representation scale, the Mutuality of Autonomy scale. This research reported an association between Picker's CS-based score and interpersonal or object-relations development.

Thus, there is a strong empirical grounding for Rorschach

ployed an extreme groups design (Wood, Nezworski, Stejskal, Garven, & West, 1999). Post hoc goodness-of-fit analysis with logistic regression addressed incremental validity. This analysis demonstrated that the HEV's ability to differentiate these two groups of women were not accounted for by other Rorschach variables and responses (WSum6, X – %, demographic variables, and the responses excluded from the HEV). These findings, in the context of the previous positive findings, suggest that Rorschach human representations captured by the HEV offered specific information about interpersonal perception as a foundation to interpersonal relatedness and psychological health.

Table 3 summarizes the available HEV descriptive data published in journals and dissertations. The groups are arranged from low to high HEV scores, that is, from healthy to problematic scores. As in the original (Perry & Viglione, 1991) study, PHE was greater in number and more variable than GHE. These research findings and experience with the HEV revealed some possible areas for improving the HEV. For example, PHE responses were more frequent than GHE responses in almost all samples. Moreover, this predominance of PHE in many cases seemed to contradict our assessment of the responses according to interpretive guidelines culled from the empirical and theoretical literature. Also, examinations of representative protocols suggested that some neutral or even positive human representational responses were misclassified as PHE.

The greater variability of PHE associated with the higher frequency of PHE relative to GHE initially led Perry and Viglione (1991) to incorporate corrective weights and a constant in the original HEV calculation equation. However, these weights confused some commentators (Wood, Nezworski, Stejskal, & Garven, 2001; Wood et al., 1999). To make calculation more simple, it was determined that a simple raw (unit weighted) difference score would be preferable. Such a simplification could only be justified if the GHE and PHE distributions were more similar.

ENHANCING HE HE O PROD CE HE HR

For these reasons, we decided to examine the original HEV algorithm for differentiating GHE from PHE responses with

TABLE 2
HEV and HRV Algorithms for Classifying Human Representational Responses As Good or Poor

HEV	*HRV*
S A. S A R T- a C a E - H a C C [H, (H), H , (H), H_], - D a M, COP AG S a S W - a FM C	
S B. A E - a G P Ea - - T- H a R T- F C a - a A - C	
1. Assign Good (GHE) for responses containing a Pure H coding that also have all of the following: (a) Form Quality of FQ+, FQo, or FQu (b) No cognitive special scores	1. Assign Good (GHR) for responses containing a Pure H coding that also have all of the following: (a) Form Quality of FQ+, FQo, or FQu (b) No cognitive Special Scores except DV (c) No Special Scores AG or MOR
2. Assign Poor (PHE) to the remaining responses that have either (a) FQ minus, (b) ALOG, CONTAM, or any Level 2 cognitive Special Score, or (c) AG or MOR	2. Assign Poor (PHR) to the remaining responses that have either: (a) FQ minus or FQ none (no Form) or (b) ALOG, CONTAM, or any Level 2 cognitive Special Score
3. Assign GHE to any remaining responses that have either (a) Popular to III, IV, VII, and IX or (b) Responses with COP	3. Assign GHR to any remaining responses that have the Special Score COP but do not have the Special Score AG
4. Assign PHE to any remaining responses that have either (a) Responses without H that contain (H), Hd, (Hd), or Hx, (b) FABCOM1, INCOM1, DR1, or (c) Responses with FQnone	4. Assign PHR to any remaining responses that have either: (a) The Special Scores of FABCOM or MOR, or (b) The Content of An
5. Assign GHE to all remaining responses	5. Assign GHR to any remaining responses that have a Popular to III, IV, VII, or IX 6. Assign PHR to any remaining responses that have either: (a) The Special Scores AG, INCOM, DR, or (b) An Hd coding [not (Hd) coding] 7. Assign GHR to all remaining responses
S C: C a - GHE PHE Ra a Ca a - HEV	*S C: C a - GHR PHR Ra a Ca a - HRV*
1. Express as ratio of GHE to PHE responses (e.g., 5:3) 2. Calculate the HEV score (a) Formula 0.51(PHE) – 0.75(GHE) + 0.04 = HEV (b) Positive scores are associated with more impairment	1. Express as ratio of GHR to PHR responses (e.g., 5:3) 2. Calculate the HRV score (a) Formula GHR – PHR = HRV (b) Negative scores are associated with more impairment

