JOURNAL OF PERSONALITY ASSESSMENT, 1992, 58(2), 231–244

Response Frequency Problems in the Rorschach: Clinical and Research Implications With Suggestions for the Future

Gregory J. Meyer
Department of Psychiatry
University of Chicago Hospitals

This article focuses on clinical and research problems associated with response frequency (*R*) being a variable in the Rorschach. Despite the fact that variations in *R* directly contribute to 50% of the explainable variance among Rorschach raw scores, there is a dearth of empirical evidence to document what *R* actually measures. Furthermore, in the practical use of the Rorschach's structural data, *R* is considered to be a nuisance variable that is controlled and not deemed interpretively significant. Given this information, two research agendas are proposed. The first is to more thoroughly determine whether *R* measures anything of substantial clinical importance. The second is to evaluate systematically the relative merits of making *R* a constant rather than a variable through use of an *R*-controlled method of Rorschach administration. This strategy would resolve many of the psychometric problems related to *R*. Introducing greater structure and clearer expectations to the task may also sharpen the Rorschach's ability to assess and predict important aspects of personality. However, significant disadvantages would also result from this change in administration. Both sides of the issue are discussed in some detail.

Response frequency (*R*) is not a problem when the Rorschach is used as a fully idiographic instrument. However, it introduces clinical and research problems when the test is utilized in a nomothetic fashion. Aronow, Reznikoff, and Rauchyway (1979) suggested that the test should be made an even more idiographic instrument. Although this may be useful in some contexts, there are clear advantages to developing the nomothetic capacities of the test. Already, particularly through Exner's (1978, 1986) work, broad patient and nonpatient norms have been established and normatively based indices have been developed to identify psychotic fragmentation, depression, and hypervigilant processes, to name a few. In order to further these nomothetic advances the problem of *R* has to be addressed in a systematic and intelligent fashion. To do so three central questions need attention: (a) What nomothetic problems does *R* create?, (b) what exactly does *R* measure?, and (c) do the costs of having *R* as a variable outweigh the benefits associated with it?

WHAT NOMOTHETIC PROBLEMS DOES *R* CREATE?

The basic nomothetic problem is that there is a strong relationship between *R* and many other (though not all) Rorschach scores (e.g., Fiske & Baughman, 1953). This is one of the most consistent findings in Rorschach research, and it is not surprising because there is a part–whole relationship between many scoring categories and total *R*. For example, the sum of the location scores, whole (*W*), usual detail (*D*), and unusual detail (*Dd*), must equal *R*, as must the sum of all main determinants, main content categories, developmental quality scores, and form quality scores.

Given this, we find that *R* is consistently and highly correlated with many other Rorschach scores. For example, *R* has correlated with: *D*, pure form (*F*), and the number of content categories in the .7 to .9 range; *Dd* in the .6 to .8 range; and human movement (*M*), animal movement (*FM*), organizational frequency (*Zf*), white space (*S*), *# of Pairs*, texture (*T*), vista (*V*), and diffuse shading (*Y*) in the .4 to .7 range (see Consalvi & Canter, 1957; Cox, 1951; Lotsof, Comrey, Bogartz, & Arnsfield, 1958; Meyer, 1989; Shaffer, Duszynski, & Thomas, 1981; Williams & Lawrence, 1953, 1954; Wittenborn, 1950a, 1950b). In general, correlations between *R* and other variables tend to be somewhat higher for protocols administered under the Beck system (e.g., Beck, Beck, Levitt & Molish, 1961), though the ranges just listed are also found with the Comprehensive System.[1] As one would expect, there tends to be less of a correlation between *R* and scores that have already been controlled for *R* through ratios or percentages (e.g., *EB* Pervasive, D Score, Egocentricity Index, Lambda, Form Quality, etc.).

Clinically, the degree of relatedness between *R* and some scoring variables can be problematic when sores are interpreted in light of normative tables and a protocol contains an unusual number of responses. For example, the mean number of *S* responses in a normal protocol is 1.5 (*SD* = 1.2), which is based on an average 22.6 response protocol (Exner, 1990). If a subject has a 45 response

[1]For example, in a study of 268 college students (Meyer, 1989), the following correlations with *R* were observed: *D* = .78, *F* = .76, *Dd* = .67, *Pairs* = .66, *Zf* = .53, S = .48, M = .46, *FM* = .40, *FY* = .39, and *FC* = .35. These correlations are substantially larger than those reported by Exner (this issue), but why this is the case is uncertain.

