



# Psycho-Sociological Review of Criminal Thinking Style

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**Abstract:** Criminal thinking has been long established as a very important predictor of criminal behaviour, however far less research effort has been undertaken to understand what variables can predict the emergence of criminal thinking. Considering the importance of criminal thinking, we feel it necessary to conduct a systematic review of the literature on criminal thinking in order to bring together what is currently known regarding the factors that relate to, and predict, habitual criminal thinking styles. This paper provides a brief overview of the state of the science on criminal thinking and indicates the need for future research in this context and the areas this future research should focus upon.

**Keywords** – criminal thinking; criminal associates; personality; criminal social identity

## Introduction

Research within the fields of criminal and social psychology, respectively, have consistently demonstrated the important predictive influence of habitual and ingrained criminal thinking styles on the prediction of criminal behaviour. Walters (2006a) defined criminal thinking as the thought content and cognitive processes conducive to the commencement and continuation of persistent anti-social and criminal conduct. The significant link between criminal attitudes and criminal behaviour has been well established in previous studies, (Andrews & Kandel, 1979; Bagozzi & Burnkrant, 1979; Engels, Luijpers, Landsheer, & Meeus, 2004; Nesdale, Maass, Kiesner, Durkin, Griffiths, & James, 2009; Mills, Kroner, & Forth, 2002; Stevenson, Hall, & Innes, 2003; Simourd, 1999; Vitaro, Brendgen, & Tremblay, 2000), indicating that individuals who exhibit a consistent pattern of criminal-style thinking, and who have internalized a criminal concept of behaviour, are at a greater risk of engaging in criminal behaviours.

## Theoretical Roots

One of the first theoretical concepts to consider criminal thinking was Sutherland's Differential Association Theory which views criminal attitudes as the product of associations with criminals. Accordingly, Sutherland's theory views

associations with criminal peers as the root cause of criminal conduct (Sutherland & Cressey, 1978; Sutherland, Cressey, & Luckenbill, 1992).

Neutralization theory was another concept that has contributed to the understanding of criminal thinking. Sykes and Matza (1957) postulate that the most of criminals perceive themselves as conventional rather than as anti-social and that most of them try to rationalize and justify their criminal acts. In order to explain the process of neutralization Sykes and Matza suggested five methods used by criminals: denial of responsibility ("it was an accident"), denial of injury ("no one got hurt"), denial of the victim ("he/she was asking for it"), condemnation of the condemners ("society is the real criminal"), and appeals to higher authority ("I couldn't let my friends down"). These cognitive processes have been observed in both young and adult offenders however contrary to what was suggested by Sykes and Matza, such thinking patterns have been identified by criminal psychologists as occurring consequently from engagement in criminal behaviour, rather than existing prior to performing a criminal act, and thus acting as a predictor of law-breaking behaviour. Moreover, these thinking patterns have also been shown to play a significant role in maintenance of criminal behaviour (Maruna & Copes, 2005).

Yochelson and Samenow's (1976) personality approach was another significant early theoretical perspective on criminal thinking style. Working with recidivistic prisoners from St. Elizabeth's Hospital in Washington D.C., where most of the criminals had been diagnosed as "insane", Yochelson and Samenow concluded that the conventional psychiatric techniques employed with these inmates were unsuccessful, and they concluded that most of these criminals used psychiatric jargon in order to rationalize and excuse their law-violating conduct. Yochelson and Samenow identified a total of 52 thinking errors that they believed reflected the thinking patterns of the criminals. Based on these thinking errors, Yochelson and Samenow (1976) proposed eight distinct factors that were characteristic of criminal thinking: 1) mullification (neutralization); cutoff (elimination of fear), entitlement (feeling of exceptionality), power orientation (perception of control in criminal's life) sentimentality (good deeds to recompense past criminal acts), superoptimism (a form of optimism that provides offenders with the confidence of achieving their needs), cognitive indolence (lack of resistance in criminal behaviour), and discontinuity in promises and intentions over time. As there was no control group in their research project, and the 255 criminals involved were not randomly sampled from a larger offender population, the generalizability and validity of the results that emerged from this research has been seriously questioned (see Conklin, 2003). Nevertheless, Yochelson and Samenow's work was the first to suggest that personality factors could play a central role in the understanding of criminal thinking.