N . HEV = Human Experience Variable; HRV = Human Representational Variable; GHE = Good Human Experience; PHE = Poor Human Experience; GHR = Good Human Representation; PHR = Poor Human Representation.

TABLE 3
HEV and HRV Scores of Adults Published in Journal Articles or Dissertations

			GHE		*PHE*		*HEV*	
S	*Sa D*	*N*	*M*	*SD*	*M*	*SD*	*M*	*SD*
HEV								
Burns, 1993; Burns & Viglione, 1996	Nonpatient married women good interpersonal relations	35	3.66	2.15	2.03	1.75	–1.68	1.98
DeLucas, 1997[a]	Military male security personnel—adequate and good relationships	30	2.37	1.13	1.80	1.86	–0.78	1.23
Auslander, 2000	Older nonpatients, mean age = 75	45	2.30	2.00	2.30	2.00	–0.44	1.40
Perry, Sprock, et al., 1995	Nonpatient college men placebo	20			2.04			
Perry, Sprock, et al., 1995	Nonpatient college men, small dose amphetamines	20			2.45			
DeLucas, 1997	Military violent male offenders	33	2.85	1.37	3.39	2.12	–0.38	1.58
Netter, 1990; Netter & Viglione, 1994	Nonpatient volunteers	20	3.10	2.12	3.85	3.59	–0.32[b]	
Auslander, 2000	Older patients with schizophrenia, stabilized on meds, with late-life onset; mean age = 60	44	2.10	1.90	2.40	2.90	–0.27	1.90
Perry, 1989; Perry & Viglione, 1991	Outpatients with depression diagnosis	49	2.63	1.86	3.80	2.48	–0.01	1.94
Haller, 1982; Haller & Exner, 1985[c]	Inpatients with depression symptoms	50	2.09	1.33	3.02	1.97	0.00[c]	1.00[c]
Adrian & Kaser-Boyd, 1995[d]	Outpatients	24	2.20	1.60	3.20	2.60	0.02[b]	
Ingham, 1993	Women whose military husbands were about to deploy overseas	68	2.28	1.48	3.50	2.83	0.21	1.93
DeLucas, 1997	Military nonviolent male offenders	32	2.00	1.32	3.25	0.35	0.35	1.39
Adrian & Kaser-Boyd, 1995[d]	Clinical team diagnosis, nonpsychotic	48	2.30	1.50	4.00	3.10	0.36[b]	
Burns, 1993; Burns & Viglione, 1996	Nonpatient married women poor interpersonal relations	35	2.23	1.35	4.06	2.27	0.42	1.59
Adrian & Kaser-Boyd, 1995[d]	Inpatients	61	1.70	1.40	4.20	3.40	0.91[b]	
Netter, 1990; Netter & Viglione, 1994	Inpatient, schizophrenia diagnosis from locked residential-care ward	20	1.60	1.10	4.20	2.26	0.98[b]	
Adrian & Kaser-Boyd, 1995[d]	Clinical team diagnosis; psychotic	37	1.30	1.20	3.80	3.40	1.00[b]	
Adrian & Kaser-Boyd, 1995[d]	Clinical team diagnosis; major depression	22	2.00	1.60	5.40	3.80	1.29[b]	
			GHR		*PHR*		*HRV*[e]	
			M	*SD*	*M*	*SD*	*M*	*SD*
HRV								
McGlone, 2001	Control Roman Catholic priests	80	4.15	1.92	2.04	1.79	2.11	2.43
	Ephebophile Roman Catholic priests	79	5.00	2.85	3.16	2.63	1.84	3.86
	Pedophile Roman Catholic priests	78	4.23	2.43	2.65	2.35	1.58	3.09

N . Table arranged from lowest to highest HEV scores and highest to lowest HRV scores. HEV = Human Experience Variable; HRV = Human Representational Variable; GHE = Good Human Experience; PHE = Poor Human Experience; GHR = Good Human Representation; PHR = Poor Human Representation.