protocol, statistically speaking (and assuming a simple linear relationship between *R* and *S*), it would be normal or expected to find 3 or 4 *S* responses. However, this finding would lead to increased scores on the Suicide Constellation, Depression Index, and Hypervigilance Index. In fact, a 45 response protocol could be expected to be positive on four of the seven measures that comprise the Depression Index (i.e., *FD* > 2; *S* > 2; *Sum C'* [achromatic color] > 2; and *Morbid* > 2), four of the five variables that comprise the Obsessive Style Index (i.e., *Dd* > 3; *Zf* > 12; *Popular* > 7; and *FQ*+ > 1), and approximately five of the eight variables on the Hypervigilance Index (i.e., *Zf* > 12; *S* > 3; *H* + *(H)* + *Hd* + *(Hd)* > 6; *(H)* + *(A)* + *(Hd)* + *(Ad)* > 3; and *Clothing* > 3). Obviously, a 45 response protocol is unusual in its own right and would be interpreted with caution. However, given the standard deviations associated with each of the variables just listed, it would not be unusual to find these criteria positive in a 30 response protocol. Working in the other direction, a protocol with relatively few responses would tend to generate positive scores on the Coping Deficit Index.

It may be that an excessive number of responses is indicative of depressive, obsessional, or hypervigilant tendencies, whereas a minimal number of responses is indicative of helpless qualities or deficient coping resources. That is, *R* may be an important mediating variable that contributes to the predictive validity of these indices. However, because *R* does not appear in these indices, this seems unlikely. One has to assume that the indices operate most effectively or have their greatest predictive validity for an average-length protocol. Consequently, the individual with a 30 to 40 response protocol runs a risk of being misdiagnosed with these indices. At best, the individual with a positive index in a 30 to 40 response protocol is sure to differ in important qualitative ways from the individual with a positive index in an average-length 20 response protocol. In either case, there is considerable uncertainty when drawing interpretations from deviant-length protocols. This may be most problematic for unsophisticated users of the test who rely on the computer-generated interpretive programs which are becoming increasingly available, because these programs do not take *R* into account when generating interpretations.

In research, the degree of relationship between *R* and some other Rorschach scores can also be problematic. In a correlational design one is unable to directly interpret a correlation between a Rorschach score (e.g., # of human content) and an external variable (e.g., Minnesota Multiphasic Personality Inventory *Pa* scale) if *R* is correlated with the external variable and the Rorschach score. This is because the relationship (between human content and *Pa*) may be accounted for solely by *R* working as a mediating variable (see Kalter & Mardsen, 1970, for a detailed discussion). In a between groups design, we find a similar problem. If groups differ significantly in their total *R*, one has to be very cautious interpreting any observed group differences for other Rorschach scores that are correlated with *R* (Cronbach, 1949; Perry & Kinder, 1990).

Factor analytic investigations of the Rorschach provide other data relevant to a discussion of nomothetic problems with *R*. Seventeen appropriate factor analytic studies of the Rorschach were reviewed to evaluate the impact of response frequency. Most of these studies utilized the traditional Pearson's correlation (a parametric statistic) in the data matrix, though others utilized a nonparametric measure of association (e.g., Phi coefficient, Tetrachoric correlation) to contend with the fact that many Rorschach scores are not normally distributed and are not interval-level data.

In 15 of the studies, there was a single dominant response frequency factor, whereas two studies had *R* loading high on two separate factors. Despite different subject populations, scoring systems, factor analytic methods, and numbers of extracted factors, the *R* factor was remarkably consistent across studies. The row at the bottom of Table 1 refers to the percentage of studies for which the determinant loaded significantly (i.e., $> \pm .40$) on the *R* factor. A fine-grained analysis of shading variables, which tended to be combined inconsistently across studies, suggested that *FY* and perhaps *FC'* would also define this factor. Thus, from this review it can be seen that factor analytic studies of the Rorschach reveal a ubiquitous response frequency dimension. In addition to *R*, this dimension is consistently defined by *D*, *Dd*, F, form color (*FC*), *Zf*, ordinary developmental quality (*DQo*), # of content, M, *FM*, inanimate movement (*m*), S, *FT*, *FY*, and *FC'*. These are the most frequently occurring Rorschach scores, with the exception of whole and popular responses.