Building on the work Yochelson and Samenow (1976), Walters (1990, 1995a, 1995b, 2002, 2003, 2006b) developed what is widely regarded as the most influential and important models of criminal thinking. Walters' theory of criminal thinking places a central role on the individual's cognitive processes. Walters proposed that crime is a way of life which is associated with a system of beliefs and criminal attitudes that include implicit justifications and rationalizations for criminal conduct. Although Walters was partially in opposition to Yochelson and Samenow's findings, he incorporated most of the components of their theory in his Psychological Inventory of Criminal Thinking Styles (PICTS; Walters, 1995) including eight cognitive dimensions of distorted anti-social and criminal thinking

processes. The eight thinking patterns include: 1) mollification (rationalization and placing blame on external factors); 2) cutoff (rapidly disregarding feelings that prevent from anti-social acts); 3) entitlement (permitting crime by a particular privileged self-attribution); 4) power orientation (the need for control over the other people); 5) sentimentality (good deeds to offset depressing feelings about committed crime); 6) superoptimism (confidence of avoiding the negative result of committed crime); 7) cognitive indolence (lack of developed mental strategies); and 8) discontinuity (lack of determination and consistency in thinking and behaviour (Walters, 2001).

Walters produced evidence to support his theoretical model of criminal thinking in his research, and demonstrated that these eight thinking factors, though statistically related, are discrete cognitive patterns identifiable among criminal populations (Walters, 2001). This factorial model refers to the idea that criminal thinking style facilitates decisions which tend to be self-indulgent, rash, interpersonally invasive, and against societal norms. Thus, Walters' model postulates that criminal thinking patterns are illogical, unorganized, and subjective and provide needs for urgent satisfaction.

More recently, Mills and Kroner (1999) developed a model of criminal thinking which is based on just four dimensions: Violence, Entitlement, Antisocial Intent, and Associates (MCAA; Measure of Criminal Attitudes and Associates; Mills & Kroner, 1999). In accordance with Ajzen's (1988) explanation of attitudes, the three sub-scales of Violence, Entitlement, and Antisocial Intent measure dispositions towards actions, whereas the Associates sub-scale mainly measures dispositions towards people. Mills and Kroner suggested that an ability to understand and consequently predict violent behaviour is of central importance when identifying individuals at high risk. Additional research has indicated that tolerance towards violence was a stronger predictor of involvement in violence than all sociological and economic variables measured (Caprara, Cinanni, & Mazzotti, 1989; Mills, Kroner, & Weekes, 1998) providing additional empirical support for the crucial role of cognitive processes in the emergence of criminal behaviour.

The attitude of entitlement highlighted in many theories of criminal thinking, has consistently been shown as a reason of why people engage in criminal behaviour. Walters and White (1989) described entitlement as the cognition that *"tells them they have a right to take whatever they want from whoever has what they desire"* (p. 4). Research suggests that entitlement is one of two cognitions most highly associated with age of first arrest and age of first imprisonment (Walters, 1995a, 1995b).

Previous research has also indicated that the Alienation Scale of the Basic Personality Inventory (Jackson, 1989) to be predictive of law-violating behaviour (Kroner, Holden, & Reddon, 1997; Palmer, 1997). It has been noted by Kroner and Reddon (1996) that items of the Alienation Scale express an intention. These findings are consistent with theory and attitudinal research showing that behavioural intentions are better predictors of potential conduct than attitudes in general (Ajzen, 1988; Ajzen & Fishbein, 1980).

