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The Recent Past and Near Future of Risk and/or Need Assessment

D. A. Andrews

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The history of risk assessment in criminal justice has been written on several occasions (Andrews & Bonta, 2003; Clements, 1996; Hollin, 2002). Here we assess progress since Andrews, Bonta, and Hoge's (1990; Andrews, Zinger, et al., 1990) statement of the human service principles of risk-need-responsivity (RNR) and professional discretion. In those articles, the corrections-based terms of *risk* and *need* were transformed into principles addressing the major clinical issues of who receives treatment (higher risk cases), what intermediate targets are set (reduce criminogenic needs), and what treatment strategies are employed (match strategies to the learning styles and motivation of cases: the principles of general and specific responsivity). General responsivity asserts the general power of behavioral, social learning, and cognitive-behavioral strategies. Specific responsivity suggests matching of service with personality, motivation, and ability and with demographics such as age, gender, and ethnicity. Nonadherence is possible for stated reasons under the principle of professional discretion. Expanded sets of principles now include consideration of case strengths, setting of multiple criminogenic needs as targets, community-based, staff relationship and structuring skills, and a management focus on integrity through the selection, training, and clinical supervision of staff and organizational supports (Andrews, 2001).

The review is conducted in the context of the advent of the fourth generation of offender assessment. Bonta (1996) earlier described three generations of risk assessment. The first generation (1G) consisted mainly of unstructured professional judgments of the probability of offending behavior. A

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variation of this approach is now called “structured clinical judgment” (e.g., HCR-20; Webster, Douglas, Eaves, & Hart, 1997). Second-generation (2G) assessments were empirically based risk instruments but atheoretical and consisting mostly of static items (e.g., the Salient Factor Score or SFS; Hoffman, 1994). Third-generation (3G) assessments were also empirically based but included a wider sampling of dynamic risk items, or criminogenic needs, and tended to be theoretically informed (e.g., Level of Service Inventory–Revised or LSI-R; Andrews & Bonta, 1995). The fourth generation (4G) guides and follows service and supervision from intake through case closure. With postclosure follow-up, outcome may be linked with intake assessments of risk, strengths, need, and responsivity, with reassessments, and with service plans, service delivery, and intermediate outcomes. With systems that recognize the criminogenic-noncriminogenic distinction, the achievement of less and more relevant intermediate outcomes may be compared in relation to recidivism and with measures of well-being. The point is not only the development of management information systems but also the development of human service assessment and treatment systems. A major goal of the 4G instruments is to strengthen adherence with the principles of effective treatment and to facilitate clinical supervision devoted to enhance public protection from recidivistic crime. To our knowledge, the best known of the 4G systems are the original and classic Wisconsin (now known as Correctional Assessment and Intervention System [CAIS], information available at www.nccd-crc.org/need_main.html), and Correctional Offender Management Profiling for Alternative Sanctions (COMPAS; information available at www.northpointe.com). The Offender Intake Assessment (OIA) of Correctional Service Canada (Motiuk, 1997) and the Level of Service/Case Management Inventory (LS/CMI; Andrews, Bonta, & Wormith, 2004).

To begin, we note that theoretical, empirical, and applied progress within the psychology of criminal conduct (PCC) has been nothing less than revolutionary. This is important because the 1990 articles opened with a statement that the PCC was crucial to effective correctional treatment. Second, this article takes a brief look at clinical judgment (1G) with a nod to structured clinical judgment, notes a new energy in 2G actuarial instruments, and a renewed appreciation of the assessment of change (3G). Third, the challenge faced by forensic mental health approaches from general correctional instruments, even within mental health samples, is reviewed. Fourth, the widely known principles of effective service for offenders are supplemented by additional principles derived from meta-analytic evidence. Finally, the article closes with a discussion of some negative evaluations of RNR and the challenges that feminist, critical criminological perspectives and humanistic perspectives present to the future of risk and/or need assessment.

THE PCC

In just 15 years, the PCC has moved from being a minor irritant to being a major player in criminology and criminal justice and a key component of the fast-growing area of a justice and/or forensic psychology. Now, instructors and students are able to draw on a number of relevant textbooks (Andrews & Bonta, 2003; Bartol & Bartol, 2005; Blackburn, 1993; McGuire, 2004). Developments in the PCC are apparent in the domains of theory, research, and application.