A review was also conducted of four factor analytic studies that attempted to control the impact of *R* by using percentage scores. Somewhat surprisingly there was still a clear response frequency factor in the data. This factor was bipolar and had a markedly different flavor than the one just outlined. One side of the factor was defined by *R* and *Dd*%, whereas the opposing side was defined by *W*%, *Popular*%, and the percentage of content that was animal (*A*% or *A* + *Ad*%). Studies from which this factor were developed (Adcock, 1951 [two samples]; Geertsma, 1962; Wishner, 1959) were limited in the number of *R*-controlled variables included in the matrix. It is likely that additional scores would have defined this factor if the full complement of Rorschach scores had been included in the research. Nonetheless, this factor suggests that a curvilinear relationship is present between *R* and some other Rorschach scores. As *R* increases, there is a continued relative increase in *Dd* scores but a relative decrease in *W*, *Popular*, and animal responses. Therefore, percentages appear to undercompensate for the effects of *R* on *Dd*, but overcompensate for the effects of *R* on *W*, *Popular*, and animal responses.

Given the pervasiveness of the traditional (nonpercentage) *R* factor, it becomes important to know how large it is. This is determined by the proportion of variance among Rorschach scores accounted for by this dimension. There are two types of variance that can be examined—common variance and total variance. *Common variance* is the variability among scores that can be accounted

TABLE 1
The Response Productivity Factor Across 17 Studies

Study	*R*	*D*	*Dd*	*F*	*#C*	*DQo*	*FC*	*Zf*	*FM*	*M*	*m*	*FT*	*S*	*TF*	*CF*	*SumC*	*C*	*Other Shading*	*Other*
1	X	X	X	X	NA	NA	X	NA	X	X	X	X	X	–	–	NA	–	*SumC′ SumY*	*Original*
2	X	X	X	X	NA	NA	NA	NA	(X)	NA	NA	NA	NA	NA	NA	NA	(X)	*SumY + V + FD + r + C′*	X+, F+
3	X	NA	NA	NA	NA	NA	NA	NA	NA	–	NA	NA	NA	NA	NA	X	NA	*SumY + C′*	
4	X	X	X	X	NA	NA	X	NA	X	X	X	(X)	–	X	X	NA	–	*SumV, SumY*	W, VIQ, PIQ
5	X	X	X	X	NA	NA	X	NA	(X)	X	–	–	NA	X	–	NA	–	*SumV*	
6	NA	X	X	NA	NA	NA	NA	(X)	NA	(X)	NA	NA	–	NA	NA	–	NA		*Pop, H + HD*
7	NA	NA	NA	X	NA	NA	X	NA	X	X	X	X	X	–	–	NA	–	*SumC′, SumY, (FD)*	
8	X	NA	NA	NA	NA	NA	(X)	NA	X	X	NA	NA	X	NA	–	NA	NA		*MP, TAT–T, ws*
9	X	X	X	NA	X	NA	NA	NA	(X)	NA	(X)	NA	NA	NA	NA	NA	NA	*FC + FC′*	
10	X	X	NA	X	X	NA	NA	NA	–	–	(X)	NA	–	NA	NA	–	NA	*SumT*	*A + Ad*
11	X	X	X	X	NA	NA	X	NA	–	(X)	X	X	(X)	–	(X)	NA	(X)	*SumY + V + FD + r*	*Original*
12	X	X	X	NA	NA	NA	?	?	NA	?	NA	NA	NA	NA	?	NA	NA		*F + FM + m*
13	X	X	X	NA	NA	X	?	?	?	?	?	NA	NA	NA	?	NA	?		
14	X	X	X	NA	NA	X	?	?	?	?	?	NA	NA	NA	?	NA	?	*SumY*	
15	X	X	X	NA	NA	NA	(X)	NA	(X)	X	–	–	X	–	–	NA	NA	*FY*	
Split Factor Solutions																			
16	X	(X)	X	X	NA	NA	–	NA	–	–	(X)	–	–	(X)	(X)	NA	–	*(SumY)*	
	X	X	–	–	NA	NA	X	NA	X	X	–	–	–	–	–	NA	–	*(FD) (SumC′)*	
17	X	?	X	NA	NA	?	?	?	?	?	?	NA	NA	NA	?	NA	?	*SumY, SumV*	*X + %*
	X	X	?	NA	NA	X	?	X	?	?	?	NA	NA	NA	?	NA	?		*DQ+, H*
%	100	100	100	100	100	100	100	100	82	82	77	57	56	43	38	33	28		

