The frequency concept of disposition: dominance and prototypically dominant acts[1]

David M. Buss and Kenneth H. Craik, *University of California, Berkeley*

Abstract

Three studies of dominance explore the frequency concept of disposition, which entails categories of acts that are topographically dissimilar but nonetheless considered to be manifestations of a common disposition. In the first study, 100 different acts presumably belonging to the category of dominance were generated through a nomination procedure. In the second study, expert and student panels rated how prototypically dominant each act is, defined in terms of centrality of membership in the category of dominant acts. In this manner, an internal structure of the act category was specified such that some acts are more prototypically dominant while others are more peripheral members. Substantial agreement in these ratings exists within and between panels. The third study found that a multiple-act criterion based on prototypically dominant acts is predicted by personality scales with significantly greater success than are multiple-act criteria based on more peripheral acts within the dominance domain. Discussion focuses on specifying the appropriate act category for other frequency dispositions and follow-up field studies of them. Implications for alternative notions of disposition (e.g., purposive-cognitive concepts) are considered.

At the heart of personality research lies the concept of disposition: the tendency of individuals to behave in certain ways, for example, to be self-praising, to be subservient in relation to others, or to adopt a sensation-seeking orientation toward the environment. The diverse meanings of this basic concept of personality are pres-

ently undergoing reexamination (Alston, 1975; Craik, 1976; Kil-
kowski, 1975; Wiggins, Note 1). The assertion "Mary is dominant"
can be understood as a hypothetical proposition (Ryle, 1949) some-
what akin to a dispositional statement in physics (e.g., "The glass
is brittle"), taking the form: it is likely, or a good bet, that the entity
will respond in certain ways (x, y, z) to certain circumstances (a, b, c). Alternatively, the concept of personal disposition can be ana-
lyzed as a summary statement (Hampshire, 1953) taking the form:
so far, the term *dominant* is the right word to summarize the gen-
eral trend in Mary's conduct. The hypothetical proposition focuses
upon specific conditional predictions and the role of situational
factors; the summarizing statement emphasizes the relative fre-
quency of a specified kind of act over a period of observation.

Both interpretations would appear to be subsumed by Alston's
(1975) delineation of what he terms the frequency concept of dis-
positions. To paraphrase Alston, when we attribute a disposition of
this sort to a person, it is part of what we are asserting that, given
a representative set of situations (which may be specified broadly
or narrowly), the person will emit a large number of appropriate
responses (relative to the norm for that disposition). Neither per-
sonality scales nor trait ratings constitute the basic measure of the
frequency concept of disposition; rather, the frequency concept
involves sampling behavior by monitoring the relative frequency
of specific acts within an appropriate response category over an
array of occasions. Alston employs the expression "S-R frequency
disposition," but because he later relaxes the situational restric-
tions, the expression "frequency concept of disposition" will be
used here.

The frequency concept of disposition entails *categories of acts*
that are topographically dissimilar but nonetheless considered to
be manifestations of a common disposition (e.g., some acts "count"
as instances of dominance while others do not). The nature of such
dispositional categories, their criteria for membership, and their
structure constitute fundamental but heretofore relatively unex-
amined issues in personality theory.

Our aim is to contribute to this exploration by joining recent
formulations of personal disposition to cognitive studies of natural
categories. The disposition toward dominance, one frequently as-
sessed in personality research (Butt & Fiske, 1968; 1969), is se-
lected for scrutiny.

The category of dominant acts may be cognitively structured into
prototype (clearest cases, best examples, instances *par excellence*)
and nonprototype members, with the nonprototypes members
tending toward an order from better to poorer examples (Rosch,

1975; 1978; Rosch & Mervis, 1975). Rosch has proposed that such categories contain an internal structure. Thus, members of a natural category differ with respect to "centrality of membership." A sparrow, for example, would be a more prototypical member of the category "bird" than would a penguin, which would be a more peripheral member. Through the use of prototypicality ratings (Rosch & Mervis, 1975), acts can be identified which most centrally fit the category or image of the meaning of dominance. One aim of the present research is to gauge the reliability with which these prototypically dominant acts can be identified. The only previous works to bear even tangentially upon the relation of prototype to dispositional concepts (Cantor & Mischel, 1977; 1979) dealt with trait-descriptive terms and diagnostic labels rather than acts and used different indices for the concept of prototype.

