That is, they were to indicate as rapidly as possible whether the first stimulus was related to the second stimulus, and they won money based on the speed and accuracy of their responses.

In addition, on each trial, an irrelevant stimulus, which participants were told to ignore, was presented simultaneously with the first of the relevant stimuli. This irrelevant stimulus could be distinguished from the relevant stimuli by its appearance: If the relevant stimuli were words, then the irrelevant stimulus was a picture and vice versa. The key to this experiment was that the to-be-ignored irrelevant stimulus was either conceptually related or unrelated to the second of the relevant stimuli. Although the relation of the irrelevant or peripheral stimulus to the relevant stimulus had no bearing on participants' manifest task, this relationship did have a marked effect on their task performance. Specifically, when the two relevant stimuli were conceptually unrelated (e.g., the words coat and sweep), but the irrelevant stimulus (e.g., a picture of a broom presented simultaneously with the word coat) was conceptually related to the second of the relevant stimuli (i.e., the word sweep), participants were slower to determine that the two relevant stimuli were unre-

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lated (Gernsbacher & Faust, 1991). Because participants were explicitly instructed to ignore the stimulus that was irrelevant to performance of the manifest task, the interference caused by the irrelevant cue was presumed to be relatively involuntary and automatic.

As was the case with normal samples (Gernsbacher & Faust, 1991), low-anxious nonpsychopaths responded more slowly when the to-be-ignored stimulus was related to the second relevant stimulus. Conversely, low-anxious psychopaths showed no interference; they responded just as quickly when the irrelevant stimulus was related to the relevant stimulus as they did when irrelevant and relevant stimuli were unrelated. In other words, psychopaths were less affected than were nonpsychopaths by the affectively neutral peripheral information.

This finding has been replicated conceptually with a picture-word Stroop task (Schmitt & Newman, 1999), in which participants name pictures while attempting to ignore superimposed, incongruent words (see Fig. 4.1). The conflicting peripheral information (words) reliably slows the picture-naming of normal samples (Golinkoff & Rosinski, 1976; Rosinski, Golinkoff, & Kukish, 1975). Again, like normal controls, low-anxious nonpsychopaths displayed significant interference when attempting to ignore the incongruent words. Low-anxious psychopaths differed significantly from their nonpsychopathic counterparts in that their task performance was not impaired by the presence of the incongruent words.

Psychopaths' lack of responsiveness to the peripheral or task-irrelevant stimuli in these studies suggests that their attentional and controlled processing resources were not allocated to the processing of the peripheral information. If those limited-capacity information-processing resources had been allocated to the processing of the irrelevant stimuli, then some impairment in the performance of the manifest task would have been apparent (as was the case for nonpsychopaths, as well as for normal samples of participants). This suggests, in turn, is consistent with the hypothesis that, for psychopaths, the automatic direction of attentional and controlled processing resources to peripheral information occurs less readily than is the case for nonpsychopaths.

Furthermore, because the stimuli in these two studies did not have a strong emotional valence, this result indicates that the psychopath's deficit is not dependent on the emotional content of the stimuli involved. Rather, psychopaths are less influenced by the meaning of affectively neutral stimuli as well as by the meaning of affectively significant stimuli, provided that this information is peripheral to their ongoing goal-directed behavior or response set.

Combined, the prior findings suggest that psychopaths are less likely to process adequately and revise their response strategies in accord with peripheral information that would be of benefit to them, especially while
resources to peripheral stimuli or information (Arnett et al., 1993; Newman & Kosson, 1986; Newman et al., 1987, 1990). Instead, the deficit involves the processing of peripheral information when this processing activity is dependent on relatively automatic shifts of attention (such as those that are involved in response modulation).

In summary, we suggest that psychopaths suffer from a deficiency in the automatic allocation of attentional and controlled processing resources. This deficit diminishes the awareness and processing of potentially useful peripheral information and consequently interferes with the ability to regulate dominant response inclinations and goal-directed activity. Note that we do not postulate a complete absence of the processing of peripheral information. Rather, under certain conditions, this sort of processing is less effective for psychopaths than for nonpsychopaths. This point is well illustrated by Jutai and Hare’s (1983) psychophysiological findings: When engaged in an ongoing activity, psychopaths’ N100 responses to peripheral information were not absent, but rather the amplitude was less than for nonpsychopaths.