Note. X = loading > ± .50; (X) = loading > ± .40; – = loading < + .40; NA = variable not included in study; and ? = indeterminate because of incomplete factor loading matrix. Studies are as follows: 1 = Wittenborn, 1950a; 2 = Cox, 1951; 3 = Lotsof, 1953; 4 = Williams & Lawrence, 1953; 5 = Williams & Lawrence, 1954; 6 = Borgatta & Eschenbach, 1955; 7 = Coan, 1956; 8 = Singer, Wilensky, & McCraven, 1956; 9 = Consalvi & Canter, 1957; 10 = Lotsof et al., 1958; 11 = Sultan, 1965; 12 = Schori & Thomas, 1972; 13 = Mason, Cohen, & Exner, 1985 (schizophrenic); 14 = Mason et al., 1985 (depressed); 15 = Meyer, 1989; 16 = Wittenborn, 1950b; and 17 = Mason et al., 1985 (normal). Non-Rorschach variables are as follows: VIQ = verbal intelligence; PIQ = performance intelligence; MP = speed to perceive movement in non-Rorschach inkblots; TAT–T = Thematic Apperception Test transcendence, scored when characters or events not on card are described; and WS = ability to write slowly.

for or explained by other variables included in the matrix. *Total variance* refers to all the variance in the matrix of scores. Because the latter includes error variance (due to unreliability of scoring, errors in scoring, or, in the Rorschach, reliable scoring conducted on over- or underinquired responses), most factor analytic methods are geared toward explaining common variance. Similarly, it is the proportion of common variance that yields the best estimate of how salient a factor is in the data.

Table 2 indicates that across studies variability in response frequency accounts for approximately half of the variability that is explainable among all the Rorschach scores. This is by far the largest source of variance in the test, and the size of all other Rorschach dimensions pale in comparison. Furthermore, the great size of this factor indicates that *R* is the primary entity being measured by the structural data of the test.

A final datum from factor analysis concerns the problem of colinearity within Rorschach scores. *Colinearity* refers to the fact that one or more variables can be perfectly predicted by other variables. Because *R* is in a part–whole relationship to other Rorschach scores, it can be perfectly predicted from them. This violates statistical assumptions of independence and results in the premature termination of many factor analytic programs because the correlation matrix is "ill-conditioned." From one perspective, this may imply that the factor analytic method should not be applied to Rorschach data. However, from another perspective, this finding can be seen to point out a problem with the Rorschach

TABLE 2
The Proportion of Variance Among Rorschach Scores Accounted for by Response Frequency

Study	*% Total Variance*	*% Common Variance*
Borgatta & Eschenbach, 1955[a]	23.57	41.94
Coan, 1956[a]	28.52	34.62
Consalvi & Canter, 1957	38.20	60.32
Cox, 1951	32.90	?
Lotsof, 1953	30.47	45.38
Lotsof et al., 1958	28.30	42.20
Meyer, 1989[b]	24.10	57.78
Schori & Thomas, 1972	?	38.80
Schaffer et al., 1981	40.00	?
Singer et al., 1956	26.94	34.69
Sultan, 1965	28.84	48.13
Williams & Lawrence, 1953	33.07	54.93
Williams & Lawrence, 1954	29.96	60.56
Wittenborn, 1950a	36.65	65.53
Wittenborn, 1950b[b]	31.71	65.24
Average	31.07	50.01

[a]Study did not include *R* in the correlation matrix. [b]Study had two response frequency factors.

that we generally prefer to ignore—that is, because *R* is a variable rather than a constant, it produces significant confounds within the data.

WHAT DOES *R* MEASURE?

Almost all major systematizers of the Rorschach have given interpretive significance to high *R*. However, there is little empirical evidence to substantiate the postulates that it measures obsessionalism, ego resources, or mental/ideational productivity. This may be the case, but data is currently lacking in this regard. Exner's (1986) work is an exception to the major systematizers. He did not give a direct interpretation to *R*, even though the interpretive significance of all other scores is covered in substantial detail. It is briefly mentioned that low *R* can be indicative of neurological deficit, depression, or guardedness, but data relevant to *R*'s importance are not reviewed.

Some research has demonstrated that *R* is very responsive to examiner expectations and to the testing "climate" (Exner, 1986; Exner, Armbruster, & Mittman, 1978; Guilford, 1947, cited in Cronbach, 1949). This had led a few investigators to conclude that it measures superficial or extraneous factors. Additionally, in factor analytic research, the large response frequency dimension and *R* as a raw variable have not been found to relate systematically to any external correlates, raising further doubts about this variable (Meyer, 1989).[2]

On the other hand, some researchers (e.g., Lipgar & Waehler, 1991; Perry & Kinder, 1990) have found that total *R* and card-by-card *R* differentiate groups in interpretively important ways. Additionally, though it is the least important variable on the index, cross-validated research has demonstrated that low *R* contributes to the prediction of suicide (Exner, 1986).

