

- Minkoff, K., Bergman, E., Beck, A. T., & Beck, R. (1973). Hopelessness, depression, and attempted suicide. *American Journal of Psychiatry*, 130, 455-459.
- Peterson, C., & Seligman, M. E. P. (1984). Causal explanation as a risk factor in depression: Theory and evidence. *Psychological Review*, 91, 347-374.
- Pietromonaco, P. R., & Markus, H. (1985). The nature of negative thoughts in depression. *Journal of Personality and Social Psychology*, 48, 799-807.
- Pyszczynski, T., & Greenberg, J. (1987). Self-regulatory preservation in the depressive self-focusing style: A self-awareness theory of reactive depression. *Psychological Bulletin*, 102, 122-138.
- Pyszczynski, T., Holt, K., & Greenberg, J. (1987). Depression, self-focused attention, and expectancies for positive and negative future life events for self and others. *Journal of Personality and Social Psychology*, 52, 994-1001.
- Rholes, W. S., Riskind, J. H., & Neville, B. (1985). The relationship of cognitions and hopelessness to depression and anxiety. *Social Cognition*, 8, 36-49.
- Riskind, J. H., & Beck, A. T. (1983). *The cognitive phenomenology of anxiety and depression disorders*. Paper presented at the World Congress of Behavior Therapy, Washington, DC.
- Riskind, J. H., Rholes, W. S., Brannon, A. M., & Burdick, C. A. (1987). Attributions and expectations: A confluence of vulnerabilities in mild depression in a college student population. *Journal of Personality and Social Psychology*, 53, 349-354.
- Robins, C. J. (1988). Attributions of depression: Why is the literature so inconsistent? *Journal of Personality and Social Psychology*, 54, 880-889.
- Sacks, C. H., & Bugental, D. B. (1987). Attributions as moderators of affective and behavioral responses to social failure. *Journal of Personality and Social Psychology*, 53, 939-947.
- Segal, Z. V. (1988). Appraisal of the self-schema construct in cognitive models of depression. *Psychological Bulletin*, 103, 147-162.
- Seligman, M. E. P., Abramson, L. Y., Semmel, A., & von Baeyer, C. (1979). Depressive attributional style. *Journal of Abnormal Psychology*, 88, 242-247.
- Spielman, L. A., Andersen, S. M., & Bargh, J. A. (1989). *Depressive views of the future: The relation between the experience of certainty and perceptual fluency in depressive cognitive functioning*. Paper presented at the Eastern Psychological Association.
- Stotland, E. (1969). *The psychology of hope*. San Francisco: Jossey-Bass, Inc.
- Swann, W. B. (1983). Self-verification: Bringing social reality into harmony with the self. In J. Suls & A. G. Greenwald (Eds.), *Psychological perspectives on the self* (Vol. 2, pp. 33-66). Hillsdale, NJ: Erlbaum.
- Sweeney, P. D., Anderson, K., & Bailey, S. (1986). Attributional style in depression: A meta-analytic review. *Journal of Personality and Social Psychology*, 50, 974-991.
- Taylor, S. E., & Brown, J. D. (1988). Illusion and well-being: A social psychological perspective on mental health. *Psychological Bulletin*, 103, 193-210.
- Weiner, B. (1982). An attributionally based theory of motivation and emotion: Focus, range, and issues. In N. T. Feather (Ed.), *Expectations and actions: Expectancy-value models in psychology* (pp. 163-204). Hillsdale, NJ: Erlbaum.
- Wortman, C. M., & Brehm, J. W. (1975). Responses to uncontrollable outcomes: An integration of reactance theory and the learned helplessness model. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 8, pp. 227-336). New York: Academic Press.

PERSONS AS PRIVILEGED CATEGORIES: A REJOINDER TO MULLEN AND COPPER

CONSTANTINE SEDIKIDES

University of Wisconsin—Madison

THOMAS M. OSTROM

Ohio State University

Mullen and Copper (1989, *Social Cognition*, 7, 373-388) claimed that Sedikides and Ostrom's (1988, *Social Cognition*, 6, 252-267) meta-analysis underestimated the privileged role of person categories in the cognitive organization of information about unfamiliar persons. To support their position, Mullen and Copper conducted a revised meta-analysis of our data. They concluded that the data supported the privileged status of persons categories. We dispute this conclusion. We argue that (1) our application of meta-analytic strategies was justifiable by the existing literature and our theoretical goals, (2) the substantial implications of Mullen and Copper's results were identical to ours, with one rather minor exception, and (3) this exception downplays even further the role of person categories as organizers of social information, despite Mullen and Copper's claims. Mullen and Copper also criticized us for neglecting to meta-analyze the potential impact of several additional predictors of person organization. Although we believe it is specious to criticize researchers for what they did *not* intend to accomplish, we could not fail to notice that Mullen and Copper's meta-analysis is amenable to the same criticism.