Hampshire's (1953) summarizing notion in particular shifts the validation of dispositional assertions about persons from single acts to the relative incidence of specified acts over a period of observation. In a comparison of "single act-single situation" criteria and "multiple act-multiple situation" criteria (Fishbein & Ajzen, 1974), Jaccard (1974) has indicated that assessments of dominance based on personality scales correlated around $+.20$ with single acts of dominance but around $+.60$ with a composite multiple-act criterion (indexing the number of different acts of dominance out of the 40 listed that the person reported having performed). The present research was designed to replicate and extend the Jaccard study. Comparison of the single act and multiple-act correlations serves to replicate the Jaccard analysis. In addition, scores on dominance scales are correlated with four composite criteria derived from prototypicality ratings. The four composite criteria are arranged on a gradient from most to least prototypically dominant.

Preliminary Study 1
Method
Subjects

Seventy-five undergraduate students (40 females and 35 males) completed the procedures of Study 1 as an exercise for a psychology class.

Procedure

Each participant received the following instructions: "Think of three of the most dominant people you know of your own gender. With these dominant individuals in mind, write down five acts or behaviors they might perform that would reflect or exemplify their dominance. Now think of three people you know of the opposite sex and list five acts or behaviors that would reflect or exemplify their dominance. Be sure to indicate your

own gender on the top right-hand corner of the card." Each participant
was provided with a 3 × 5 index card on which to record the acts.

Results

The list of acts generated in this way was supplemented by acts
gleaned from a perusal of dominance scales (Allport & Allport,
1939; Edwards, 1959; Gough, 1957; Jackson, 1967), and was sub-
sequently reduced to 100 by eliminating redundancies and
"non-act" or general statements such as "She *tends* to monopolize
conversations." Two inventory items, both from the CPI, were in-
cluded in the final list in slightly modified form. The final list of
100 acts was examined for grammatical errors which were then
corrected. Each act was then phrased in a way suitable for perfor-
mance by either sex. For example, the act: "He demanded a back-
rub" could also be performed by a female ("She demanded a back-
rub"). Thus, one list consisting of 100 acts had a male (he) as actor
while another list composed of the same acts had a female (she) as
actor.

Preliminary Study 2

Method

Subjects

Two samples of participants were used for the second study. The first
consisted of 57 undergraduate volunteers (30 females and 27 males) none
of whom had participated in Study 1. Each was paid two dollars as a token
of appreciation for completing the procedures. The second sample con-
sisted of 22 expert judges—13 Ph.D.s and 9 graduate students in per-
sonality psychology (8 females and 14 males). The combined n was 79.

Prototypicality Ratings

Each participant rated 200 acts (100 with male as actor and 100 with
female as actor) on the extent to which each was prototypically dominant.
The instructions, adapted from Rosch & Mervis (1975) were as follows:

"This study has to do with what we have in mind when we use words
which refer to categories. Let's take the word *red* as an example. Close
your eyes and imagine a true red. Now imagine an orangish red . . . imagine
a purple red. Although you might still name the orange-red or the purple-
red with the term *red*, they are not as good examples of red (as clear cases
of what *red* refers to) as the clear "true" red. In short, some reds are
"redder" than others.

"In this specific study you are asked to judge how good an example of
a category various instances of the category are. The category is *domi-
nance.* Below are listed 100 acts. You are to rate how good an example of
that category each act is on a 7-point scale. A "7" means that you feel the
act is a very good example of your idea of what dominance is; a "1" means

you feel the act fits very poorly with your idea of what dominance is (or is not a member of that category at all). A "4" means you feel the act fits moderately well. Use the other numbers of the 7-point scale to indicate intermediate judgements." These instructions were repeated twice, once each for male-actor and female-actor statements.