Attitudes toward anti-social friends also appear to be a very distinctive cognitive characteristic of criminal associations. Investigating the degree of identification and approval of antisocial friends is a significant predictor of the influence that criminal friends may have on the person, which in turn may contribute to persistent criminal behaviour (Simourd, 1997, 1999).

### **Criminal Thinking, Recidivism, and Relationship with Criminal Friends**

Gendreau, Little, and Goggin (1996) in their meta-analytic study investigated a broad range of variables associated with adult recidivism. Maltz (2001) defined the term recidivism as behaviour of a repeated or habitual criminal nature (the extent of, or the rate at which an offender commits another crime, measured by police arrest or conviction baselines, after being released from imprisonment). The four most common predictors of recidivism were criminal associates, criminal attitudes (criminal thinking), antisocial personality, and previous criminal activity.

Akers (1985) in his Differential Reinforcement Theory suggested that people are first initiated into delinquent conduct by differential associations with antisocial companions. Then, through differential reinforcement, they gain knowledge of how to reap rewards and avoid punishment as the actual or anticipated consequences of particular conduct. This theory tends to fit well into criminology because it provides an explanation of the decision-making process involved in development of the cognitive (criminal attitudes), behavioural and motivational techniques essential to commit a criminal act (Akers, Krohn, Lanze-Kaduce, & Radosevich, 1979).

Holsinger's (1999) work suggested that people who have been socialized in criminal settings and who have acquired antisocial attitudes relating to criminal behaviour are at greater risk of involvement in criminal activity in the future. Further findings reported by Losel (2003) suggested that through interactions with criminal group influences, individuals develop attitudes, principles and self-related cognitions which motivate criminal conduct. Similarly, Andrews and Kandel (1979) and Mills et al. (2002, 2004) reported that normative influence of criminal friends interacts with criminal attitudes, and furthermore, when these variables are strongly associated, the relationship to criminality is particularly strong. Additionally, Rhodes (1979) in his research found that those offenders who enter detention centres or prisons with a low degree of antisocial attitudes, tend to develop more deviant attitudes while serving their sentence given constant contact with other prisoners.

### **Offence as a Moderator of Criminal Thinking**

Another concern that has been indicated in research is whether criminal thinking differs in relation to the crime for which the prisoner is incarcerated. Polaschek and colleagues (2004) applied a measure of criminal attitudes toward violence to 155 New Zealand inmates and found that violent offenders scored significantly higher than non-violent inmates. Moreover, English and Welsh prisoners incarcerated for acquisition offences like burglary, robbery, theft, and shoplifting (Wilson, Attrill, & Nugent, 2003), and American inmates with a drug/alcohol dependence diagnosis (Lacy, 2000), showed significantly different level of criminal attitudes.

Sex offenders and white-collar criminals are two groups that tend to score lower on criminal thinking scales compared to other offending populations. The cognitive distortion model suggests that sex offenders hold conventional attitudes and are moderately free of cognitive deviations when they are not involved in sexual offences (Ward, Hudson, & Marshall, 1995). However, a strong sense of entitlement is considered as significant characteristic of sex offenders (Ward, Hudson, Johnston, & Marshall, 1997). Interestingly, certain research findings have undermined this assertion. In fact, sex offenders normally score lower than non-sex offenders on the PICTS (Hatch-Maillette, Scalora, Huss, & Baumgartner, 2001)

and MCAA (Mills, Anderson, & Kroner, 2004) entitlement sub-scales, although these dissimilarities tend to be minimized when researchers control for the effect of age.

### **Criminal Thinking, Personality, and Identity**

The tendency of attitudes to change is the core differentiating factor between them and other psychological variables such as personality traits (Mills, Kroner, & Hemmati, 2004). Mills (2000) suggests that criminal personality, criminal attitudes, and criminal friends, although related, are not identical constructs. Mills and colleagues (2004) stated that the presence of a criminal personality may be sufficient to indicate the existence of criminal attitudes, but the lack of a criminal personality would not necessarily denote the lack of criminal attitudes.