Theory

The general personality and social psychology of crime, with special attention to social learning and/or social cognition theory, is now the prominent theoretical position in criminology. This development has been traced in some detail by Andrews and Bonta (2003) and need not be repeated here. Moreover, it is clear that personality constructs such as low self-control and social learning constructs such as antisocial cognition and antisocial associates make independent contributions to the analysis of criminal behavior (Pratt & Cullen, 2000). Antisocial personality pattern itself appears to reflect several factors. The overtly behavioral one, reflecting early and continuing involvement in diverse antisocial conduct, may be better conceptualized as antisocial behavioral history. Others are more clearly temperamental (J. D. Miller & Lynam, 2001): weak self-control (low conscientiousness) and high antagonism (low agreeableness). Psychopathy may be understood in terms of fundamental dimensions of temperament (J. D. Miller & Lynam, 2003). Attitudes, associates, history, and personality, the big four in theory, are also of major empirical importance.

Empirical Understanding of Predictors

Meta-analyses of the risk and/or need factors with diverse offender groups have clarified our knowledge of major, moderate, and minor risk factors (Bonta, Law, & Hanson, 1998; Gendreau, Little, & Goggin, 1996; Hanson & Morton-Bourgon, 2004; Lipsey & Derzon, 1998). Moreover, the Psychopathy Checklist-Revised (PCL-R; Hare 1990) and the Violence Risk Appraisal Guide (VRAG; Quinsey, Harris, Rice, & Cormier, 1998) have lifted forensic mental health out of its dreary reliance on clinical judgment. Now, psychologists, criminologists, and mental health and justice practitioners have a common language, a shared knowledge base, and the shared technology of RNR.

One nonquantitative summary of the findings regarding the more and less powerful risk and/or need factors is provided in Table 1. We summarize the content of Table 1 by reference to the "big four" (the first four in the table) and the "central eight" (all eight of the major risk and/or need factors). Notably, the major risk and/or criminogenic need factors and the power of social learning and/or cognitive-behavioral influence strategies are readily identified within general personality and social learning perspectives on criminal behavior (Andrews & Bonta, 2003, chapters 3 and 4). Also noteworthy is that the relatively mild predictive validity of the minor risk factors, when present at all, most likely reflects contributions through the big four. For example, the predictive validity of mental disorder most likely reflects antisocial cognition, antisocial personality pattern, and substance abuse (Link, Andrews, & Cullen, 1992; Swanson, Borum, Swartz, & Monahan, 1996) whereas the contributions of socially disadvantaged neighborhoods reflect, in part, the lower strength and higher personal and interpersonal risk levels of residents (Stouthamer-Loeber, Loeber, Wei, Farrington, & Wikström, 2002). Similarly, Ron Akers has argued for years that the contributions of age, race, and gender may be largely understood through their association with core social learning variables (Akers & Jensen, 2003).

Empirical Understanding of Effective Treatment

McGuire (2004) identified 42 meta-analytic investigations of effective intervention published since 1989. The meta-analyses of Andrews, Dowden, and colleagues (summarized in Andrews & Bonta, 2003, chapters 2 and 7) were explicitly designed to test the principles of effective correctional treatment. At the risk of making statistical purists unhappy, we summarize the enhanced understanding of effective treatment by examining the correlation of adherence to RNR (less-more) with effect size (Pearson's r) in our meta-analytic data set. It is now apparent that support for the risk principle increases from very modest to strong with increases in the precision of the risk assessment. For example, the correlation of risk with effect size varies from a mild $r = .12$ when crude aggregate risk classifications are used through $r = .54$ when risk is assessed as the recidivism rate in the control groups (Andrews & Dowden, in press-b; reanalysis of Nesovic, 2003, data). It is also apparent that the validity of the need principle was underestimated in our original 1990 meta-analysis. Now, considering the full metric of the number of targeted criminogenic needs, the correlation of effect size with adherence to the need principle becomes $r = .58$ compared to the $r = .25$ value found using the more crude measure of adherence employed in the original 1990 study. Thus, multimodal has been added as a principle of effective treatment

TABLE 1 Major Risk and/or Need Factors and Promising Intermediate Targets for Reduced Recidivism

<i>Factor</i>	<i>Risk</i>	<i>Dynamic Need</i>
History of antisocial behavior	Early and continuing involvement in a number and variety of antisocial acts in a variety of settings	Build noncriminal alternative behavior in risky situations
Antisocial personality pattern	Adventurous pleasure seeking, weak self-control, restlessly aggressive	Build problem-solving skills, self-management skills, anger management and coping skills
Antisocial cognition	Attitudes, values, beliefs, and rationalizations supportive of crime; cognitive emotional states of anger, resentment, and defiance; criminal versus reformed identity; criminal versus anticriminal identity	Reduce antisocial cognition, recognize risky thinking and feeling, build up alternative less risky thinking and feeling, adopt a reform and/or anticriminal identity
Antisocial associates	Close association with criminal others and relative isolation from anticriminal others; immediate social support for crime	Reduce association with criminal others, enhance association with anticriminal others
Family and/or marital	Two key elements are nurturance and/or caring and monitoring and/or supervision	Reduce conflict, build positive relationships, enhance monitoring and supervision
School and/or work	Low levels of performance and satisfactions in school and/or work	Enhance performance, rewards, and satisfactions
Leisure and/or recreation	Low levels of involvement and satisfactions in anticriminal leisure pursuits	Enhance involvement, rewards, and satisfactions
Substance Abuse	Abuse of alcohol and/or other drugs	Reduce substance abuse, reduce the personal and interpersonal supports for substance-oriented behavior, enhance alternatives to drug abuse