Judgments of social desirability. In addition to the prototypicality ratings, approximately half (n = 27) of the undergraduate sample was asked to rate the male-actor statements on social desirability and the other half (n = 30) was asked to rate the female-actor statements on social desirability. A modification of the Edwards (1957) instructional set, preceding the list of acts, was used: "Below you find an example of four things that a person says that he does. A judge, such as yourself, has made an estimate of the degree of desirability or undesirability of these acts. Examples: '2' to punish your enemies; '5' to read psychological novels; '7' to make excuses to your friends; '8' to go out with your friends.

"The person who judged these acts believes that 'to punish your enemies' is definitely an undesirable act in others, 'to read psychological novels' is neither desirable nor undesirable, 'to make excuses for your friends' is moderately desirable, and 'to go out with your friends' is quite a desirable act.

"On a one to nine scale (9 being the most desirable and 1 being the least desirable) indicate your own judgments of the desirability or undesirability of the acts in the same manner. *Remember that you are to judge the acts in terms of whether you consider them desirable or undesirable in others.* Be sure to make a judgment about each act."[2]

Results and Discussion

Reliability of prototypicality and social desirability ratings. Table 1 presents the alpha reliability coefficients (Cronbach, 1951) separately for the four panels of raters. All are uniformly high, indicating that considerable agreement exists among members of each panel regarding which acts are prototypically dominant and, analogously, socially desirable.

Most dominant acts. Below are listed the 15 most dominant acts as rated by the entire sample.

He (she) issued orders that got the group organized.

He (she) managed to control the outcome of the meeting without the others being aware of it.

He (she) took charge of things at the committee meeting.

He (she) assigned roles and got the game going.

He (she) readily used the authority of his (her) position.

He (she) took command of the situation after the accident.

He (she) decided which programs they would watch on TV.

2. Mean prototypicality and social desirability ratings for the 100 acts are available from the authors.

Table 1. Alpha coefficients for prototypicality (PR) and social desirability (SDR) ratings.

	Male-actor statements		Female-actor statements	
	Pr	SDR	PR	SDR
Expert judges (male)	.87	–	.89	–
Expert judges (female)	.82	–	.84	–
Undergraduate judges (male)	.86	.97	.89	.90
Undergraduate judges (female)	.86	.96	.82	.96
Combined (total sample)	.95	.97	.95	.95

He (she) forbade her to leave the room.
He (she) set goals for a group.
He (she) demanded that he run an errand.
He (she) persuaded others to accept his (her) opinion on the issue.
On the auto trip, he (she) decided which directions to take when they got lost.
He (she) took the lead in organizing a project.
He (she) persuaded him to do something he didn't want to do.
He (she) told her to get off the phone so that he (she) could use it.

It should be noted that these acts involve elements both of control for group goals and of persuasion for self gain.

Correlations between mean panel ratings. Table 2 presents the correlations among the mean panel ratings. All correlations are significant beyond the .001 level and substantial in magnitude. The lowest cross-panel agreement is that between undergraduate male raters and expert female raters, which holds for both the male and female actor statements. It should be noted that correlations based on group means are usually higher than correlations based on pairs of judges.

Relationship between prototypicality and social desirability. The list of means for the prototypicality of each act was correlated with the list of means for social desirability, across each set of 100 items, separately for each of the four rating panels. Table 3 presents the results of these analyses. All correlations are significantly positive with the exception of undergraduate male judges who do not tend to view prototypically dominant acts as socially desirable.

To illustrate how the prototypicality ratings and social desirability ratings interact, acts from the upper and lower quartiles of each dimension were crossed to form the four possible combinations of acts: (a) low on social desirability, low on prototypicality, (b) low

Table 2. Correlations between mean panel ratings.