Very little empirical data actually exists to evaluate this hypothetical proposition that personality traits are reflected in criminal attitudes and thinking styles. In a study among Dutch prisoners, Bulten, Nijman, and Van der Staak (2009) reported that criminal lifestyles were supported by criminal belief systems, which incorporated criminal thinking styles related to specific personality traits such as "Impulsivity". More recent research conducted by Boduszek, McLaughlin, and Hyland (2011) among a sample of Irish ex-offenders explored the predictive influence of psychoticism, associations with criminal friends, and levels of recidivism as possible predictors of criminal attitudes. Multiple regression analysis indicated that 71% of variance in criminal attitudes was explained on the basis of these three variables, with psychoticism emerging as the strongest predictor of criminal attitudes, followed by association with criminal friends and levels of recidivism. This study constituted the first piece of empirical evidence suggesting a predictive link between personality (specifically the Psychotic trait defined in Eysenck's model of personality) and criminal thinking.

Boduszek, Adamson, Shevlin, Hyland, and O'Kane (in press) have produced additional empirical support for the role of personality in the prediction of criminal thinking. Using a large and diverse sample of incarcerated male recidivistic prisoners (N = 312) Boduszek and colleagues employed multiple regression analysis and demonstrated that criminal thinking was predicted by all three personality traits (Psychoticism, Extraversion, and Neuroticism), along with two of the three factors of criminal identity (in-group ties, and in-group affect). This data not only provides additional support for the proposed role of personality in the understanding of criminal thinking but supports Eysenck's theory regarding the relationship between personality and criminal behaviour (see Eysenck and Gudjonsson, 1989). It is interesting to note that in comparison to previous findings by Boduszek et al. (2011) with non-violent male criminal ex-offenders only Psychoticism was found to predict criminal thinking, whereas findings reported by Boduszek et al. (in press) with currently incarcerated male recidivistic prisoners found a relationship between criminal thinking styles and each of the three personality traits defined by Eysenck's theory. The nature of this differentiation between ex-prisoners and recidivistic prisoners is still unknown and should be a subject of future investigations.

The main and unique findings reported by Boduszek et al. (in press) are related to the moderating role played by personality personality in the relationship between criminal social identity and criminal thinking. The data suggests that the moderation depends on the level of extraverted personality. The positive relationship can be observed between in-group affect (one of the aspects of

criminal social identity) and criminal thinking for those offenders who display low levels of extraverted personality traits, whereas the high levels of extraverted personality traits tend to moderate the positive relationship between in-group ties with criminal others (another aspect of criminal social identity) and criminal thinking style.

Hogg and Smith (2007) in their research suggested that research related to thinking style should be approached from the psychology of groups and inter-groups relations, particularly from the theoretical perspective of social identity. They indicated the most fundamental aspect in which social identity affects individuals' attitudes (thinking style):

*"Categorization of self, self categorization, transforms self conception to match the identity described by the category, and transforms one's perceptions, attitudes, feelings, and conduct to conform to the category prototype. Self-categorization configures and changes one's identity and one's attitudes. It depersonalizes our attitudes so that they conform to our in-group prototype, and this represents genuine attitude change, not superficial behavioural compliance" (Hogg & Smith, 2007; p.96)*

Previous research established that even in the absence of actual group interaction, and therefore lack of persuasion, identification with a particular group caused their members' attitudes to shift towards a perceived in-group norm (Abrams, Wetherell, Cochrane, Hogg, & Turner, 1990; Haslam, Oakes, McGarty, Turner, & Onorato, 1995; Hogg, Turner, & Davidson, 1990). This reflects the identification-based conformity which is the process of adopting the group's beliefs systems and thinking styles as one's own. The direct relationship between criminal identity and criminal thinking style has been investigated by Boduszek et al. (in press). The results suggested that in-group affect and in-group-ties with criminal group members (two dimensions of criminal social identity) significantly influence the level of criminal thinking style. These findings are in line with the contributions of Social Identity Theory (Tajfel and Turner, 1979) and with the research in social psychology that attempted to support the close relationship between identity and thinking style (Hogg and Smith, 2007; Hogg, 2001).