NOTE: The minor risk and/or need factors (and less promising intermediate targets for reduced recidivism) include the following: personal and/or emotional distress, major mental disorder, physical health issues, fear of official punishment, physical conditioning, low IQ, social class of origin, seriousness of current offense, other factors unrelated to offending.

Thanks to Shad Maruna and colleagues (Maruna, Lebel, Mitchell, & Naples, 2004) for expansion of antisocial cognition to include the broader construct of personal identity.

(with thanks to Mark Lipsey and a caveat that the focus must be on a relative predominance of criminogenic needs relative to noncriminogenic needs).

Adherence with general reponsivity in relation to effect size remains strong but can be augmented through explicit assessment of staff relationship and staff structuring skills (see Dowden & Andrews, 2004, for a discussion of core correctional practices). With explicit additional attention to integrity through management of the setting and the selection, as well as training and clinical supervision of staff members (Andrews & Dowden, in press-a), the correlations with effect size reach into the .60 range.

Adherence with specific responsivity and professional discretion has yet to be explored meta-analytically. Of course, many other issues are raised within this meta-analytic databank but, with due respect for replication and extension, prevention and treatment programs aimed at reducing reoffending are well advised to attend to the RNR principles. All in all, the psychology of criminal conduct provides a base for RNR that is much more solid in 2005 than it was in 1990.

PREDICTIVE CRITERION VALIDITY OF 1G AND 2G ASSESSMENTS

Recent meta-analyses have quantified the weak predictive validity of unstructured clinical judgment. Averaged across the six 1G mean estimates in Table 2, the overall mean r was .12. The pattern of results is exactly that found in the prediction literature generally (Grove, Zald, Lebow, Snitz, & Nelson, 2000).

Structured clinical judgment (SCJ) reflects a decision based on a review of specified items but without a validated mechanical system linking scores to decisions. The great promise of SJC is that with follow-up studies, knowledge of empirical validities will emerge much faster than it could from unstructured judgment. Meta-analytic comparisons involving SCJ approaches are not yet available except for sex offender samples (Hanson & Morton-Bourgon, 2004) wherein structured clinical judgments did better than unstructured assessment but not as well as later generation approaches.

Actuarial instruments (2G) that rely on a few static criminal history items with perhaps a minor sampling of dynamic domains continue to function well. The overall mean predictive validity derived from the three Bonta and Hanson reviews was .42 for general recidivism and .39 for violent recidivism and are dramatically higher than the 1G estimates. It is interesting to note, and subject to further study, Hanson and Morton-Bourgon (2004) found that mean validity of general criminality risk and/or need scales equaled or exceeded that of specialized sex-offending instruments even in the prediction of sexual violence.

TABLE 2 Mean Predictive Criterion Validity Estimates (*r*) From Meta-Analytic Studies by Generation (*k*)

<i>Study</i>	<i>Recidivism</i>			
	<i>General</i>	<i>Violence</i>	<i>Scale</i>	
First-generation unstructured clinical judgment				
Bonta, Low, & Hanson (1998) ^a	.03 (5)	.09 (3)		
Hanson & Bussière (1998) ^b	.14 (8)	.10 (10)		
Hanson & Morton-Bourgon (2004) ^b	.12 (7)	.20 (9)		
Mean	.10	.13		
Second-generation actuarial (mechanical)				
Bonta, Law, & Hanson (1998) ^a	.39 (6)	.30 (7)		General
Hanson & Bussière (1998) ^b	.42 (5)	.46 (6)		General
Hanson & Morton-Bourgon (2004) ^b	.46 (3)	.40 (3)		General
Mean general scales	.42	.39		
Gendreau, Little, & Goggin (1996)	.26 (15)			SFS
Gendreau et al. (1996)	.31 (14)			Wisconsin
Gendreau et al. (1996)	.29 (9)			PCL-R
Gendreau, Goggin, & Smith (2002)	.24 (30)	.23 (26)		PCL-R
	.26 (6)	.30 (5)		PCL-R ^d
Hemphill & Hare (2004)	.30 (7)	.28 (5)		PCL-R ^d
Mean PCL-R	.27	.27		
Rice & Harris (telephone communication, December 10, 2004)		.39		VRAG
Third-generation mechanical with dynamic items				
Gendreau et al. (1996)	.33 (28)			LSI-R
Gendreau et al. (2002)	.39 (33)	.28 (16)		LSI-R
	.40 (6)	.24 (5)		LSI-R
Hemphill & Hare (2004)	.33 (7)	.23 (5)		LSI-R ^d
Mean LSI-R	.36	.25		
Fourth-generation clinical assessment systems (from intake through closure)				
Andrews, Bonta, & Wormith (2004) (compiled from chapter 6)	.41 (8)	.29 (7)		LS/CMI