	Male-actor statements			Female-actor statements		
	A	B	C	A	B	C
Prototypicality ratings						
A Expert judges (male)						
B Expert judges (female)	.82			.87		
C Undergraduate judges (male)	.65	.48		.64	.44	
D Undergraduate judges (female)	.87	.80	.74	.74	.64	.89
Social desirability ratings						
C Undergraduate judges (male)						
D Undergraduate judges (female)			.97			.93

Note.—All correlations are significant beyond the .001 level.

on social desirability, high on prototypicality, (c) high on social desirability, low on prototypicality, and (d) high on social desirability, high on prototypicality. Table 4 presents three exemplars from each of these categories. Petulant and self-centered acts seem to be rated low on both dimensions. Explicitly directive, yet self-centered acts seem to be rated low on social desirability, yet high on dominance. Leadership and organizing behaviors for group gain are rated high on both social desirability and prototypicality. Finally, acts in the high socially desirable but low dominance quadrant seem to be characterized by public involvement without leadership or directive connotations.

Main Study
Method
Subjects

Eighty-three undergraduate volunteers (43 females and 40 males) completed the procedures for the Main Study. None of these students had participated in either of the first two studies.

Materials

These were: (1) the dominance scale from the California Psychological Inventory (Gough, 1957); (2) the dominance scale from the Jackson PRF (Jackson, 1967); (3) self-rating on a seven-point scale of dominance, and other measures used for a companion study. The Act Report (100 acts derived from Study 1) was also completed. Each act was transformed from the third-person singular to the first-person singular (e.g., "he demanded a backrub" became "I demanded a backrub"). Participants were asked to check "yes" or "no" according to whether they had ever performed the

Table 3. Relationship between prototypicality and social desirability.

Sample	Male-actor statements	Female-actor statements
Expert judges (male)	.48***	.38***
Expert judges (female)	.64***	.58***
Undergraduate judges (male)	−.09	−.13
Undergraduate judges (female)	.18*	.46***

   * p < .05.
  ** p < .01
 *** p < .001.

act or not. If the answer was "yes," they were requested to indicate the frequency with which they performed the act on a three-point scale— "rarely," "sometimes," or "often."

Procedure

Participants were administered the first three items listed under "Materials." After a one-week interval, the Act Report was administered. A week interval was allowed between the two sessions in order to minimize the operation of a response set.

Results

Act × Scale correlations. The "yes/no" dichotomy of act performance was correlated with each of the two dominance scales and the self-rating. Similarly, the frequency with which each act was performed was correlated with the measures. For the CPI Dominance Scale, the mean correlations were .16 (range = −.26 to 54) and .11 (range = −.38 to .57) for act performance and frequency of performance respectively. For the PRF Dominance Scale, these respective correlations are .20 (range = −.19 to .64) and .19 (range = −.26 to .63). For the self-rating of dominance, these correlations are .10 (range = −.26 to .44) and .13 (range = −.34 to .49). Thus, the prediction of specific acts from inventory scales approximates that found by Jaccard (1974).

Multiple-act criteria. Each act was ranked on the basis of its independently generated prototypicality rating (see Preliminary Study 2). This ranked list was then divided into quartiles, each successive 25 acts forming an independently composited multiple-act criterion. These composites are subsequently referred to as Proto1, Proto2, Proto3, and Proto4 (Proto1 being the most prototypically dominant criterion and Proto4 being the least prototypically dominant criterion).

Table 4. Acts from upper and lower quadrants.

	Low prototypicality	High prototypicality
Low social desirability	He (she) flattered her in order to get his (her) way.	He (she) forbade her to leave the room.
	He (she) hung up the phone on his (her) lover.	He (she) monopolized the conversation.
	He (she) deliberately arrived late for the meeting.	He (she) directed the conversation around to himself (herself) and his (her) doings.
High social desirability	He (she) asked someone out on a date.	He (she) took the lead in livening up a dull party.
	He (she) was highly involved in a political campaign.	He (she) took the lead in organizing a protest.
	He (she) solicited funds for a cause in which he (she) was interested.	He (she) took command of the situation after the accident.

Predictors and the multiple-act criteria. For each subject, four scores were generated which represented the number of acts performed (the "yes/no" dichotomy) within each multiple-act criterion. The dominance scale scores were then correlated with these criterion scores. Table 5 presents these results, separately for each sex.