### **Conclusion and Thoughts for the Future**

Considerable research evidence has been accumulated over the past two decades which has illuminated much about the correlates and predictors of criminal thinking. Much of this evidence has supported the importance of the social environment in the emergence of criminal attitudes, particularly with respect to associations with criminal peers. Research evidence is also indicating that innate psychological constructs such as personality traits also play a crucial role in criminal thinking. Traits such as Psychoticism, Extraversion, and Neuroticism have all been shown to be important predictors, and in the case of Extraversion a moderator, of criminal thinking. Emerging evidence is now also demonstrating the necessity to consider one's criminal social identity as a particularly important predictor of criminal thinking style however research in this area has been extremely limited due to the absence of a well validated measurement tool. This problem has now been addressed with the publication of the Measure of Criminal Social Identity (Boduszek, Adamson, Shevlin, & Hyland, 2012), an eight item

measure of criminal identity which has been empirically validated within a large sample of recidivistic prisoners. We believe that future research on criminal thinking should be focused on further exploring the relationship between personality and identity and their respective influences on criminal thinking.

## References

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- Abrams, D., Wetherell, M. S., Cochran, S., Hogg, M. A., & Turner, J. C. (1990). Knowing what to think by knowing who you are: Self-categorisation and the nature of norm formation, conformity, and group polarisation. *British Journal of Social Psychology, 29*, 97 – 119.
- Ajzen, I. (1988). *Attitudes, personality, and behaviour*. Milton-Keynes, England: Open University Press.
- Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Englewood Cliffs, NJ: Prentice Hall.
- Akers, R. (1985). *Deviant Behaviour: A Social Learning Approach*. Belmont: Wadsworth.
- Akers, R., Krohn, M., Lanze-Kaduce, M., & Radosevich, M. (1979). Social Learning and Deviant Behaviour: A Test of General Theory. *American Sociological Review, 44*, 636-55.
- Andrews, K. H., & Kandel, D. B. (1979). Attitude and behavior: A specification of the contingent consistency hypothesis. *American Sociological Review, 44*, 298-310.
- Bagozzi, R. P., & Burnkrant, R. E. (1979). Attitude organization and the attitude-behavior relationship. *Journal of Personality and Social Psychology, 37*, 913- 929.
- Boduszek, D., Adamson, G., Shevlin, M., & Hyland, P. (2012). Development and validation of a Measure of Criminal Social Identity within a sample of Polish recidivistic prisoners. *Criminal behaviour and Mental Health* (in press). DOI: 10.1002/cbm.1827
- Boduszek, D., Adamson, G., Shevlin, M., Hyland, P., & O’Kane, D. (in press). The Role of Personality in the Relationship between Criminal Social Identity and Criminal Thinking Style within a Sample of Prisoners with Learning Difficulties. *Journal of Learning Disabilities and Offending Behaviour*.
- Boduszek, D. & Hyland, P. (2011). The Theoretical Model of Criminal Social Identity: Psycho- social Perspective. *International Journal of Criminology and Sociological Theory, 4(1)*, 604-615.
- Boduszek, D., McLaughlin, C., & Hyland, P. (2011). Criminal Attitudes of Ex-Prisoners: the Role of Personality, Anti-Social Friends and Recidivism. *Internet Journal of Criminology, 9*, 1-10.
- Bulten, E., Nijman, H., & van der Staak, C. (2009). Measuring criminal thinking style: The construct validity and utility of the PICTS in a Dutch prison sample. *Legal and Criminological Psychology, 14*, 35-49.