Thus, although evidence is scanty and contradictory, it appears that *R* does measure some features of personality. The real questions then relate to what these features are and how important it is to measure them. It is likely that *R* is not equivalent to word productivity on the Thematic Apperception Test, which is a superficially similar variable. It probably also measures something other than the types of response bias that have been found in research with self-report instruments—for example, the tendency for an individual to agree with everything or to use the extremes of a Likert-type scale. These are testable postulates; the point is simply that data which clearly document *R*'s meaning and importance are lacking.

In addition to having minimal data on the intrapsychic and external determinants that cause variability in *R*, the de facto practice for most who use the

[2]Note that although many variables have been examined in relation to response frequency, determination of what it measures has never been the explicit purpose of any factor analytic investigation.

Rorschach's structural data is to minimize *R*'s impact on scores that are viewed as more important. This is accomplished by controlling *R* in the structural summary through ratios and percentages (e.g., *M:SumC*, *EA:es*, *F:non-F*, Egocentricity Index, X+%, etc.). Unfortunately, as the factor analytic data demonstrate, percentages do not fully control the impact of *R* on other scores. Additionally, Exner indicated that, at least for research purposes, the practices of using ratios or percentages to control *R* are "far too simple and lead to major distortions" in the data (Exner, this issue).

Finally, Exner (1991) and the Rorschach Research Foundation recently made advances for using the test's structural data. This has been accomplished by defining clusters of psychologically related variables (e.g., controls and stress tolerance, affect, ideation, mediation, etc.), which are interpreted in a hierarchical fashion on the basis of key features of the protocol. Virtually every score on the structural summary (with the exception of some content) falls into one or more of the clusters. However, *R* is a notable exception because it has no place in any cluster. The implication from this appears to be that variability in *R* offers little or nothing of interpretive significance for the clinicians and researchers who use structural data.

DO THE COSTS OF HAVING *R* AS A VARIABLE OUTWEIGH THE BENEFITS?

Is the kind and quality of information obtained from *R* being a variable worth the psychometric and clinical problems this introduces? This question is likely to generate many different answers, but it would be premature to dismiss or try to answer it without more focused research.

Information reviewed here highlights *R*'s status as a variable that is in a part–whole relationship with many Rorschach scores. The location categories, primary determinants, primary content categories, developmental quality scores, and form quality scores must all equal *R* when they are summed. Even when this part–whole dependence is not present, *R* still correlates highly with many variables (e.g., space responses, populars, pairs, etc.). These factors cause *R* to define a large and broad response frequency dimension that is the central source of variability within Rorschach data. The size of this dimension is unparalleled in relation to other Rorschach dimensions, and it is evident even after attempts have been made to control *R* through percentages or ratios.

In research, *R* can create substantial confounds when one attempts to interpret some correlational studies and between group comparisons. Through a sophisticated understanding of when it is appropriate, a researcher can attempt to artificially contend with *R*'s impact by using different statistical methods (Exner, this issue; Kinder, this issue). However, these strategies are not likely to be completely effective, and their use restricts the generalizations that can be drawn from this type of research.

In clinical practice, *R*'s variability impedes the application of normative data to individual cases. Unfortunately, the statistical techniques that help contend with *R* at the nomothetic level offer no assistance to the clinician who wishes to use normative data and must draw conclusions from a deviant-length protocol. Additionally, because *R* accounts for approximately 50% of the explainable variance in Rorschach data, it plays a dramatic role in determining the raw scores that are found in a structural summary. Despite its role, there is little understanding of what *R* actually measures and, given that it does not appear in any of the new interpretive clusters, it seems the latest thinking is that the information it offers has minimal significance. In combination, these factors raise the question of whether it would be wise to control *R* during test administration. Simply stated, if *R* is not that important to our understanding of the individual taking the test, why should we continue to measure it—especially when doing so can create significant problems in research and in the clinical application of normative data?