In the conceptual framework elaborated earlier, the *category* of dominant acts contained an internal structure such that individual acts differed with respect to prototypicality of membership. It was hypothesized that performance of acts central to the category (that is, prototypically dominant) would be predicted with greater accuracy than more peripheral members of the category (acts rated low on prototypicality). Inspection of the table columns shows that for males on the CPI and PRF scales, the correlations decrease progressively in magnitude as the prototypicality of the criteria decreases. The difference between the correlations with the most central and most peripheral category criteria are significant for both dominance scales ($p < .01$ for the CPI; $p < .01$ for the PRF). This pattern does not hold for the self-rating of dominance.

The table shows a similar pattern for females with the exception of the third prototypicality criterion being more successfully pre-

Table 5. Predictors and multiple-act criteria.

	CPI	PRF	Self-Rating
Males (*n* = 40)			
Proto1	.48***	.67***	.25
Proto2	.32*	.45**	.26
Proto3	.26*	.42**	.04
Proto4	.14	.33*	.29*
Females (*n* = 43)			
Proto1	.31*	.47***	.31*
Proto2	.21	.31*	.15
Proto3	.31*	.48***	.27*
Proto4	.05	.26*	.12

*$p < .05$.
** $p < .01$.
*** $p < .001$.

dicted than the second with both scales. Again, the most central and most peripheral differ significantly ($p < .01$ for the CPI; $p < .05$ for the PRF). For the dominance self-rating, the hypothesized pattern is obtained for the female sample, with the difference in magnitude of correlations for Proto1 and Proto4 significant ($p < .01$). The pattern of correlations is slightly lower than that obtained by Jaccard (1974) but in no case significantly so.[3] To summarize, the hypothesis that prototypically dominant acts (using a multiple-act criterion) will be predicted with greater accuracy than acts more peripheral to the category, is by and large confirmed by the present data.

Discussion

The frequency concept of personal disposition entails a multiple-act criterion and a means of specifying the appropriate act category. The finding of a gradient of validity correlations associated with prototypicality of acts lends support to the hypothesis that dispositional concepts function through natural categories of acts (Rosch

---

3. The focus of the CPI Do scale upon assessing constructive forms of dominance (Gough, 1968) is reflected in a correlation of $+.62$ between the social desirability ratings of the 100 acts and the Act × CPI Do scale *rs*. Comparable correlations for the PRF Do scale and dominance self-ratings are $+.24$ and $+.19$, respectively. That is, the CPI Do scale tends to correlate with socially positive acts. N.B. The correlation of the scale itself with social desirability indices is a different matter and estimated at a lower magnitude, between $+.30$ and $+.40$, by Gough (1964) and Megargee (1972).

& Mervis, 1975), structured so that some acts serve as prototypical while others fall along a continuum toward the periphery of the category boundaries. Furthermore, the evidence indicates that, for the concept of dominance at least, highly reliable judgments of the prototypicality of acts can be made, even among a set previously and independently nominated as dominant, and that prototypicality judgments show striking agreement between panels of personological experts and nonexperts. Prototypicality ratings offer a direct and convenient means of examining category structure. However, convergent evidence from other typicality indices should be sought (e.g., verification times for category membership; probability of item output in membership nomination tasks; expectations generated by the category name) (Rosch, Simpson, & Miller, 1976).

The frequency concept of personal disposition generates an alternative to traditional approaches in the analysis of personality. Through the variables of the California Psychological Inventory (CPI), Gough (1957; 1968) has sought to assess folk concepts of personality, dimensions of individual functioning that are universal among cultures, are often calibrated with sociological continua and serve to forecast how persons will be described and appreciated by others and how they will fare regarding significant societal outcomes (e.g., graduating from medical school; being diagnosed as alcoholic; having one's works and performances deemed creative). Alternatively, Block (1977) has differentiated four classes of personality data: R-data (based on observer reports), S-data (based on self-reports), L-data (based upon personal and societal life outcomes), and T-data (based upon laboratory test situations), and has emphasized the demonstration of coherence among them. Attention to act-data (based upon naturally occurring behavior in the individual's everyday ecology) is not incompatible with either of these two orientations to personality research. Its neglect, however, leaves the behavioral linkages that presumably establish the often observed statistical coherence among sets of R-, S-, and L-data as something of a mystery. An act approach, as an addition to traditional means of personality research, could clarify these behavioral linkages.