**SYNTHESIS**

Unlike most people who have a substantial capacity for anticipating the consequences of their actions in a relatively automatic manner, psychopaths tend to be aware of those sorts of considerations only when they are (a) central to the current response set or ongoing activity, or (b) made salient prior to the initiation of goal-directed behavior or a response set. In other words, when information is central to the intentional or controlled focus of attention, it may be utilized readily by the psychopath. Conversely, when the information is peripheral to the current response set and its accessibility thus depends on the automatic allocation of limited-capacity cognitive resources (i.e., when those resources are engaged elsewhere), the ability to utilize that information is diminished substantially.

This emphasis on the interaction between automatic and controlled processes is compatible with Cleckley’s (1976) observation that the impaired judgment shown by psychopaths is specific to circumstances in which they are engaged in goal-directed behavior. Psychopaths display little evidence of impairment when providing abstract answers to verbal questions. However, when the regulation of their behavior depends on automatic processes because attentional and controlled processing resources are allocated to the attainment of immediate goals, the impairment becomes much more pronounced. This does not mean that psychopaths are incapable of regulating behavior—only that for them the redirection of attention and hence self-regulation is more effortful (i.e., dependent on controlled proc-
essing capacity rather than on automatic processes). In consequence, the capability to utilize peripheral information is especially vulnerable to disruption when available attentional and controlled processing resources are reduced, such as when psychopaths are engaged in goal-directed behavior, when they are emotionally caught up in a situation, or when processing capacity is reduced due to the use of drugs or alcohol.

IMPLICATIONS FOR THE DIAGNOSIS AND TREATMENT OF PSYCHOPATHY

Psychopathy and ASPD Should Be Considered Distinct Diagnostic Entities

Cognitive therapy theorists (e.g., Beck, Freeman, & Associates, 1990; Young, 1994) propose that many psychiatric disorders, including personality disorders such as ASPD, reflect the influence of dysfunctional or maladaptive schemas. Schemas may be conceived as cognitive structures that (a) are based on past experience, (b) guide or bias information processing, and (c) may be thought of as beliefs about the self and one’s physical and social environment. The function of schemas is to “serve as templates for the processing of later experience” (Young, 1994, p. 9). The results, products, or outcomes of schema-based information processing include judgments, inferences, and attributions, such as interpretations of one’s own or others’ actions (e.g., social inferences) and specific thoughts and expectations about the present and future.

Dysfunctional schemas give rise to judgments, interpretations, and inferences that are consistently biased in an erroneous manner (i.e., they cause cognitive distortions). For instance, one who believes that others are likely to be hostile is at risk of (a) interpreting an ambiguous or even innocuous interaction as reflecting an aggressive intent (e.g., Dodge & Crick, 1990; Dodge et al., 1990), and (b) acting in accord with this misperception (e.g., in an aggressive manner). A number of maladaptive schemas have been implicated in the manifestations of ASPD, including “I need to be the aggressor or I will be the victim” (Beck et al., 1990, p. 48), “People are there to be taken” (Beck et al., 1990, p. 26), “Others are exploitive, and therefore I’m entitled to exploit them back” (Beck et al., 1990, pp. 48–49), “If I don’t push others around (or manipulate, exploit, or attack them), I will never get what I deserve” (Beck et al., 1990, p. 49), and “One should be able to do or have whatever one wants, regardless of what others consider reasonable or the cost to others” (Young, 1994, p. 59).