There are a number of direct clinical and psychometric advantages that would result from controlling *R* at the point of administration (e.g., by requiring two responses per card). One advantage is that *R* would no longer be a variable, but rather a constant. As such, there would no longer be a part–whole relationship between *R* and many other Rorschach scores. This also means there would no longer be the statistical problem of colinearity within Rorschach data. Additionally, with *R* held constant, correlations between Rorschach raw scores and external measures would become readily interpretable. The same would be true for between group comparisons of Rorschach scores.

A further advantage of making *R* a constant is that determinants would not be "swamped" or diluted by the effects of *R*. For scores that now correlate highly with *R*, there would no longer be a question as to whether the observed level of a score is due to the salience of that score for the individual's psychology or if it is due to the frequency with which the individual responded to the test. In the current use of the test, this is a significant confound. If a patient has 35 responses and seven M responses, we cannot be certain whether M is elevated because of the subject's introversive nature or if it is elevated simply because there are more opportunities (35 *R*) for an M determinant to occur from an individual who is average in introversiveness. With raw scores no longer confounded by variations in *R*, structural data would become more easily interpretable (e.g., three M would be clearly different from five M), and there would be no need to use percentages on the structural summary because all raw scores would be a function of a set number of responses. This would also mean that normative guidelines and normative data would be equally applicable to all protocols.

Another consequence of an *R*-controlled form of administration is that the distributions of many scores would become more normalized. Because *R* is a variable, it contributes to the dramatically skewed shape of many score distributions. Setting *R* constant would limit the range of values that can be obtained for scores, which in turn would decrease skew. Although this may not significantly alter kurtosis, if many scores are less skewed, research would benefit because there would be less need to rely on low-power nonparametric statistics.

Adopting an *R*-controlled form of administration would change the clinical nature of the test in addition to altering the quality of the nomothetic data. At first glance, this may be considered a negative change that would reduce the dynamic richness of the test. However, the Comprehensive System already has guidelines in place for limiting *R* when it becomes excessively high and for increasing *R* when it is too low (Exner, 1986, 1988). The *R*-controlled procedure of administration would extend these guidelines by imposing an explicit and formalized structure on the task. Rather than diluting the quality of dynamic inferences that can be drawn, an overt structure may enhance our ability to make clinically significant predictions. Broadly paralleling the shift in dynamic theory to more object relational approaches, the test would not be used as a "blank screen" but as a task with "real" expectations and constraints. How the patient responds to these conditions could then provide useful information for other real-life situations in which the environment has functional demands.

Specifically, new information would be obtained about how a patient contends with this overt structure. Despite creating a clear "set" for the patient to give two responses per card, some individuals would still want to produce fewer responses, whereas others would produce more. Thus, the *R*-controlled method of administration would result in the creation of a new variable related to instances when the patient deviates from the overt structure. Like responses given at the stage of inquiry, additional responses would be noted and interpreted but would not be part of the formal structural summary.

Within this framework, one could say with greater certainty whether a patient is unable or reluctant to marshall sufficient resources to comply with minimal external demands (i.e., difficulty producing two responses per card). Additionally, one could evaluate the circumstances under which a patient becomes so provoked that they have problems in constraint or control (i.e., by giving more than two responses). Suppose, for example, that a patient has a *TF* score in conjunction with a "battered pelt" as their third response to Card VI. Interpretively, this would suggest that when this patient is in touch with internal pain, the need for interpersonal comfort or attention may result in the disregard of external structure or boundaries—perhaps resulting in attempts to prolong a therapy hour or to contact a therapist between sessions. In addition, suppose a patient has three responses to Cards VIII and X. Instead of inferring that the patient is prone to processing affective stimuli, we could infer that affective arousal leads to the disregard of environmental expectations or external limits.

Although there are many potential advantages, the disadvantages of adopting an *R*-controlled form of administration are also significant. One disadvantage is that *R* would no longer be a variable, but rather a constant. This was already listed as an advantage, but it could also be a disadvantage because the freedom a subject has with the test is diminished. Although a subject would still be free to determine what to perceive, where to see it, and how to describe it, the subject would not be free to determine how many times to respond to the task. At this point, it is unclear how significant this loss would be, but it is a potential disadvantage for dynamic inferences that are based on what stimuli provoke increased and decreased responding under unstructured conditions. A more serious disadvantage would be the loss of the affective ratio. We would lose information about how prone or willing a subject is to process emotionally toned material under unstructured conditions, and the important role that this ratio plays in the Depression Index and the Coping Deficit Index would also be lost. Finally, the most serious disadvantage would be in limiting the usefulness of current normative data. This data was developed through the traditional form of administration, and a new data base would have to be developed for the *R*-controlled form of administration. This would be a major undertaking. A tremendous amount of energy and research have been devoted to developing the Rorschach's current normative information. As such, any procedure that limits the applicability of this data would have to be carefully considered.