NOTE: SFS = Salient Factor Score; PCL-R = Psychopathy Checklist–Revised; VRAG = Violence Risk Appraisal Guide; LSI-R = Level of Service Inventory–Revised; LS/CMI = Level of Service/Case Management Inventory.

k = number of primary estimates.

a. = Mentally disordered offenders.

b. = Sex offenders.

c. = General risk scales.

d. = Within-sample comparisons.

The classic correctional 2G instruments did well in the prediction of general recidivism; Wisconsin Risk has a mean of .32 and SFS has a mean of .30. Their predictive success is particularly notable in that for decades, probation and parole officers were successfully predicting criminal recidivism, while

forensic mental health professionals were failing miserably. Fortunately, forensic mental health assessments have advanced with the standardization and quantification of Cleckley's clinical description of psychopathy with the PCL-R. Hare and colleagues are adamant that the PCL-R is not a risk and/or need scale but a diagnostic instrument (Hemphill & Hare, 2004). So be it; however, obviously the PCL-R is also a systematic survey of items tapping antisocial personality and a history of antisocial behavior (two of the big four). Mean PCL-R predictive criterion validity estimates are indeed impressive (.27 for general and for violent recidivism) and in the same range although somewhat lower than the correctional instruments.

The PCL-R is a key component of the 2G instrument VRAG (Quinsey et al., 1998). As evident in Table 2, the VRAG is outstanding in the prediction of violence. The overall mean estimate of .39 is substantially greater than all other mean estimates in the violence column of Table 2 but for the Hanson estimates (and primary studies of VRAG contributed to the Hanson estimates). If one believes the PCL-R rescued forensic mental health assessment, then the VRAG carried the whole field of violence prediction, based in corrections and forensic mental health, to a new level. Thus, the VRAG demands special attention.

Reflecting 2G respect for multiple regression approaches to item selection and the 2G dustbowl atheoretical tradition, the VRAG (first known as the Violence Prediction Scheme: Webster, Harris, Rice, Cormier, & Quinsey, 1994) was built through careful and comprehensive coding of psychosocial history and clinical files in a maximum-security forensic psychiatric facility. The findings established, overwhelmingly so, that the major predictors of violence in that forensic sample were not mental health variables but the risk factors already well established in general corrections and the psychology of criminal conduct (recall Table 1). Much of the content of the VRAG was drawn from the central eight risk factors. However, some "minor" risk factors were selected and were scored as strengths: being schizophrenic, having a female victim of index offense, and inflicting serious injury are each scored as factors that reduce risk. The VRAG team has already shown that a short objective historical scale (the Child and Adolescent Taxon Scale—CATS) can replace the PCL-R. Perhaps simple checklists could also replace the diagnoses of "schizophrenia" and "any personality disorder" in addition to providing substitutions for inversely scored serious injury and female victim (if the latter two, in fact, are found to be required at all).

The possibility of achieving satisfactory prediction without the use of clinical items was demonstrated in a study of the Offender Group Reconviction Score (OGRS; Copas & Marshall, 1998). The OGRS consists of age, gender, and criminal history items selected based on their predictive validity

in general offender samples. In a study of 315 offenders who were mentally disordered (Gray et al., 2004) and without sampling a single mental health item, OGRS outperformed forensic instruments. The massive superiority of the general risk assessment approach was apparent across diagnosis, and the clinical scales had no incremental predictive validity. We await meta-analytic evidence before judging the ultimate value of the decidedly 2G OGRS.

PREDICTIVE CRITERION VALIDITIES OF 3G AND 4G ASSESSMENTS

Only the 3G LSI-R and 4G LS/CMI are listed in Table 2 because we have been unable to discover meta-analytic summaries or accessible listings of the predictive criterion validity estimates for the risk and need elements of the Wisconsin, COMPAS (Northpointe Institute for Public Management, 1996), OIA (Motiuk, 1997) and Offender Assessment System (OASys; HM Prison Service and National Probation Directorate, 2001). Given the limited availability of results on other 3G and 4G systems, our discussion focuses on the LSI-R and LS/CMI.