Although the concept of psychopathy historically has been associated with antisocial personality traits, in our view there is no necessary rela-

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with one's parole officer (e.g., expressing remorse, displaying an even temper, presenting a plan for prosocial adaptation, and conveying a commitment to succeed). Most people are able to benefit from this sort of schema-based information not only prior to initiating, but also during, social interactions, whereas psychopaths' ability to use such information is limited once they have established a response set. Thus, rather than simply being indicative of deliberate noncompliance with societal rules and expectations, the chronic violation of social norms displayed by psychopaths may also stem from their inability to access rule-related schemas once goal-directed behavior or a response set has been initiated (see also Gough, 1948).

We propose, then, that psychopathy is not fundamentally a reflection of schema-based information processing that results in cognitive distortions, as is the case for the nonpsychopath with ASPD. On the contrary, the current analysis suggests that many of the maladaptive manifestations of psychopathy are the result of failures of schema-based processes. This formulation highlights an important distinction in conceptualizing the antisocial behavior of nonpsychopathic individuals with ASPD on the one hand and of psychopaths on the other: The former intentionally or purposefully violate societal norms, whereas the latter often violate societal norms due to being momentarily oblivious to their existence. In other words, the antisocial behavior of the nonpsychopath with ASPD reflects primarily cognitive distortions, whereas specific cognitive deficiencies contribute substantially to the maladaptive and antisocial behavior of the psychopath.

For example, if a psychopath and nonpsychopath with ASPD each were to find a purse on a park bench, both might react in an antisocial manner by taking the purse and removing the valuables, rather than using identification to find the owner. Nevertheless, this same bit of behavior might occur for quite different reasons for the nonpsychopathic person with ASPD and the psychopath. For the ASPD nonpsychopath, the antisocial action presumably would be motivated by beliefs such as “People who can’t take care of themselves deserve to be exploited,” whereas the psychopath simply might act on his or her good fortune with little or no consideration of the distress that this course of action will cause to the purse’s owner.

In summary, even if the behavioral manifestations at times appear similar, it does not seem to serve the purposes of diagnosis to group etiologically dissimilar persons within the same diagnostic category if the underlying causal processes markedly differ. In consequence, because the psychopathology of the psychopath in all likelihood results from cognitive processes that differ qualitatively from those that characterize the nonpsychopath with ASPD (i.e., specific information-processing deficien-

cies vs. normal schema-based information processing involving antisocial schemas), it is not sufficient to categorize the psychopath’s problem as ASPD. Rather, psychopathy merits a separate diagnosis.

Diagnostic Implications of the PCL-R

As noted earlier, the PCL-R (Hare, 1991) is a reliable and valid measure of psychopathy (e.g., Hare, 1996) and is gaining considerable influence in the criminal justice system. However, there is some debate as to whether psychopathy—as assessed by the PCL-R—should be considered to reflect a dimensional trait or is better conceived as a discrete category. Continuous or dimensional traits are distributed to differing degrees, but appear throughout the population as a whole (e.g., height or weight). A discrete or categorical entity, on the other hand, is not distributed throughout the entire population: Some persons have it and some do not (e.g., Down syndrome).

Rather than viewing the PCL-R as assessing either the level of a dimensional trait or the presence of a categorical entity, we suggest that PCL-R scores reflect both a continuous variable and a discrete category. Two lines of evidence provide support for this conjecture. First, Vitale, Newman, and Serin (1999) examined the relationship between PCL-R scores and the tendency to make hostile attributions. The tendency to attribute the actions of others to hostile motivations may be conceived as reflecting the effects of hostile cognitive schemas, which give rise to expectations and interpretations that others are inherently inimicable or harbor aggressive intentions (e.g., Beck et al., 1990; Young, 1994). We found that hostile attributions, and hence the influence of hostile schemas, increase with PCL-R scores to approximately a score of 30 and then remain relatively constant as PCL-R scores continue to increase. That is, PCL-R scores below about 30, which is the usual cutoff score for diagnosing psychopathy, were associated with a continuum reflecting the influence of hostile schemas, whereas those above 30 (which are associated with the psychopathy diagnosis) were not. Indeed, the correlation between PCL-R scores and hostile attributions in White offenders was .371 ($p < .01$) when psychopaths were eliminated from the distribution. This correlation dropped to .274 ($p < .05$) when the psychopaths were reinserted in the sample. It dropped further, to a nonsignificant .159, when participants with midrange scores were removed from the sample (i.e., only psychopaths and controls were included). Although unconventional, these analyses clearly demonstrate that midrange, rather than high, PCL-R scores were most related to hostile attributional style.