The frequency concept of disposition is, however, logically distinct from notions of personal disposition which Alston terms purposive-cognitive (PC) concepts, and prefers on theoretical grounds (Alston, 1975). In the PC approach, theoretically postulated determinants such as desires, beliefs, and abilities are marshaled to account for or explain observed acts. PC concepts do not entail a frequency criterion and no readily specified act category is available for them. A person may be a crack pistol shot and have a strong

need for close relations with others; but due to lack of interest and fear of rejection, respectively, he may rarely or never exercise his ability or seek to satisfy his need. Furthermore, consistency in the same kind of overt acts, e.g., trying to dominate others, may be accounted for by different PC concepts, e.g., a fear of what might happen if someone else were in control *versus* a strong desire for reassurance of one's own worth plus a belief that dominating others provides a good chance of securing that reassurance (Alston, 1975). Thus, it is understandable that some of our personological experts, committed to PC concepts of personality (e.g., the Murray need system), found the making of prototypicality ratings subjectively difficult, for each act could be viewed as an expression of a variety of PC concepts. By way of contrast, in the strict frequency approach, dispositions are not considered causes (Wiggins, Note 1); rather, coherence among acts embodies regularities in individual behavior that may possess fundamental descriptive and predictive value, but that call for rather than afford explanation.

The replication of Jaccard's (1974) findings regarding single versus multiple-act criteria for validational appraisal of personality scales also illustrates the rather straightforward means available for linking act-data with S-data, and in analogous fashion, with R-data. Comparison of single-act and multiple-act criteria is analogous to the comparison of items and scales: thus, higher correlations for the latter are to be expected on psychometric grounds. The substantive point of the Jaccard analysis and this replication is that multiple-act criteria constitute the *appropriate* criteria in personality research from the perspective of a summary or frequency interpretation of the concept of personal disposition.

The present analysis links one form of S-data (scale scores) with another (self-reported acts). In addition, the reliabilities for the prototypicality ratings are based upon verbal presentation of acts rather than directly observed acts. One evident next step in this line of research calls for field studies, entailing prototypicality ratings of acts observed *in situ*. Video-taping the everyday behavior of persons can be expected not only to reveal stable differential base rates (or batting averages) for the already specified and nominated acts of dominance but also to highlight the artistry of dominance and yield more subtle exemplars of the multiple-act category. Such naturalistic field studies, providing fuller elaboration and documentation of dispositional concepts, are urgently needed in personality research.

In the context of field studies, three technical issues could be examined further. First, in addition to the centrality of an act, consideration of the intensity of the act is warranted (e.g., "she asked

him to . . ." versus "she ordered him to . . ."). Second, in assessing the strength of a disposition, what are the implications of using the *total frequency* with which any acts falling within the dispositional category are manifested over the period of observation in contrast to using the number of *different acts* within the category? Third, it is possible that the population of core acts for a given disposition is quite limited and readily specifiable, while the population of peripheral but pertinent acts is broader and more difficult to identify fully. How likely is it then that an individual who manifests a disposition (e.g., dominance) by a moderate frequency of core acts would be more accurately assessed than an "equivalently dominant" individual who displays the disposition via a higher rate of peripheral acts, which may be less completely and thoroughly identified and monitored? These issues can be clarified by demonstration field studies.

Finally, what about the acts that are not prototypically dominant? They may simply be peripheral members of the category, but more likely they share attributes and membership with other dispositions. The examination of prototypical acts for an array of dispositional categories is obviously an important item on the research agenda. A guide to this form of inquiry is offered by the circumplex model of trait-descriptive terms within the interpersonal domain, recently presented by Wiggins (1979). A procedure of act nominations and prototypicality ratings for each of the sixteen-marker categories of that model would test it empirically: acts peripheral to a given category should also display membership within adjacent, rather than remote categories along the circumplex. Our strategy offers a means of exploring domains such as those described by the circumplex, by focusing upon acts, the categories that contain them, and the internal structure of these dispositional constructs.