The overall mean predictive criterion validity estimates for the LSI-R (.36) and the LS/CMI (.41; see Table 2) are quite respectable with the latter equaling or exceeding all other overall mean validity estimates in the general recidivism column of Table 2. It does appear that the LSI-R is more strongly associated with general recidivism (.36) than with violent recidivism (.25). Corresponding values for LS/CMI are .41 and .29, respectively (with the latter being substantially lower than the mean correlation of VRAG with violence).

The predictive validity of the LSI-R in regard to violence may be enhanced in the LS/CMI wherein the General Risk/Need assessment (Section 1) across the central eight domains has been strengthened by the introduction of an Antisocial Personality Pattern subcomponent. It is a behavior-based assessment of early and diverse problems. Moreover, sexual assault, violence, and diversity of antisocial behavior are now also surveyed systematically. In the first prospective validation of the LS/CMI, the correlation with violent recidivism of the enhanced assessment of personality pattern and history of aggression was $r = .42$ in the follow-up of incarcerated individuals (Girard & Wormith, 2004). Barnoski and Aos (2003) also reported enhanced validity of the LSI-R with increased attention to a serious and violent criminal history. Promising but, once again, one or two studies are unconvincing and meta-analyses of more primary studies are necessary. All in all, there are now a number of correctional instruments that seriously challenge the foren-

sic mental health orientation of the VRAG for dominant status in terms of predictive criterion validity (for other promising alternatives, see Dieterich, 2003; Kroner & Mills, 2001; Loza & Green, 2003).

Substantial improvements in the predictive criterion validity of risk assessments may reside in reassessments of dynamic risk factors. The incremental dynamic criterion validity of the LSI-R is evident from several studies (Andrews & Robinson, 1984; Motiuk, Bonta, & Andrews, 1990; Raynor, Kynch, Roberts, & Merrington, 2000). Two recent dissertations (Brown, 2003; Law, 2004) demonstrate substantial gains in predictive validity with re-assessments on Correctional Service Canada's OIA need survey. Brown's (2003) study additionally incorporated assessments of rapidly changing acute risk factors. The latter may signal the "breakthrough" of the next few years (Hanson & Harris, 2000; Quinsey, Coleman, Jones, & Altrows, 1997; Zamble & Quinsey, 1997). Based on the available evidence, we anticipate reassessments will double and, perhaps, triple the outcome variance explained by intake assessments. More important, with assessments of acute factors, opportunities for timely preventive action are enhanced.

The underlying RNR in the psychology of criminal conduct is intended to apply widely. The expectation is that being human means that variation on the big four of attitudes, social support, behavioral history, and temperament will account for much of the variability in antisocial behavior across a host of situational variables. Patterns of satisfaction and dissatisfaction in the behavioral settings of family, school and/or work, leisure and/or recreation, and substance abuse and a host of more distal factors such as socioeconomic indicators will be sources of variability in the big four. The expectation is that male or female, Black or White, the predictive criterion validity of assessments of major risk factors will be evident in a variety of contexts. In fact, correlations between the LS/CMI's General Risk/Need subscale and re-offending were substantial and robust in a large sample of adult female offenders in Ontario (Rettinger, 1998). The validity was maintained within institutional and community samples and for women suffering from psychiatric problems, severe histories of abuse, and poverty (Andrews, Dowden, & Rettinger, 2001). Validity was also apparent for aboriginal and Black women. Girard and Wormith (2004) provided predictive criterion validity of the LS/CMI with diverse samples of male sex offenders, batterers, and offenders who are psychiatrically involved and nonexceptional. A similar pattern of findings is evident in reanalyses with the original LSI community corrections sample (Andrews & Bonta, 2003).

Wide applicability and robustness does not mean that there are not moderators of predictive criterion validity. For example, low base rates and/or limited variation in risk scores may limit predictive criterion validity estimates. Short follow-up periods are another consideration. One recent study of community-based female offenders who were low risk was very critical of the relevance of the LSI-R to community-based samples of female offenders who were financially disadvantaged (Holtfreter, Reisig, & Morash, 2004). LSI-R total scores were linked with recidivism albeit at the low end. The outcome variable was very unusual: self-reported rule violations or self-reported rearrest over a short 6-month follow-up period. The Financial and Education/Employment subcomponents of the LSI-R were more strongly linked to recidivism (correlations of $r = .19$ and $r = .25$) than the LSI-R total score and statistically indistinguishable from the predictive value of an income-based measure of poverty. It is interesting to note, women who were economically disadvantaged and referred to a program with an emphasis on the problems of the poor showed dramatic reductions in short-term self-reported reoffending. This appears consistent with the predictive criterion validity of the Financial and Accommodation subcomponents. Given the short follow-up period, financial difficulty was likely an acute risk factor.