- Caprara, G. V., Cinanni, V., & Mazzotti, E. (1989). Measuring attitudes toward violence. *Personality and Individual Differences, 10*, 479-481.
- Engels, R., Luijpers, E., Landsheer, J., & Meeus, W. (2004). A longitudinal study of relations between attitudes and delinquent behaviour in adolescents. *Criminal Justice and Behaviour, 31*, 244–260.
- Eysenck, H. J., & Gudjonsson G. H. (1989). *The causes and cures of criminality*. New York: Plenum Press.
- Gendreau, P., Little, T., & Goggin, C. (1996). A meta-analysis of the predictors of adult offender recidivism: What works! *Criminology, 34(4)*, 575-607.
- Haslam, S. A., Oakes, P. J., McGarty, C., Turner, J. C., & Onorato, S. (1995). Contextual changes in the prototypicality of extreme and moderate out-group members. *European Journal of Social Psychology, 25*, 509 – 530.
- Hatch-Maillette, M. A., Scalora, M. J., Huss, M. T., & Baumgartner, J. V. (2001). Criminal thinking patterns: are child molesters unique? *International Journal of Offender Therapy and Comparative Criminology, 45*, 102–117.
- Hogg, M. A. (2001). A Social Identity Theory of Leadership. *Personality and Social Psychology Review, 5(3)*, 184-200.
- Hogg, M. A., & Smith, J. R. (2007). Attitudes in social context: A social identity perspective. *European Review of Social Psychology, 18*, 89-131.
- Hogg, M. A., Turner, J. C., & Davidson, B. (1990). Polarised norms and social frames of reference: A test of the self-categorisation theory of group polarisation. *Basic and Applied Social Psychology, 11*, 77 – 100.
- Holsinger, A. M. (1999). Assessing criminal thinking: Attitudes and orientations influence behavior. *Corrections Today, 61*, 22-25.
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- Jackson, D. N. (1989). *Basic Personality Inventory Manual*. London, Canada: Sigma Assessment Systems.
- Kroner, D. G., Holden, R. R., & Reddon, J. R. (1997). Validity of the Basic Personality Inventory in a correctional setting. *Assessment, 4*, 141-154.
- Kroner, D. G., & Reddon, J. R. (1996). Factor structure of the Basic Personality Inventory with incarcerated offenders. *Journal of Psychopathology and Behavioral Assessment, 18*, 275-284.
- Lacy, P.J. (2000). Differences in thinking styles between inmates with drug problem diagnoses and inmates without drug problem diagnoses. Doctoral dissertation, Fielding Institute, 2000. *Dissertation Abstracts International, 61B*, 2790.
- Losel, F. (2003). The development of delinquent behaviour. In D. Carson & R. Bull (Eds) *Handbook of Psychology in Legal Context (2<sup>nd</sup> Ed)*. England: John Wiley and Sons, Ltd.
- Maltz, M. D. (2001). *Recidivism*. Orlando, Florida: Academic Press, Inc.
- Maruna, S., & Copes, H. (2005). What have we learned from five decades of neutralization research? *Crime and Justice, 32*, 221-320.
- Mills, J. F. (2000). *Criminal attitudes: Assessment and the relationship with psychopathy and response latencies*. Unpublished doctoral dissertation, Carleton University, Ottawa, Canada.
- Mills, J.F., & Kroner, D. G. (1999). *Measures of criminal attitudes and associates*. Unpublished User Guide.
- Mills, J. F., Kroner, D. G., & Weekes, J. R. (1998). *Anger and institutional misconduct in a sample of violent offenders*. Unpublished manuscript.
- Mills, J. F., Anderson, D., & Kroner, D. G. (2004). The antisocial attitudes and associates of sex offenders. *Criminal Behaviour and Mental Health, 14*, 134- 145.
- Mills, J. F., Kroner, D. G., & Forth A. E. (2002). Measures of Criminal Attitudes and Associates (MCAA): Development, factor structure, reliability, and validity. *Assessment, 9*, 240-253.
- Nesdale, D., Maass, A., Kiesner, J., Durkin, K., Griffiths, J., & James, B. (2009). Effects of peer group rejection and a new group's norms on children's intergroup attitudes. *British Journal of Developmental Psychology, 27(4)*, 799-814.