Reference Note

1. Wiggins, J. S. In defense of traits. Vancouver, B.C.: University of British Columbia, unpublished report, 1974.

References

Allport, G. W., & Allport, F. H. *The A-S reaction study,* Rev. Edition. Boston: Houghton Mifflin, 1939.

Alston, W. P. Traits, consistency, and conceptual alternatives for personality theory. *Journal for the Theory of Social Behaviour,* 1975, 5, 17–48.

Block, J. Advancing the psychology of personality: Paradigmatic shift or improving the quality of research. In D. Magnusson and N. S. Endler (Eds.), *Personality at the crossroads: Current issues in interactional psychology.* New York: Erlbaum (Wiley), 1977, pp. 37–63.

Butt, D. S., & Fiske, D. W. A comparison of strategies in developing scales for dominance. *Psychological Bulletin,* 1968, 70, 505–519.

Butt, D. S., & Fiske, D. W. Differential correlates of dominance scales. *Journal of Personality*, 1969, **37**, 415–428.

Cantor, N., & Mischel, W. Traits as prototypes: Effects on recognition memory. *Journal of Personality and Social Psychology*, 1977, **35**, 38–48.

Cantor, N., & Mischel, W. Prototypes in person perception. In L. Berkowitz (Ed.), *Advances in experimental social psychology*. New York: Academic Press, 1979.

Craik, K. H. The personality research paradigm in environmental psychology. In S. Wapner, S. B. Cohen, and B. Kaplan (Eds.), *Experiencing environments*. New York: Plenum, 1976, pp. 55–79.

Cronbach, L. J. Coefficient alpha and the internal structure of tests. *Psychometrika*, 1951, **16**, 297–334.

Edwards, A. L. *The social desirability variable in personality assessment and research*. New York: Holt, Rinehart and Winston, 1957.

Edwards, A. L. *Manual for the Edwards Personal Preference Schedule*, Rev. Edition. New York: Psychological Corporation, 1959.

Fishbein, M., & Ajzen, I. Attitudes toward objects as predictors of single and multiple behavioral criteria. *Psychological Review*, 1974, **81**, 59–74.

Gough, H. G. *Manual for the California Psychological Inventory*, Rev. Edition. Palo Alto, Calif.: Consulting Psychologists Press, 1964.

Gough, H. G. An interpreter's syllabus for the California Psychological Inventory. In P. McReynolds (Ed.), *Advances in psychological assessment*, Vol. 1. Palo Alto, Calif.: Science and Behavior Books, 1968, pp. 55–79.

Hampshire, S. Dispositions. *Analysis*, 1953, **14**, 5–11.

Jaccard, J. J. Predicting social behavior from personality traits. *Journal of Research in Personality*, 1974, **7**, 358–367.

Jackson, D. N. *Personality research form manual*. Goshen, N.Y.: Research Psychologists Press, 1967.

Kilkowski, J. M. Traits, situations, and the logic of explanation in psychology: A selective review of the issues and evidence. *ORI Research Monograph*, 1975, **15**, No. 3.

Megargee, E. L. *The California Psychological Inventory Handbook*. San Francisco, Calif.: Jossey-Bass, 1972.

Rosch, E. Cognitive reference points. *Cognitive Psychology*, 1975, **7**, 532–547.

Rosch, E. Principles of categorization. In E. Rosch and B. B. Lloyd (Eds.), *Cognition and categorization*. Hillsdale, N.J.: Erlbaum, 1978.

Rosch, E., & Mervis, C. B. Family resemblances: Studies in the internal structure of categories. *Cognitive Psychology*, 1975, **7**, 573–605.

Rosch, E., Simpson, C., & Miller, R. S. Structural bases of typicality effects. *Journal of Experimental Psychology: Human Perception and Performance*, 1976, **2**, 491–502.

Ryle, G. *The concept of mind*. New York: Barnes & Noble, 1949.

Wiggins, J. S. A psychological taxonomy of trait-descriptive terms: I. The interpersonal domain. *Journal of Personality and Social Psychology*, 1979, **37**, 395–412.