A great promise of meta-analysis is discovering the moderators of variation in predictive criterion validity estimates. One, of course, is assessment generation (1G vs. the later three generations), and another is specific instruments (the apparent superiority of the LSI instruments relative to others in predicting general recidivism; the apparent superiority of VRAG in predicting violence). Still considerable variability exists within the results of studies on particular instruments. For example, single-study predictive criterion validity estimates vary from .22 to .63 from recent LS/CMI studies (Andrews et al., 2004). Some of the sources of variation in the criterion validity estimates for particular instruments are known. The issue of general versus violent recidivism was already noted. The training, experience, and clinical supervision of users may also be important moderators of predictive criterion validity. Agencies whose staff has not been trained by certified trainers yield much smaller validity estimates than agencies with better-trained staff members (Lowenkamp, Latessa, & Holsinger, 2004). The use of intake assessments in treatment-rich agencies is also an issue; that is, the simple predictive criterion validity of original risk and/or need scores will be greatly reduced when following up cases that have been appropriately treated. In those situations, retests are more valued.

*THE OUTCOME VALIDITY OF DIFFERENTIAL PROGRAMMING:
META-ANALYTIC EVIDENCE AND
EXAMPLES WITH 4G RNR ASSESSMENT*

The validation of risk assessments in the RNR context requires demonstrations that adherence to the risk principle is rewarded by enhanced public protection from recidivistic crime. The meta-analytic evidence was previously noted in that estimates of the correlation with effect size of adherence with the risk principle varied with precision of the risk estimate. Back in 1990, we were able to construct a table illustrating interactions from 12 studies. After 15 years, we are able to identify only a few additional examples. The exploration of Risk \times Treatment interactions has not become routine in the evaluation literature. However, the meta-analytic pattern is clear. Program service delivery to the offenders who are higher risk produces larger decreases in recidivism than it does for offenders who are lower risk.

It is expected that the Risk \times Treatment interaction will only be found when the service is otherwise appropriate in regard to need and responsivity. In brief, the correlation between risk and effect size increases when treatment also adheres to general responsivity (Andrews & Dowden, in press-b). With nonadherence to need and general responsivity, the correlation of adherence to risk and effect size actually turned negative ($r = -.28$).

Turning to need, and as already noted, our original statement of principles underestimated the power of need, and the multimodal principle has been added. The simple measure of "number of criminogenic needs targeted exceeded number of noncriminogenic needs targeted" is best supplemented by explicit consideration of the full differential between number of criminogenic needs targeted and number of noncriminogenic needs targeted. This result speaks volumes. There are solid ethical, legal, decent, and even just reasons to focus on some noncriminogenic needs; however, to do so without addressing criminogenic need is to invite increased crime and to miss the opportunity for reduced reoffending. The validity of general responsivity is overwhelming in the meta-analytic literature. Once again, of course, general responsivity is less important when service is not conforming with the risk and need principles.

Specific responsivity remains the least explored of the RNR principles. A number of specific responsivity approaches have been outlined. They include interview-based and questionnaire-based classification approaches such as Interpersonal Maturity Level (Jesness, 1988) and Client Management Classification (CMC; Baird, Heinz, & Bemus, 1979). A major addition to this list is stages of change theory and motivational interviewing (DiClemente & Velasquez, 2002; W. R. Miller & Rollick, 2002). Elsewhere,

van Voorhis (1994) suggested that the many categories of offenders suggested by different specific responsivity personality systems reduce to four basic types: committed criminal, character disordered, neurotic anxious, and situational. Another major development is the interest in gender-specific and culturally specific programming. The literature on gender-specific programming is large and detailed (e.g., Covington & Bloom, 1999) although largely nonevaluated.

With outstanding exceptions such as an early evaluation of CMC (Lerner, Arling, & Baird, 1986), evaluations of responsivity systems have not been conducted in the context of risk and need. A priority issue is an analysis of specific responsivity systems in terms of the extent to which the classifications do incorporate risk (and hence differential levels of service and supervision) and need (intermediate targeting) issues in addition to responsivity (differential styles, modes and strategies of intervention). CMC directs differential targeting and differential styles of intervention and has demonstrated that implementation of CMC affects revocations with moderate-risk and high-risk cases.