A fundamental issue in social cognition is how perceivers impose structure upon their social environment. Higher-order processes, such as inferences and attributions, are affected in part by the cognitive organization of social information.

We recently published a meta-analysis (Sedikides & Ostrom, 1988) of 44 studies that evaluated the degree to which person categories are used in the cognitive organization of information about unfamiliar persons. In the typical person organization study, subjects are presented with several descriptor items corresponding to each of multiple stimulus persons and, after a brief distractor task, subjects are asked to recall

We thank Janet Shibley Hyde and Kathy Ostrom for helpful suggestions. Correspondence concerning this manuscript should be addressed to Constantine Sedikides, Department of Psychology, 1202 West Johnson Street, University of Wisconsin, Madison, WI 53706.

the information. Subjects' organizational structure is assessed by analyzing clustering patterns of stimulus information in free recall via the Adjusted Ratio of Clustering (ARC; Roencker, Thompson, & Brown, 1971).

The meta-analyzed studies were initially broken down into two categories: person studies (where the only meaningful organizing category was persons) and competing studies (where person categories competed with descriptor categories for subjects' organizational preference). Competing studies were further subdivided into studies employing social descriptors (e.g., traits, hobbies, occupations) and non-social descriptors (e.g., day of the week, time of the day, location).

The meta-analysis reported four major findings. The first two findings concerned the *absolute use* of person categories for unfamiliar persons. First, person categories were reliably used as a means of organizing these multiperson, multiattribute stimulus fields. This result was based on all 44 studies. Second, unfamiliar person categories were used as organizing aides regardless of whether the stimulus field contained competing descriptor categories. This finding was based on the 26 competing studies. The results led Sedikides and Ostrom to conclude that, within the bounds of the experimental task employed, perceivers "have a significant (although not large) tendency toward organizing social information around person categories" (p. 252). This meta-analytic conclusion contrasted an earlier conclusion derived from primary levels of analyses (cf., Pryor & Ostrom, 1981; Pryor, Simpson, Mitchell, Ostrom, & Lydon, 1982).

The other two meta-analytic findings concerned the *relative use* of person categories. When both person and descriptor categories were contained in the stimulus field, subjects did not manifest a distinct preference for one organizational strategy over the other ($n = 26$ competing studies). However, subjects tended to exhibit a greater relative preference for person organization in the case of nonsocial descriptors ($n = 9$ competing studies) than in the case of social descriptors ($n = 17$ competing studies).

In a comment on Sedikides and Ostrom (1988), Mullen and Copper (1989) raised two concerns. First, they argued that Sedikides and Ostrom applied meta-analytic techniques inappropriately to the problem under investigation. Second, they criticized Sedikides and Ostrom for not testing the effects of several *additional* predictors (besides the social or nonsocial nature of descriptors) on person organization. Mullen and Copper claimed that, as a result, Sedikides and Ostrom's meta-analytic findings "may lead to a fundamental misrepresentation of the use of person categories for unfamiliar persons" (p. 374). To sub-

stantiate their position, Mullen and Copper conducted a new meta-analysis of the same 44 studies.

The present article (1) evaluates Mullen and Copper's claim that Sedikides and Ostrom's application of meta-analytic strategies was inappropriate, (2) questions the value of Mullen and Copper's meta-analysis of additional predictors for the issue at stake (i.e., the organizational status of person categories), and (3) examines whether Mullen and Copper's meta-analysis produced results that differed from Sedikides and Ostrom's results.

ON THE APPROPRIATENESS OF SEDIKIDES AND OSTROM'S APPLICATION OF META-ANALYTIC TECHNIQUES

Mullen and Copper provided a statistical reanalysis of the effects that were the theoretical focus of our paper. We found this useful and informative. The field of meta-analysis is still developing. More state-of-the-art analytic techniques are frequently appearing in psychology literature.

The statistical procedures we reported in our paper were in common usage at the time we conducted our analyses. Although Mullen and Copper provided no rationale for the superiority of the techniques they used in their reanalyses, we assume that the rationale is provided in the forthcoming volume they cite (Mullen, 1990). It seems likely that in the future researchers will routinely adopt their techniques. We hope, however, that Mullen and Copper will resist the urge to reanalyze all past published meta-analyses that did not employ these more recently developed statistical techniques.