Second, factor analytic studies of the PCL-R have consistently demonstrated the presence of two primary factors (i.e., categories or types of
PCL-R items). Factor 1 items appear to be related to the fundamental or core features of psychopathy that were emphasized by Cleckley (1976). Conversely, Factor 2 is related primarily to the commission of antisocial acts, such as those that are the focus of the diagnostic criteria for ASPD.

Analyses of PCL-R data performed by Cooke and Michie (1997) found that Factor 1 items are more strongly associated with the higher range of scores, whereas Factor 2 items are primarily associated with scores below 30. That is, the discriminating power of the items associated with Factor 2, which reflects mainly antisocial behavior, decreases markedly above the level at which a diagnosis of psychopathy commonly is ascribed. Moreover, these researchers concluded that Factor 2 items bear a strong association to environmental factors, such as socioeconomic status, educational attainment, and family of origin. However, at the higher range of PCL-R scores, the core features of psychopathy are relatively independent of the social context, and “the absence of any moderating effect of social context on Factor 1 tends to implicate biological processes” (Cooke & Michie, 1997, p. 12).

Based on these results, we suggest that PCL-R scores of less than 30 are likely to reflect differences in influence of acquired or environmentally based antisocial schemas of the sort associated with ASPD (e.g., schemas that produce erroneous hostile attributions), with lower scores indicating relatively little influence and higher scores indicating greater influence. Scores of 30 or more are indicative of the presence of the psychopathy diathesis (i.e., the attentional, response modulation, and self-regulatory deficits). In other words, we propose that the PCL-R measures both a continuous variable (i.e., the strength of antisocial schemas), which relate more strongly to PCL-R scores below 30, and a discrete variable (i.e., the presence of the hypothesized cognitive deficiencies), which becomes increasingly influential at levels of approximately 30 or more.

Although our proposal is, as yet, somewhat speculative, clinicians may wish to consider that scores from 1 to 29 are likely to reflect the strength of antisocial schemas (and the resulting cognitive distortions), such as those associated with ASPD. On the other hand, scores of 30 or more are likely to be indicative of the presence of the fundamental attentional, response modulation, and self-regulatory deficits that characterize psychopathy.

Nonetheless, we should emphasize that, although the PCL-R cutpoint of 30 is the most common value, both in research and applied settings, it should be used to generate diagnostic and treatment hypotheses only (as is the case for any psychometric assessment instrument). Some true psychopaths may score somewhat less than 30, and some ASPD non-psychopaths may score somewhat above 30.

For example, an individual’s culture or environment may influence the point at which the PCL-R score reflects primarily psychobiological cognitively deficiencies, rather than social influences that may give rise to antisocial cognitive distortions. Indeed, the proposal that both types of factors contribute to an individual’s PCL-R score has the potential to clarify cross-cultural differences in the use of the PCL-R to assess psychopathy.

In samples of North American White males, the score at which PCL-R ratings reflect mainly cognitive deficiencies rather than social influences appears to be 30. However, for any particular individual, this point might vary somewhat depending on the environmental influences to which that person had been exposed. For example, if a person were raised in a relatively stable environment with numerous socially appropriate role models, the point at which his PCL-R score reflected primarily psychobiological rather than environmental factors might be expected to be lower than it would be for one whose social environment was characterized by high levels of aggression or hostility. This latter individual might attain a PCL-R score of 30 or more due primarily to the presence of high levels of antisocial behaviors and beliefs resulting from his less-than-optimal social environment, rather than to the presence of specific cognitive deficiencies.