[a]Eight participants in this dissertation were included in the sample (*N* = 389) described later in this article. [b]HRV estimated from GHE and PHE. [c]This is the HEV derivation sample, therefore, *M* = 0 and *SD* = 1, from the factor analysis. [d]Samples from the Adrian & Kaser-Boyd (1995) study share participants. [e]The HRV is scored in the opposite direction of the HEV. High HRV scores and low HEV scores are associated with more positive interpersonal perception.

the aim of (a) increasing the frequency of good human responses relative to poor human responses, (b) making the good and poor human distributions more similar so as to justify a simple difference score, and if possible, (c) increasing the validity of the classification of human responses as good or poor. We reviewed some readily available data to provide direction for changes to the HEV algorithm. We examined available Rorschach data in computerized forms from ongoing research projects with nonpatients controls and for individuals with depression, a history of criminal offenses, or schizophrenia. In Table 4 these groups are ordered from problematic interpersonal relationships (individuals with schizophrenia) to more positive and mutually enhancing interpersonal relationships (nonpatients/controls). Available demographic information for these groups is presented in the footnotes of Table 4.

Hu . D t , H , . . F t . Hu .
C . t . t , (H), . . (H)

The percentage scores in Table 4 refer to the percentage of human representational responses that are accompanied by

these human contents. The differences between the groups are small but in the expected direction for H and Hd. In other words, groups at the bottom of the table, presumably with healthier interpersonal relationships, produced more Pure H and less Hd. This expected pattern was not discernible for (H), (Hd), and Hx in the third column of the table.

In the HEV algorithm, Pure H identified good responses, and (H), Hd, (Hd), and Hx identified poor responses (see Table 2, HEV column, Step B, 4a). The second to last column in Table 4 represents this HEV algorithm for the four clinical samples. Based on the findings in Table 4 with these various human content categories, we dropped (H), (Hd), and Hx as poor criteria but retained Hd as a poor criterion for the new HRV. The right side of Table 2 provides the complete algorithm for scoring the HRV and the changes just noted can be seen in Step B, 6b and 7. Returning to Table 4, the results for this component of the HRV algorithm are represented in the final column. The expected pattern, that is, greater percentages at the bottom of the columns, is discernible for the HRV algorithm but not for the HEV algorithm. Accordingly, retaining Hd to identify poor responses while dropping (H) and (Hd) in the HRV algorithm preserves its more valid components. Because responses are no longer classified as poor based on (H) and (Hd) scores, it also contributes to our second goal for the HRV of increasing the number of good responses relative to poor.

COP

Although Cooperative Movement (COP) occurs at a relatively high frequency among samples with superior interpersonal relatedness, it was not often used in the algorithm to classify good responses in HEV Step B, 3b. In the sample of 294 nonpatient controls, only 2% of the human responses were classified as good based on having a COP on this step of the algorithm. For this group and others, Table 5 presents (a) the percentages of human responses with COP contrasted with (b) the percentage of human responses classified by COP in the HEV algorithm. To classify more responses as good based on the occurrence of a COP, we moved COP up in the algorithm. As a secondary consequence of this move, responses with both COP and MOR are now classified as good in the new HRV, whereas they were assigned PHE in the HEV algorithm.