We believe that our application of meta-analytic techniques was entirely appropriate as far as both the existing meta-analytic literature and our theoretical goals were concerned. We focus below on the meta-analytic strategies that Mullen and Copper criticized.

REPORTING EFFECT SIZE ESTIMATES

Mullen and Copper identified an inconsistency in Sedikides and Ostrom's meta-analysis. In their own words, "the analyses regarding the absolute use of person categories are based on significance levels for the included hypothesis tests; however (Sedikides and Ostrom's) analyses regarding the relative use of person categories within the

competing studies are based on effect sizes for the included hypothesis tests" (p. 375). Mullen and Copper are wrong in the second half of their assertion: Tests of the relative use of person categories were based on both significance tests and effect sizes (e.g., see Sedikides & Ostrom, 1988, p. 259).

In the case of absolute use of person categories, we indeed did not report effect size estimates. The theoretical issue of interest was "is there person organization for unfamiliar stimulus persons?" (Sedikides & Ostrom, 1988, p. 257). This question did not concern the size of the effects—only whether or not *there was* an effect. As Chow (1988) has pointed out, effect sizes can not replace or even supplement significance tests when a theoretical statement is evaluated. Theory testing only requires a binary decision regarding the relation between two variables. Thus, reporting significance tests was sufficient for our purpose.

Nevertheless, the magnitude of the effect was conveyed by reporting median ARC scores. Most meta-analyses deal with a diffuse set of dependent measures. In our meta-analysis, the dependent measure was identical in all studies. Furthermore, the ARC measure is an interval scale with rational anchors of zero (chance clustering) and unity (perfect clustering). Median ARC scores are more informative for the present issue than are effect sizes.

MEGA-ANALYSIS

Mullen and Copper took issue with our focused-contrast comparisons, that is the comparison of two meta-analytic *Z*'s for significance. They labeled this comparison "mega-analysis" or "meta-meta-analysis", after Dillon (1982), Kazdin, Durac, & Agteros (1979) and Smith (1982).

We strongly disagree with Mullen and Copper's label of our focused-contrast comparisons as mega-analysis. Mega-analysis has been defined (in a tongue-in-cheek manner) as a technical method that "integrates findings in a single discipline" (Dillon, 1982, p. 35). The papers cited by Mullen and Copper do not deal with the criteria for selecting statistical techniques.

Our paper had nothing to do with mega-analysis. We simply contrasted two subsets of results stemming from a program of research (person organization) within a certain field (person memory) within a certain area (social psychology) within a certain discipline (psychology). We made no attempt to integrate findings of either a discipline, an area or a field. Comparisons of such subsets of results are routine

in the meta-analytic literature (e.g., Hyde, 1984; Hyde & Linn, 1988; Stoffelmayr, Dillavou, & Hunter, 1983).

ON THE VALUE OF TESTING THE THREE ADDITIONAL PREDICTORS

Mullen and Copper reproach us for not entering three potential predictors (exposure duration, distractor task duration, and name frequency) into the meta-analysis. They go so far as to claim that this underutilization of meta-analysis may have led us to fundamentally misrepresent the use of person categories (p. 374).

CRITICIZING RESEARCHERS FOR WHAT THEY DID NOT INTEND TO ACCOMPLISH

We applaud Mullen and Copper's interest in studying the effect of these three variables on the use of person categories. We believe that this is an important area of research for social psychology and that the field only benefits by the involvement of more researchers exploring additional determinants of person organization processes. However, we are perplexed as to why Mullen and Copper feel we were obligated to study these three variables in our meta-analysis. We used the meta-analysis to examine several theoretical issues that we had been grappling with at the time. We resisted the temptation to use meta-analysis as a fishing expedition, preferring to focus squarely on the a priori questions in front of us at the time. We are not at all troubled by the fact that others may wish to use our data to evaluate theoretical issues of special interest to them.

Our meta-analysis had a concrete set of goals that apparently did not happen to coincide with the goals Mullen and Copper wished the meta-analysis to have. We believe that it is inappropriate for authors to be criticized for what they did not intend to do. In fact, if we were to use Mullen and Copper's logic, we should in turn criticize them for a failure to examine several additional predictors of person organization, such as sequencing or blocking of the stimulus information, subjects' processing objectives, number of person or descriptor categories, number of descriptor items, or the social referent (e.g., ingroup versus outgroup).