Lorenz, Smith, Bolt, Schmitt, and Newman (1999) speculated that differences that are evident in the laboratory performance of White and African-American offenders diagnosed as psychopaths on the basis of the PCL-R may reflect the differential influences of social and psychobiological factors. A score of 30 on the PCL-R may indicate the point at which cognitive deficiencies begin to have the greatest influence on White offenders, whereas this may not be the case for African Americans. Thus, although we propose that both the effects of social factors (e.g., antisocial schemas and cognitive distortions) and psychobiological influences (specific information-processing deficiencies) contribute to PCL-R scores, the balance of the two may not be consistent across environments and cultures.

Nonetheless, it should be emphasized again that, for White males, the PCL-R cutpoint of 30 has been demonstrated repeatedly to predict accurately differences both in criminal offending (Hare, 1996; Kosson, Smith, & Newman, 1990; Quinsey et al., 1995; Serin, 1996) and in laboratory performance (e.g., Hare, 1996; Newman, 1998). Therefore, at least for White males, the suggestions presented in this chapter regarding the diagnostic and treatment implications of PCL-R scores have substantial plausibility.

Treatment Considerations for Psychopathy and ASPD

As just suggested, for clinical purposes, PCL-R scores of less than 30 might best be conceived as providing an assessment of a dimensional or continuous variable reflecting the strength of antisocial schemas of the sort associated with ASPD, whereas at levels of 30 or more, the cognitive deficiencies associated with psychopathy would be the preferred focus of
the case formulation. In consequence, when using the PCL-R to guide treatment recommendations, it might be useful to consider separately scores of less than 30 and those of 30 and above. This follows from our view that differences in the etiological processes associated with nonpsychopathic ASPD and psychopathy (i.e., specific maladaptive schema contents vs. information-processing abnormalities) are likely to lead to differences in treatment outcomes for standard cognitive therapy interventions.

Specifically, we expect cognitive therapy to be less effective for psychopaths than for ASPD nonpsychopaths. This is because cognitive therapy presupposes that “the products of [schema-based information processing] are largely in the realm of awareness” (Beck et al., 1990, p. 5). Furthermore, the awareness of schema products (e.g., specific judgments, interpretations, and inferences) often entails the use of limited-capacity attentional and controlled information-processing resources for the processing of those cognitions. This direction or allocation of attention can occur in a controlled manner if, for example, the schema is intentionally accessed due to its relevance to the current behavioral goal or response set. Nevertheless, as discussed earlier, the direction of attention and controlled processing both to external and internal stimuli (such as schema products) often proceeds in an automatic manner (Wallace & Newman, 1997, 1998). Hence, the awareness and processing of schema products often depends on the automatic allocation of limited-capacity cognitive resources.

However, we have postulated that psychopaths suffer from a deficiency in the automatic direction of attentional and controlled processing resources to external and internal stimuli. Hence, for psychopaths, internal stimuli such as schema products receive substantially less processing from automatically allocated limited-capacity resources especially when those cognitions are peripheral to an ongoing response or response set. Consequently, schema-based information processing is less influential than would be the case for nonpsychopaths, especially after a response or response set has been initiated. Therefore, standard cognitive therapy focused on altering maladaptive schema contents is expected to be less effective for psychopaths than for nonpsychopathic individuals with ASPD or for nonpsychopaths in general.

We are not asserting that schemas and schema products are without influence in psychopaths. First, the ability of psychopaths to access schema contents or products in a controlled or intentional, rather than in an automatic, manner is comparable to that of nonpsychopaths. Second, prior to the initiation of goal-directed behavior or a response set, the accessing of schemas using automatic cognitive resource allocation is not compromised to the extent that it is subsequent to response or response set initiation.

This second point implies that schema-based processing that occurs prior to the initiation of a response set may influence the types of responses or response sets that subsequently are initiated. For example, psychopaths who, in addition to having the hypothesized information-processing deficiencies, have developed antisocial schemas are more prone to initiate antisocial responses than a psychopath whose schemas are relatively prosocial (e.g., that do not produce cognitive distortions, such as hostile attributions for others’ actions).