Advances in the assessment of psychopathy permit the conceptualization of the construct in RNR terms. Proposals have been presented of breaking down the PCL-R items into static criminal history, dynamic criminogenic needs, and responsivity items (Andrews & Bonta, 2003; Bonta, 2002; Simourd & Hoge, 2000). In fact, Wong and Hare (2005) incorporated elements of RNR into their treatment prescriptions. The risk presented by people who are psychopaths is well documented; however, a discussion of criminogenic need, multimodal, general responsivity, and specific responsivity is a high-priority issue. In 1990, Andrews and colleagues proposed that the many personality-based responsivity systems could be reduced to a few differential treatment hypotheses involving several sets of offender characteristics including cognitive and/or interpersonal skills, anxiety, antisocial personality, motivation, social support, gender/race/ethnicity, and mental disorder. We now add strengths to the list as in "design a plan that builds on the strengths of the person." We await new primary studies and meta-analytic evidence in regard to specific responsivity. Research should be stimulated with the addition of a specific responsivity section to LS/CMI.

With an early version of the Youth Level of Service/Case Management Inventory (YLS/CMI; Hoge & Andrews, 2002), rated gains on intermediate criminogenic targets were more strongly correlated with reduced recidivism among higher risk cases than with lower risk cases. Probation files were coded according to the achievement of intermediate objectives, and the objectives themselves were coded as appropriate or inappropriate according to the assignment of major and minor need factors (Table 1). Section 9 (Case

Management Plan) and Section 10 (Progress Record) of the LS/CMI followed this approach by monitoring targets reflecting criminogenic and noncriminogenic needs.

These 4G approaches have opened up opportunities for advances in service and public safety. In addition, knowledge gains will be evident in regard to many important service and theoretical issues in the near future. Obvious perhaps, however, at least modest gains may be expected in predictive criterion validity through continuing work on the incremental value of strength ratings and expanded or refined assessments of criminal history and antisocial personality pattern. The possibility of personal and/or emotional well-being interactions with gender or other risk factors must be explored. Studies of change and acute risk factors may soon establish, on average, just how much of an improvement in predictive accuracy may be expected. Simultaneous monitoring of changes in criminogenic and noncriminogenic needs may help reshape the content of the categories of criminogenic and non-criminogenic needs. Studies that integrate the process of service planning, delivery, and intermediate outcome from intake through case closure and follow-up are most desirable. We see responsivity issues as priority ones in this process.

DOES IMPLEMENTATION OF RNR ENHANCE OUTCOMES? AGENCY-LEVEL STRUCTURAL EFFECTS

The Correctional Program Assessment Inventory (CPAI2000; Gendreau & Andrews, 2001) was developed to assess the degree of adherence to the principles of RNR demonstrated by a program or correctional agency. It is possible to assess the strengths and weaknesses of agencies and their programs in regard to implementation of RNR and to identify areas in which improvements might be considered. In research and applied terms, it is possible to explore agency-level practice, structure, and culture not simply on the usual financial and/or staffing issues but in terms of adherence to demonstrably powerful principles of effective correctional treatment.

Edward Latessa and Christopher Lowenkamp and their colleagues and students (Lowenkamp, 2004; Lowenkamp & Latessa, 2002) have demonstrated that agency-level variation in adherence with RNR is associated with the success rates of correctional agencies. Each agency had completed a CPAI that included an assessment of the extent to which risk and/or need assessments were done. Agencies that actively employed standardized risk and need assessments had a greater impact on recidivism than agencies that did not (correlations with effect sizes of .33 and .16, respectively; Lowen-

kamp, 2004). Reassessment with standardized instruments was also linked with outcome (.39). Of course, consideration of general responsiveness enhanced outcomes even further. The correlation between total CPAI scores and effect size was $r = .41$. It is interesting to note, Aleksandra Nesovic's (2003) meta-analytic evaluation of the CPAI yielded a correlation with effect size in the same range (.50). We can look forward to agency-level experimental investigations in which agencies are differentially exposed to and trained in RNR, and the CPAI may be used as an intermediate check on integrity of implementation.

PROMISE AND CHALLENGE OF ALTERNATIVE MODELS TO RNR

With the possible exception of those self-consciously engaged in ongoing critical discourse, we assume that challengers of RNR are committed to the ethical, legal, efficient, decent, and just pursuit of reduced victimization (recidivism) through human service delivery. We also assume a shared commitment to implementation of the least onerous interpretation of the sanction. In one sense, feminist and critical criminological critiques of RNR are an important and valuable reminder that a commitment to rational empiricism is fundamental to the design and improvement of classification procedures. Skepticism, indeed "unsparing criticism," is a major defining component of rational empiricism. Another component is respect for evidence. Thus, the rational empiricists involved in classification research have devoted energy to the documentation of reliability and validity issues and must continue to do so.