Mullen and Copper leave the impression that we did not address the issue of examining other moderating factors in our meta-analysis.

In fact, this very issue was one of the foci of our discussion section (pp. 262–263). A major point we made was that the randomized experiment provides a far superior approach to studying factors such as those examined by Mullen and Copper. Indeed, experiments of this kind have already established the importance of factors like processing goals (Pryor et al., 1982), information redundancy (Pryor, Kott, & Bovee, 1984), information sequencing (Devine & Ostrom, 1985; McCann, Ostrom, Mitchell, Herstein, & Pusateri, 1983), and out-group membership (Ostrom, Carpenter, & Sedikides, 1986) on the use of person categories for unfamiliar persons.

We have to wonder whether Mullen and Copper were cognizant of these studies. Their expanded meta-analysis led them to offer two general conclusions. The first was that “the use of person categories is not static and unassailable” (p. 384), thereby implying that this has corrected one of the “fundamental misrepresentations” of our original paper. But nowhere in our paper did we claim that person category usage had a static, immutable quality. Nor would we make such a claim given the abundance of past studies (such as those cited above) that overwhelmingly establish the liability of person category usage.

THE USE OF META-ANALYSIS WITH SINGLE VERSUS MULTIPLE INSTANTIATION VARIABLES

Our decision to ignore exposure duration or duration of the distractor task as potential predictors of person organization is consistent with our beliefs about when meta-analyses are most helpful.

There are two important categories of independent variables that can enter into meta-analyses: single instantiation variables and multiple instantiation variables. Single instantiation variables are ones like time (or duration), number (or frequency), and probability. For example, an exposure duration of 30 sec has only one instantiation. It is either 30 sec or it is not 30 sec. No sampling of alternative instantiations is involved. Multiple instantiation variables, on the other hand, are ones like communicator credibility, gender of partner, and level of induced anxiety. There are many instantiations of high credibility, femaleness of partner, and high anxiety situations. Any given study using multiple instantiation variables usually employs only one instantiation of the independent variable, but the investigator almost always wishes to generalize to the entire population of instantiations.

We believe that meta-analysis is most useful when applied to independent variables that fall in the multiple instantiation class. All the factors that we looked at in our paper were of this kind. We wanted

to know whether usage of person categories for unfamiliar persons was greater than chance; it is certainly true that multiple instances of person categories exist. We wanted to know whether the use of person categories was moderated by the presence of competing descriptor categories; there clearly are multiple forms that such competing categories can take. We also wanted to know whether the use of person categories is affected by whether the competing categories were social or nonsocial in nature; multiple instantiations of both social and nonsocial categories exist.

The two statistically significant factors examined by Mullen and Copper in their reanalysis were both single instantiation variables: duration of exposure and duration of distractor task. Such factors can be cleanly manipulated in an experiment, yielding data far more interpretable than those provided by a meta-analysis. In our paper, we used meta-analysis where we believed it could be uniquely informative, and avoided it where we believed it could be needlessly misleading.

USE OF AN INCOMPLETE DATA BASE

Mullen and Copper were interested in extending our meta-analysis to investigate the effects of exposure duration, duration of distractor task, and name frequency. A serious application of meta-analysis to these issues would involve a thorough examination of the literature to provide the relevant parameter values for as many studies as possible. This appears not to have been done. They included only 14 of the 44 studies reported in our original paper.

This lack of comprehensiveness was not due to unavailability of the necessary reference sources. For example, although all three parameters were available in a paper published in the *Journal of Experimental Social Psychology* (Pryor et al., 1984), none were entered into their analysis. No parameters were coded from several studies available as dissertations, and no request was made to either of us by either Mullen or Copper for the reports from our files on which our original meta-analysis was conducted. Consequently, the results reported by Mullen and Copper regarding these additional variables must be regarded with extreme caution.

THE PROBLEM OF CORRELATED PREDICTORS

In conducting meta-analyses that involve multiple predictors, the researcher must be alert to the possibility of confounding among the

several predictors. If two predictors are highly correlated with each other, they simply cannot be considered to have independent effects on the dependent variable. This very problem arose in the case of the two significant predictors studied by Mullen and Copper. They concluded that both exposure duration and duration of the distractor task independently affected the use of person categories. This finding was important to their conclusion that person categories occupy a privileged cognitive status.

Unfortunately for Mullen and Copper's argument, these two predictors were highly correlated, $r(12) = .73, p < .003$. Perhaps the confound would not have been so severe had the investigators coded a higher proportion of the studies for the variables of interest to them. Nonetheless, the issue of correlated predictors should be addressed when it is relevant to interpreting the findings of a meta-analysis.