- Palmer, W. (1997). *A new scheme for predicting recidivism*. Unpublished doctoral dissertation, Queen's University, Kingston, Ontario, Canada.
- Polaschek, D. L. L., Collie, R. M., & Walkey, F. H. (2004). Criminal attitudes to violence: development and preliminary validation of a scale for male prisoners. *Aggressive Behaviour, 30*, 484-503.
- Rhodes, M. L. (1979). The impact of social anchorage on prisonization. *Dissertation Abstracts International, 40*, 1694A. (UMI No. 79-19, 101).
- Simourd, D. J. (1997). The Criminal Sentiments Scale-Modified and Pride in Delinquency scale: Psychometric properties and construct validity of two measures of criminal attitudes. *Criminal Justice and Behavior, 24*, 52-70.
- Simourd, D. J. (1999). Assessment of criminal attitudes: Criterion-related validity of the Criminal Sentiments Scale-Modified and Pride in Delinquency scale. *Criminal Justice and Behavior, 26*, 90-106.
- Stevenson, S. F., Hall, G., & Innes, J. M. (2003). Sociomoral Reasoning and Criminal Sentiments in Australian Men and Women Violent Offenders and Non-Offenders. *International Journal of Forensic Psychology, 1*, 111-119.
- Sutherland, E. H., & Cressey, D. R. (1978). *Criminology* (8th Ed). Philadelphia: Lippincott.
- Sutherland, E.H., Cressey, D. R., & Luckenbill, D. F. (1992). *Principles of criminology*. Dix Hills, N.Y.: General Hall.
- Sykes, G. M., & Matza, D. (1957). Techniques of neutralization: a theory of delinquency. *American Sociological Review, 22*, 664-670.
- Vitaro, F., Brendgen, M., & Tremblay, R. E. (2000). Influence of deviant friends on delinquency: Searching for moderator variables. *Journal of Abnormal Child Psychology, 28(4)*, 313-325.
- Walters, G. D. (2001). *Psychological Inventory of Criminal Thinking Styles (Version 4.0)*. Unpublished manuscript.
- Walters, G. D. (2002). The Psychological Inventory of Criminal Thinking Styles (PICTS): A review and meta-analysis. *Assessment, 9*, 283-296.
- Walters, G. D. (2003). Changes in criminal thinking and identity in novice and experienced inmates: Prisonization revisited. *Criminal Justice and Behavior, 30*, 399-421.
- Walters, G. D. (2006a). Appraising, researching and conceptualizing criminal thinking: a personal view. *Criminal Behaviour and Mental Health, 16*, 87-99.
- Walters, G. D. (2006b). Proactive and reactive composite scales for the Psychological Inventory of Criminal Thinking Styles. *Journal of Offender Rehabilitation, 42(2)*, 23-36.
- Walters, G. D. (1995a). The Psychological Inventory of Criminal Thinking Styles. Part I: Reliability and preliminary validity. *Criminal Justice and Behavior, 22*, 307-325.
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- Walters, G. D. (1995b). The Psychological Inventory of Criminal Thinking Styles. Part II: Identifying simulated response sets. *Criminal Justice and Behavior, 22*, 437-445.
- Walters, G. D., & White, T.W. (1989). The thinking criminal: A cognitive model of lifestyle criminality. *Criminal Justice Research Bulletin, 4*, 1-10.
- Ward, T. W., 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*, 67-83.
- Ward, T. W., Hudson, S. M., Johnston, L., & Marshall, W. L. (1997). Cognitive distortions in sex offenders: an integrative review. *Clinical Psychology Review, 17*, 479-507.
- Wilson, S., Attrill, G., & Nugent, F. (2003). Effective interventions for acquisitive offenders: an investigation of cognitive skills programmes. *Legal and Criminological Psychology, 8*, 83-101.
- Yochelson, S., & Samenow, S. E. (1976). *The Criminal Personality (Vol. 1): A Profile for Change*. New York: Jason Aronson.

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