Assertions that "nothing is a risk in itself: there is no risk in reality" and yet "anything can be a risk" is a postmodern diversion coming from acknowledged skeptics in regard to prediction (Hannah-Moffat & Shaw, 2001, pp. 12, 18). Skepticism, indeed, but consider further the following: "risk and the enterprise of risk management appears on the surface to be moral, efficient, objective, and non-discriminatory, but they are not" (p. 12). Consider this: "the compartmentalizing of risk identities is actually a spuriously correlated constellation of traits that, in reality, hinge upon the actual predictors of socioeconomic status, ethnicity, gender and age" (Rigakos, 1999, p. 145). Actually, in our opinion, the demonstrated superior predictive criterion validity of RNR assessments relative to social location variables is being trivialized and human diversity discounted.

Once again, everyone agrees that immoral and discriminatory practices are to be avoided. Indeed, some have argued "failure to conduct actuarial risk

assessment or consider its results is irrational, unscientific, unethical, and unprofessional" (Zinger, 2004, p. 607). To sample factors unrelated to offending in a risk assessment instrument is to invite overclassification. Positively, rational empiricists are fortunate that a new subfield of critical criminology has arisen to assist us in our agreed-on goal of decent and just applications. RNR researchers and practitioners (and RNR products and processes) are a focus of the new critical discourse of understanding risk management and the risk society. This is good because criticism can be helpful and perhaps particularly so when it comes from outside the RNR professional group.

Some feminists and some clinical psychologists have been concerned with the lack of attention paid to personal well-being in the RNR approach. This concern extends to a failure to recognize the special needs of female offenders in terms of victimization, poverty, ethnicity, child care, and so on. Tony Ward and colleagues (Ward & Brown, 2004; Ward & Stewart, 2003) more generally noted that RNR is too negative (reducing too much to risk and need), does not recognize strengths, and is not devoted to enhancing human potential and achievement. We strongly endorse explorations of the issues surrounding RNR and other principles. The idea of enhancing RNR through greater attention to human motivation is very attractive. However, reduction of criminal victimization and enhancement of well-being are too important to be pursued in other than an ethically informed rational empirical manner. One should explore alternative strategies and theories but be very careful about who is treated, what is targeted, the influence strategies employed, and the quality of the direct service staff and program management.

CONCLUSIONS AND DIRECTIONS FOR THE FUTURE

Advances in the psychology of criminal conduct, on which RNR is based, have been dramatic. Meta-analyses of the prediction and treatment literature have strongly advanced knowledge, and dissemination has been impressive. General personality and social cognition perspectives are the dominant theoretical position. The predictive criterion validity of actuarial assessments of major risk and/or need factors greatly exceeds the validity of unstructured clinical judgment. New studies will address the methodological, training, supervision, and other factors that account for validity estimates that reside on the lower and upper edges for various instruments.

Evidence supports the incremental predictive criterion validity of reassessments of the major criminogenic need factors, including acute needs. The limits of this aspect of risk and/or need assessment have yet to be explored in anything but a most preliminary manner. In the absence of reas-

assessment, it is not apparent that the predictive criterion validity of the best constructed of 3G and 4G assessments of risk and or need exceeds that of the best constructed 2G assessments of risk.

Specific responsivity assessment has a history in corrections, and there are many promising leads. However, understanding the interactions of offender and treatment characteristics remains a high-priority issue. The existing personality-based systems need to be analyzed according to the elements of risk, need, and responsivity. Advancements in the domains of self-control, psychopathy, stages of change, treatment readiness, and strengths are highly relevant here. Overall, we also continue to recommend systematic exploration of the domains of interpersonal and/or cognitive maturity, gender, and ethnicity and/or culture as responsivity issues.

The promise of 4G assessments is that linkages among assessment and programming, and of each with reassessments, and ultimate outcome will be very rewarding in theory and practice. The value of the assessments resides in planning and delivering effective service. The 4G assessment instruments promote good planning and delivery. They should greatly enhance clinical supervision of direct contact staff members. The roles for noncriminogenic need influence strategies beyond social learning and/or cognitive-behavioral interventions, and general well-being as an outcome are of additional interest.

Positive findings from the new generation of studies using instruments such as the CPAI may well have a dramatic impact on the development and successful implementation of RNR. The available evidence, and that structural evidence is brand new, suggests that agency adoption of RNR is rewarded by enhanced public protection at least when assessment and service are conducted with integrity.

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