The issue of correlated predictors did not arise in the Sedikides and Ostrom (1988) meta-analysis. One predictor (social vs. nonsocial) was nested within the other predictor (person vs. competing categories), thereby eliminating any possibility of confounding.

DO MULLEN AND COPPER'S RESULTS DIFFER FROM SEDIKIDES AND OSTROM'S RESULTS?

Mullen and Copper's meta-analysis had only a minimum effect on the implications of our meta-analysis. The first, and most important, conclusion Sedikides and Ostrom reached was that unfamiliar person categories are spontaneously used in structuring a multiperson, multi-attribute stimulus array. This is exactly the same conclusion reached by Mullen and Copper. The second conclusion Sedikides and Ostrom drew was that unfamiliar person categories are employed as organizing structures even when subjects have the option to organize their social world by alternative, nonperson, descriptor categories. Mullen and Copper replicated this finding as well.

Third, Sedikides and Ostrom found that when both person and descriptor categories are available, subjects do not exhibit a preference for one organizational strategy over the other. Mullen and Copper obtained exactly the same pattern of results. Finally, Sedikides and Ostrom found a slight preference for person organization in the case of nonsocial descriptors, a finding also echoed by Mullen and Copper.

The only novel finding that the Mullen and Copper meta-analysis can claim is the lower use of person categories in competing as compared to person studies. In our view, this result provides a powerful argument favoring the use of their statistical techniques over ours. It bothered

us at the time that this fairly substantial difference in ARC scores (Person Category Mean = .241; Competing Category Mean = .145) did not emerge statistically significant. Clearly, their approach has greater power to detect the reliability of such differences.

Although we agree with this change in the statistical conclusions of our paper, it is important to note that this does not refute any of the substantive conclusions we drew. These conclusions are summarized in the two preceding paragraphs.

DO PERSON CATEGORIES HOLD A PRIVILEGED ORGANIZATIONAL STATUS?

By far, the most important issue raised by Mullen and Copper had to do with whether person categories are fundamentally different from other categories for organizing social information about unfamiliar people. They rejected our claim that person categories showed no unique properties that differentiated them from alternative descriptor categories available to persons when acquiring and retrieving social information.

They offered four reasons in their discussion in support of their conclusion. First, they emphasized that person categories continued to be used even when competing descriptor categories were available. But they seemed not to consider the parallel question of whether the competing descriptor categories also continued to be used even when person categories were available. Their conclusion demands that the answer to this parallel question be no.

The answer to this question was available in our data. We found that the median ARC for Person Categories was .145 and for Descriptor Categories was .142. This small difference was found both by us and by Mullen and Copper to be nonsignificant. Clearly, the answer to the parallel question is yes. Alternative descriptor categories are just as potent in the presence of person categories as person categories are in the presence of descriptor categories. These data support our conclusion, not theirs.

The remaining three reasons offered by Mullen and Copper to support their stand targeted their findings from the three new variables they examined in their reanalyses. The second and third reasons derived from the findings that exposure duration and duration of the distractor task showed more of an effect on person categories than on descriptor categories. We regard these findings as provocative rather than definitive. We would give those findings more credence had a more exhaustive sample of the relevant studies been included

and had the confounding between the two predictors been eliminated. But even if their meta-analytic findings would hold up under these improved circumstances, we would regard this at best as an incentive for them to conduct the appropriate randomized experiments investigating these two single instantiation independent variables.

Mullen and Copper's fourth reason highlighted the nonsignificant tendency of name frequency to affect person categories more than descriptor categories. But the lack of significance of this effect makes it more conjecture than substantiation of their conclusion.

Given that Mullen and Copper did not offer any compelling data in support of their conclusions, their argument for a "privileged position" occupied by person categories is not credible. Laboratory studies that have used the appropriate experimental designs and comparisons to test the "privileged position" notion have obtained an effect for descriptor categories that is symmetrical to the effect obtained for person categories (e.g., Devine & Ostrom, 1985; Pryor et al., 1982). Mullen and Copper have provided no solid evidence that could dispute Sedikides and Ostrom's (1988) conclusion: "When all of the determinants of category strength are balanced out, person categories are no more preferred than are nonperson categories. Hence, they seem not to hold a privileged position in the organization of social information" (p. 262).