Given the foregoing information, a two-pronged research agenda is suggested to help clarify whether the benefits of making *R* a constant in the Rorschach outweigh the costs associated with doing so.

First, additional research is needed to determine what exactly *R* measures. This agenda is predicted on the assumption that perhaps *R* measures something significant which has been overlooked or undocumented to date. We need more knowledge of the intrapsychic and environmental conditions that produce variations in *R*. Does high *R* measure obsessionalism, active adaptive mechanisms, hostility toward the examiner who must transcribe all responses, or responsiveness to subtle expectations—or all of the above? Is *R* akin to the types of response bias found in self-report measures or to verbal productivity on the TAT? Is *R* a significant mediating variable that contributes to the predictive validity of some Comprehensive System indices? What should (and what does) the large response frequency dimension found in factor analysis relate to? A more complete understanding of *R* is necessary to evaluate whether the benefits of having *R* as a variable outweigh the costs related to this.

The second research agenda is based on knowledge of the problems that *R* can create and the degree to which its significance is discounted in the current interpretation of structural data. Within this agenda future research should evaluate whether an *R*-controlled format of administration gives greater clarity to the scores that are generally considered more important in the test. Do scores from an *R*-controlled form of administration have greater construct and predictive validity than the same scores from traditional administration? Does research with the test have greater internal validity under an *R*-controlled form of administration? Are clinical interpretations and diagnostic decisions enhanced by this method through the ready application of normative data? Do deviations from a set number of responses offer more clinically significant information than the affective ratio? Is a patient's reluctance to produce 20 responses under explicit structure more predictive of suicide than a low number of responses under less structured conditions?

It is clear that the Rorschach works well enough in most instances. It may be that for the test to continue yielding rich information on both sides of the idiographic–nomothetic fence it straddles no changes should be made in the way it is administered. If this proves to be the case, then users of the test will have to be highly cognizant of the clinical and research problems that result from *R* being a variable. On the other hand, it may be that variable *R* is like Achilles' heel in the normative use of structural data. As additional nomothetic progress is made with the test, variable *R* may become a more obvious and crippling problem. In an earlier era, Holtzman (e.g., Holtzman, Thorpe, Swantz, & Herron, 1961) concluded that *R* must be controlled in order to make refined use of nomothetic inkblot data. Most clinicians and researchers, however, did not wish to abandon Rorschach's familiar blots and the traditional method of administration. Currently, the questions and problems created by *R* remain, even within the Comprehensive System. What is different, however, is that research on the Rorschach is now at a point of maturity where the issues related to response frequency can be systematically addressed and resolved.

REFERENCES

Adcock, C. J. (1951). A factorial approach to Rorschach interpretation. *Journal of General Psychology, 44*, 261–272.

Aronow, E., Reznikoff, M., & Rauchyway, A. (1979). Some old and new directions in Rorschach testing. *Journal of Personality Assessment, 43*, 227–234.

Beck, S. J., Beck, A. G., Levitt, E. E., & Molish, H. B. (1961). *Rorschach's test: I. Basic responses* (3rd ed.). New York: Grune & Stratton.

Borgatta, E. F., & Eschenbach, A. E. (1955). Factor analysis of Rorschach variables and behavioral observation. *Psychological Reports, 1*, 129–136.

Coan, R. (1956). A factor analysis of Rorschach determinants. *Journal of Projective Techniques, 20*, 280–287.

Consalvi, C., & Canter, A. (1957). Rorschach scores as a function of four factors. *Journal of Consulting Psychology, 21*, 47–51.

Cox, S. M. (1951). A factorial study of the Rorschach responses of normal and maladjusted boys. *Journal of Genetic Psychology, 79*, 95–115.

Cronbach, L. J. (1949). Statistical methods applied to Rorschach scores: A review. *Psychological Bulletin, 46*, 393–429.

Exner, J. E., Jr. (1978). *The Rorschach: A comprehensive system* (Vol. 2). New York: Wiley.

Exner, J. E., Jr. (1986). *The Rorschach: A comprehensive system* (Vol. 1, 2nd ed.). New York: Wiley.

Exner, J. E., Jr. (1988). Problems with brief Rorschach protocols. *Journal of Personality Assessment, 52,* 640–647.