L 1 C t S S

The Level 1 cognitive Special Scores of INCOM1, DR1, and FABCOM1 were grouped together in the last step of the HEV algorithm as poor human criteria. To ensure this criterion was working properly, we examined numerous responses that were classified at this step to determine whether the responses entailed positive or negative interpersonal schema. Our collective judgment was that the human repre-

TABLE 7
Descriptive Data for the Old HEV and the New HRV

Va ab	*GHE*	*PHE*	*GHR*	*PHR*	*PHR 10*[a]	*HEV*[b]	*HRV*[b]	*HRV W PHR 10*[a]
M	2.95	3.89	3.58	3.26	3.09	–.19	.32	.48
SD	1.79	3.44	1.96	3.24	2.59	2.25	3.76	3.22
Skew	.71	2.07	.43	2.38	.93	.711	–1.43	–.45
Kurtosis	.61	7.88	.07	9.28	.25	2.40	4.41	.43
Min.	0	0	0	0	0	–6.20	–19	–10
5th percentile	0	0	0	0	0	–3.70	–6	–5
25th percentile	2	1	2	1	1	–1.70	–1	–1
M	3	3	3	3	3	–.38	1	1
75th percentile	4	6	5	4	4	1.09	2	2
95th percentile	6	9	7	8.80	8.80	3.10	5	5
Max.	9	27	10	25	10	7.72	9	9

N . *N* = 363. HEV = Human Experience Variable; HRV = Human Representational Variable; GHE = Good Human Experience; PHE = Poor Human Experience; GHR = Good Human Representation; PHR = Poor Human Representation.
[a]Maximum = 10. [b]The HRV is scored in the opposite direction of the HEV. High HRV scores and low HEV scores are associated with more positive interpersonal perception.

Table 7 contains the descriptive statistics for the HEV and HRV components. An examination of Table 7 reveals that the GHR and PHR means are more nearly equal as compared to the GHE and PHE means. In fact, the distributions are highly similar from the 0 through 95th percentiles. The PHR distribution, like the distribution for the former PHE variable, is highly skewed. It has a tail at the high end and a maximum score of 25 in this sample. The last column in Table 7 presents the HRV with the PHR capped at a maximum score of 10. This cap was employed to explore the effects of the skew with PHR relative to the maximum score of 10 found with the GHR. Table 8 provides correlations between the HEV and HRV and their subcomponents. PHR is not capped at 10 in this table.

DISC SSION

As expected, the data and analyses in this article reveal that the HRV has improved psychometric qualities relative to the HEV. With the original HEV, there were more PHE responses than GHE responses. Consistent with our goals, the GHR and PHR means and distribution are more nearly equal, which justifies using a raw score difference for computing the HRV (HRV = GHR – PHR). It should be noted again that the direction of the HRV scale is reversed relative to the HEV. Now high HRV scores are associated with healthy interpersonal perception and functioning, whereas low HEV scores were associated with healthy interpersonal perception and functioning.

A number of psychometric issues are worthy of consideration. In such a large sample with great diversity of psychological impairment and approaches to the testing, it is not surprising that there are some very high values for PHR. On the other hand, there seems to be a ceiling of about 10 for GHR suggesting that GHR may be constrained by the limited number of potential good human forms identifiable in the 10 Rorschach plates (Exner et al., 2001). The disparity in maximum GHR and PHR scores produces a moderate degree of skew in the composite HRV (Curran, West, & Finch, 1996). Accordingly, in research it might be advisable to truncate PHR at 10 (i.e., retain all data points but change all values greater than 10 to 10) so as to maximize the similarity between GHR and PHR distributions. Such a tactic would minimize the negative skew in the HRV. There are other small differences in the GHR and PHR distributions. The GHR distribution is comparably normal with relatively few (5.2 %) zero values. In contrast, relatively equal proportions of individuals have PHR scores of 0, 1, 2, or, 3 in our sample (15% to 17%) so that most individuals give three or fewer PHR responses.