CONCLUDING OBSERVATIONS

Commentary in science is a necessary enterprise that adds vitality to any domain of inquiry. We certainly welcome such attentive reactions to our published work. But we would caution those who embark on the pathway of critical commentary to thoroughly examine their premises, analyses, and conclusions prior to publication.

We recommend to those wayfarers a delightful nineteenth century poem by James Thomas Fields (1953) titled "The owl-critic." It begins by a self-proclaimed owl-eologist walking into a barber shop and blustering over the artificiality of a stuffed white owl sitting on a perch. He complains to the barber:

"Mister Brown, I'm amazed
You should be so gone crazed
As to put up a bird
In that posture absurd
To look at that owl really brings on dizziness
The man who stuffed *him* don't half know his business!"

And the Barber kept on shaving.

Later on the critic offers his own expertise:

"With some sawdust and bark
I could stuff in the dark
An owl better than that.
I could make an old hat
Look more like an owl
Than that horrid fowl,
Stuck up there so stiff like a side of coarse leather.
In fact, about *him* there's not one natural feather."

But the unfortunate critic got his comeuppance in the end:

"Just then, with a wink and a sly normal lurch,
The owl, very gravely, got down from his perch,
Walked round, and regarded his fault-finding critic
(Who thought he was stuffed) with a glance analytic
And then fairly hooted, as if he would say:
"Your learning's at fault *this* time, any way;
Don't waste it again on a live bird, I pray.
I'm an owl; you're another. Sir Critic, good-day!"
And the Barber kept on shaving.

REFERENCES

- Chow, S. L. (1988). Significance test or effect size? *Psychological Bulletin*, 103, 105-110.
- Devine, P. G., & Ostrom, T. M. (1985). Cognitive mediation of inconsistency discounting. *Journal of Personality and Social Psychology*, 49, 5-21.
- Dillon, J. T. (1982). Super-analysis. *Evaluation News*, 3, 35-43.
- Fields, J. T. (1953). The owl-critic. In B. E. Stevenson (Ed.), *The home book of verse* (pp. 1881-1883). New York: Holt, Rinehart, & Winston.
- Hyde, J. S. (1984). How large are gender differences in aggression? A developmental meta-analysis. *Developmental Psychology*, 20, 722-736.
- Hyde, J. S., & Linn, M. C. (1988). Gender differences in verbal ability: A meta-analysis. *Psychological Bulletin*, 104, 53-69.
- Kazdin, A., Durac, J., & Agteros, T. (1979). Meta-meta-analysis: A new method for evaluating therapy outcome. *Behavior Research Therapy*, 17, 397-399.
- McCann, D. C., Ostrom, T. M., Mitchell, M. L., Herstein, J. A., & Pusateri, T. P. (1983). Blocking of person information in small social groupings: The formation of person categories. Technical report no. TR/ONR-9. *Social Psychology Bulletin*, 83(1).
- Mullen, B. (1990). *Advanced BASIC meta-analysis*. Hillsdale, NJ: Erlbaum.
- Mullen, B., & Copper, C. (1989). The privileged position of person categories: A comment on Sedikides and Ostrom. *Social Cognition*, 7, 373-388.
- Ostrom, T. M., Carpenter, S. L., & Sedikides, C. (1986). The cognitive basis of the outgroup homogeneity effect. Unpublished manuscript. Ohio State University.
- Pryor, J. B., Kott, T. L., & Bovee, G. R. (1984). The influence of information redundancy upon the use of traits and persons as organizing categories. *Journal of Experimental Social Psychology*, 20, 246-262.

- Pryor, J. B., & Ostrom, T. M. (1981). The cognitive organization of social information: A converging-operations approach. *Journal of Personality and Social Psychology, 41*, 628-641.
- Pryor, J. B., Simpson, D. D., Mitchell, M., Ostrom, T. M., & Lydon, J. (1982). Structural selectivity in the retrieval of social information. *Social Cognition, 1*, 336-357.
- Roenker, D., Thompson, C., & Brown, S. (1971). Comparisons of measures for the estimation of clustering in free recall. *Psychological Bulletin, 76*, 45-48.
- Sedikides, C., & Ostrom, T. M. (1988). Are person categories used when organizing information about unfamiliar sets of persons? *Social Cognition, 6*, 252-267.
- Smith, N. L. (1982). Evaluative applications of meta- and mega-analysis. *Evaluation News, 3*, 43-47.
- Stoffelmayr, B. E., Dillavou, D., & Hunter, J. E. (1983). Premorbid functioning and outcome in schizophrenia: A cumulative analysis. *Journal of Consulting and Clinical Psychology, 51*, 338-352.