Exner, J. E., Jr. (1990). *A Rorschach workbook for the Comprehensive System* (3rd ed.). Asheville, NC: Rorschach Workshops.

Exner, J. E., Jr. (1991, March 7). Structural approach to the Rorschach. In J. E. Exner & P. M. Lerner (Chairs), *Toward an integration of a structural and a content approach to the Rorschach.* Workshop conducted at the midwinter meeting of the Society for Personality Assessment, New Orleans.

Exner, J. E., Jr. (this issue). *R* in Rorschach research: A ghost revisited. *Journal of Personality Assessment, 58.*

Exner, J. E., Jr., Armbruster, G., & Mittman, B. (1978). The Rorschach response process. *Journal of Personality Assessment, 42,* 27–37.

Fiske, D. W., & Baughman, E. E. (1953). Relations between Rorschach scoring categories and the total number of responses. *Journal of Abnormal and Social Psychology, 48,* 25–32.

Geertsma, R. H. (1962). Factor analysis of Rorschach scoring categories for the population of normal subjects. *Journal of Consulting Psychology, 26,* 20–25.

Holtzman, W. H., Thorpe, J. S., Swartz, J. D., & Herron, E. W. (1961). *Inkblot perception and personality.* Austin: University of Texas Press.

Kalter, N., & Marsden, G. (1970). Response productivity in Rorschach research: A caution on method. *Journal of Projective Techniques and Personality Assessment, 34,* 10–15.

Kinder, B. N. (this issue). The problem of *R* in clinical settings and in research: Suggestions for the future. *Journal of Personality Assessment, 58.*

Lipgar, R. M., & Waehler, C. A. (1991). A Rorschach investigation of mothers of behaviorally disturbed infants. *Journal of Personality Assessment, 56,* 106–117.

Lotsof, E. J. (1953). Intelligence, verbal fluency, and the Rorschach test. *Journal of Consulting Psychology, 17,* 21–24.

Lotsof, E. J., Comrey, A., Bogartz, W., & Arnsfield, P. (1958). A factor analysis of the WISC and Rorschach. *Journal of Projective Techniques, 22,* 297–301.

Mason, B. J., Cohen, J. B., & Exner, J. E., Jr. (1985). Schizophrenic, depressive, and nonpatient personality organizations described by Rorschach factor structures. *Journal of Personality Assessment, 49,* 295–305.

Meyer, G. J. (1989). *An empirical search for fundamental personality and mood dimensions within the Rorschach test.* Unpublished doctoral dissertation, Loyola University of Chicago.

Perry, G. G., & Kinder, B. N. (1990). The susceptibility of the Rorschach to malingering: A critical review. *Journal of Personality Assessment, 54,* 47–57.

Schori, T. R., & Thomas, C. B. (1972). The Rorschach test: An image analysis. *Journal of Clinical Psychology, 28,* 195–199.

Shaffer, J. W., Duszynski, K. R., & Thomas, C. B. (1981). Orthogonal dimensions of individual and group forms of the Rorschach. *Journal of Personality Assessment, 45,* 230–239.

Singer, J. L., Wilensky, H., & McCraven, V. G. (1956). Delaying capacity, fantasy, and planning ability: A factorial study of some basic ego functions. *Journal of Consulting Psychology, 20,* 375–383.

Sultan, E. E. (1965). A quantitative investigation of the Rorschach Inkblot Test as applied to student teachers. *British Journal of Social and Clinical Psychology, 4,* 197–206.

Williams, H. L., & Lawrence, J. P. (1953). Further investigation of Rorschach determinants subjected to factor analysis. *Journal of Consulting Psychology, 17,* 261–264.

Williams, H. L., & Lawrence, J. P. (1954). Comparison of the Rorschach and MMPI by means of factor analysis. *Journal of Consulting Psychology, 18,* 193–197.

Wishner, J. (1959). Factor analyses of Rorschach scoring categories and first response times in normals. *Journal of Consulting Psychology, 23,* 406–413.

Wittenborn, J. R. (1950a). A factor analysis of Rorschach scoring categories. *Journal of Consulting Psychology, 14,* 261–267.
Wittenborn, J. R. (1950b). Level of mental health as a factor in the implications of Rorschach scores. *Journal of Consulting Psychology, 14,* 469–472.

Gregory J. Meyer
Department of Psychiatry
Box 411
University of Chicago
5841 South Maryland Avenue
Chicago, IL 60637-1407

Received April 3, 1991
Revised May 9, 1991