There is one dissertation (McGlone, 2001) using the current HRV, a large study with Roman Catholic clergy as respondents. This study contrasted control priests (*N* = 80) to pedophile and ephebophile priests (*N* = 79). *E b* is a term used to identify individuals who have molested adolescents rather than prepubescent children. The data from this study are presented in Table 3. There were no significant HRV differences between these groups, although the differences were in the expected direction. As might be expected with priests, a group that presumably has an intact understanding of others, GHR was relatively high compared to PHR. These are somewhat confounded groups in that the author tested the control group as research volunteers, whereas the offender groups came from institutional settings and were tested as a part of formal clinical evaluations.

Within the sample presented in Table 8, GHR and PHR are not correlated with one another. If this unexpected independence holds up under further research, GHR and PHR

less than 14 responses and thus cannot present the demographic information for the sample of 363. The great majority of the records with fewer than 14 responses came from the sample of individuals with schizophrenia.

may ultimately be interpreted or researched individually.

who contributed data from their dissertations, some of which were used in this study.

REFERENCES

Adrian, C., & Kaser-Boyd, N. (1995). The Rorschach Ego Impairment Index in heterogeneous psychiatric patients. *J a . P , a . A , , , , 65,* 408–414.

Auslander, L. (2000). *T , b a a - a a - , a a , a , a , a .* Unpublished doctoral dissertation, California School of Professional Psychology, San Diego.

Blake, S. E., Humphrey, L. L., & Feldman, L. (1994). Self-delineation and marital interaction: The Rorschach predicts structural analysis of social behavior. *J a . P , a . A , , , , 63,* 148–166.

Blatt, S. J., & Berman, W. H. (1990). Differentiation of personality types among opiate addicts. *J a . P , a . A , , , , 54,* 87–104.

Blatt, S. J., Brenneis, C. B., Schimek, J. G., & Glick, M. (1976). Normal development and psychopathological impairment of the concept of the object on the Rorschach. *J a . Ab a P , . , 85,* 364–373.

Blatt, S. J., & Lerner, H. D. (1983). The psychological assessment of object representation. *J a . P , a . A , , , , 47,* 7–28.

Brinderson, C. (1995). *A a a . R , a : D , ba , b ?* Unpublished doctoral dissertation, California School of Professional Psychology, San Diego.

Burns, B. (1993). *A b a , , : R a , b R , a H a E , a ab a , a a , a , a , .* Unpublished doctoral dissertation, California School of Professional Psychology, San Diego.

Burns, B., & Viglione, D. J., Jr. (1996). The Rorschach Human Experience Variable, interpersonal relatedness, and object representation in nonpatients. *P , a A , , , , 8,* 92–99.

Cadenhead, K. S., Perry, W., & Braff, D. L. (1996). The relationship of information-processing deficits and clinical symptoms in schizotypal personality disorder. *B a P , a ., 40,* 853–858.

Cassella, M. J. (1999). *T R , a , : A a a , a a , .* California School Of Professional Psychology, San Diego.

Curran, P. J., West, S. G., & Finch, J. F. (1996). The robustness of test statis-

ti-232 ti-1993Tf545(Dw7D[(San7Diego. p(ti- y(ona)-258/6676D 12.92 0 TD(9v/241.1(gic))-2hology)652.6(pL80(doc1(gic))-2hcf4te)15(go.)]TJ-m512.7(Ft6c8at(type.1 9 7(of

Psychological Corporation. (1997). *WAIS III & WMS III* - a a a. San Antonio, TX: Author.

Ryan, R. M., Avery, R. R., & Grolnick, W. S. (1985). A Rorschach assessment of children's mutuality of autonomy. *J a . P , a . A , , , - , 49,* 6–12.

Strauss, K. (1996). *D .. a a , , . ba - , - . - - , a , , : P , a . , - a a , , , - ?* Unpublished doctoral dissertation, California School of Professional Psychology, San Diego.

Stricker, G., & Healy, B. J. (1990). Projective assessment of object relations: A review of the empirical literature. *P , - , a A , , : A J a . C , , a C a P , - , ., 2,* 219–230.

Urist, J. (1977). The Rorschach Test and the assessment of object relations. -