More generally, we propose that maladaptive (as well as compensatory or otherwise adaptive) schemas are more influential for shaping the behavior of psychopaths prior to initiating response sets, whereas their information-processing deficiencies are the primary psychopathological influences once a response set has been initiated. Two conclusions follow. First, standard cognitive interventions aimed at modifying antisocial schemas are likely to have some efficacy in controlling the psychopath’s premeditated antisocial behavior. However, because most persons, including psychopaths, at times experience fleeting inappropriate or antisocial thoughts and impulses, changing the antisocial schemas of psychopaths will not, in our view, significantly curtail their chronic antisocial behavior. Second, to control antisocial and other maladaptive response sets, psychopaths are likely to require compensatory strategies for circumventing their information-processing deficiencies. This is because (a) people are dependent on response modulation (i.e., automatic shifts of attention) to initiate self-regulation and modify ongoing, maladaptive responses or response sets, and (b) it is precisely this automatic attentional process, and the resulting impairment in self-regulation, that are deficient in psychopaths.

Because the research documenting the psychopath’s information-processing deficiencies is relatively new, efforts to develop compensatory strategies have scarcely begun (Serin & Kurijchuck, 1994). Nevertheless, despite the dearth of relevant research, we are inclined to believe that behavioral interventions will prove to be the most effective strategies for ameliorating the psychopath’s cognitive deficits and the expression of maladaptive response sets. Behavioral interventions might include rehearsing the act of pausing (i.e., establishing and strengthening a response set to pause and reflect before acting) to promote the processing of peripheral information prior to initiating a goal-directed response. Recall that the longer a person pauses before acting, the greater the likelihood that information peripheral to the current response set is processed and utilized to affect behavior in an adaptive manner (e.g., Newman et al., 1990). Moreover, experimental manipulations that promote pausing to process peripheral information have been shown to eliminate all evidence of the psychopath’s deficit (Arnett et al., 1993; Newman et al., 1987).
In addition to teaching psychopaths to pause, it might be especially useful to teach the proactive avoidance of situations that require protracted self-control. The protracted self-control situation is substantially more difficult to negotiate successfully than is a situation that requires only decisional self-control (Kanfer & Gaeckle, 1986). This is because the former requires continuous and prolonged resistance in the face of temptation to engage in a desirable but maladaptive action (e.g., choosing to abstain from alcohol while sitting in a bar), whereas the latter entails only a single decision that terminates the exposure to temptation (e.g., choosing not to visit the bar in the first place).

The conscious decision to engage in decisional, rather than protracted, self-control (i.e., to avoid problematic situations) most commonly occurs after pausing and reflecting on immediate response options. However, it also can be associated with long-term lifestyle choices, such as making a habit of returning home directly after work, rather than stopping off at a bar, or choosing law-abiding individuals as friends, thereby limiting exposure to others’ antisocial schemas. In either case, the primary benefit of exercising decisional self-control is eliminating the necessity of engaging in the more effortful protracted self-control, which requires the use of automatic response modulation processes to monitor the appropriateness of ongoing behavior sequences or response sets.

Summary

We have proposed in this chapter that, unlike other persons bearing the ASPD diagnosis (whose psychopathology is due primarily to schema-based information processing involving antisocial schemas and cognitive distortions), psychopaths are not characterized primarily by the activity of specific dysfunctional schemas. Rather, the psychopath suffers from a more general information-processing deficiency involving the automatic direction of attention to stimuli or information that are peripheral to ongoing goal-directed behavior or a current response set. This deficiency is detrimental to the psychopath because it constitutes an impairment in the response modulation process. Response modulation (a) entails brief and relatively automatic shifts of attention from the implementation of goal-directed behavior to its evaluation, and (b) is crucial to initiating controlled processes associated with self-regulation. Because this deficiency differs qualitatively from the schema-based etiology for other ASPD individuals, and in fact decreases the influence of schema-based information processing, the present formulation implies that psychopaths and ASPD nonpsychopaths merit separate diagnoses.

We also have speculated that the primary instrument for diagnosing psychopathy—the PCL-R (Hare, 1991)—should be conceived as reflect-
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