

"Hidden Observer" Phenomena in Hypnosis: An Experimental Creation?

Jean-Roch Laurence and Campbell Perry
Concordia University, Montreal, Quebec, Canada

John Kihlstrom
University of Wisconsin—Madison

Spanos and Hewitt (1980) have recently argued, on the basis of an experiment they report, that Hilgard's "hidden observer" phenomenon is pure laboratory artifact. This report reviews their claim and concludes on the following grounds that their experiment does not warrant so sweeping a conclusion: (a) Spanos and Hewitt have posed the issue as fact versus fiction and do not appear to be aware of a third alternative, namely, that the hidden observer effect is a phenomenon encountered in hypnosis that may be influenced both by demand characteristics and by the social-psychological context. (b) They appear to obtain the effect 100% of the time, unlike Hilgard, who has emphasized the phenomenon's differential incidence. (c) In contrast to Hilgard, who furnishes abundant verbal reports of his subjects' phenomenal experience as buttressing evidence for the "genuineness" of the effect in subjects who report having it, Spanos and Hewitt do not. (d) Two major procedural aspects of their experiment are discussed. Either or both may have inadvertently influenced the outcome of their experiment in the direction of their hypothesis that the responses of subjects are entirely the product of experimenter-induced expectations.

Spanos and Hewitt (1980) have recently sought to argue, on the basis of empirical data, that the "hidden observer" phenomenon of Hilgard (1973a, 1973b, 1974, 1977a, 1977b, 1979) "has more to do with experimenter-induced expectations than with the intrinsic characteristics of a hypothetical 'dissociated state'" (p. 1212). Although this inference appears to be legitimately drawn

from the data they present, close inspection of their report indicates that they did not, in fact, correctly investigate the phenomenon. This paper briefly evaluates the Spanos and Hewitt study and argues that they have not provided the empirical data to support their conclusions. It is important to note that we make no comment on the theoretical positions of either Hilgard or Spanos and Hewitt; rather, we argue the need for investigators to employ appropriate methodology to evaluate any phenomenon.

This article was prepared while the second author was in receipt of Natural Sciences and Engineering Research Council of Canada Grant Number A6361 (Cognitive Pattern in Hypnosis) and the third author, grant number MH-35856 (Personality and Cognition in Hypnotic Phenomena) from the National Institute of Mental Health, United States Public Health Service.

We wish to thank the following people for their critical reading of the manuscript during its preparation: Joyce D'Eon, Frederick Evans, Robert Karlin, V. Jane Knox, Kevin McConkey, and Helen Pettinati. The final responsibility for the conclusions drawn, however, is our own. Special thanks also go to Elizabeth Chau for her careful typing of the manuscript.

Requests for reprints should be sent to Jean-Roch Laurence or Campbell Perry, Department of Psychology, Sir George Williams Campus, Concordia University, 1455 de Maisonneuve Boulevard West, Montréal, Québec, Canada H3G 1M8.

At first glance, Spanos and Hewitt's experiment appears straightforward. Two groups of eight highly hypnotizable subjects were employed. One group was given Hilgard's hidden observer instructions, which suggest to subjects that a "hidden part" of them is actually experiencing cold-pressor pain that is not represented in phenomenal awareness because of hypnotic analgesia. This group was labeled "more aware" (MA) by Spanos and Hewitt, because the expectation conveyed to subjects is that they should report pain that they had denied a short time earlier during hypnotic analgesia. The second group

was given contrary instructions that informed them that a hidden part would experience even less pain than that experienced and reported during analgesia. This group was labeled "less aware" (LA), because the expectation conveyed to these subjects was that they should report even less pain during the hidden observer test item.

Findings indicated that the pain reports during the two hidden observer test conditions followed the differential verbal instructions administered to the two groups. These data led Spanos and Hewitt to conclude that the hidden observer effect is an artifactual one, stemming exclusively from the cues supplied by the experimenter and the situation. Analysis of the Spanos and Hewitt procedures, however, suggests that the study does not warrant the interpretation drawn from it.

Conceptualization of the Issue

It is clear from Spanos and Hewitt's report that they see the question of the hidden observer effect as amenable to only one of two possible answers; they have posed the question in terms of fact versus fiction. Their concluding remarks make this explicit. They state,

The history of hypnosis has been characterized by the periodic "discovery" of unusual phenomena that, on closer examination, have turned out to result from expectations conveyed to subjects by aspects of the situation in which the phenomenon was assessed. Charcot's three behavioral stages of "grand hypnosis" are one such example, and the cue-produced convulsions of mesmerized subjects are another. (p. 1212)

They then conclude that the hidden observer effect is yet another artifact of this type, depends entirely on experimenter-induced expectations, and has no reality beyond what subjects have been led to believe. They do not appear to have considered a third position, because there is no provision either in their experimental design or in their procedure for evaluating it. This alternative position is that a genuine hidden observer effect may well occur in some subjects when it is suggested within the hypnotic context but that its manifestation can be influenced by experimenter cues and/or subject beliefs and expectations.

Most hypnotic phenomena can be conceived of in these terms, and posthypnotic

amnesia represents a good case in point. No current investigator doubts that it can be elicited in a hypnotic context, but the posthypnotic amnesias encountered today are quite different from those reported a century ago. For example, both unsuggested "spontaneous" posthypnotic amnesia and amnesia that persists beyond amnesia reversal (Braid, 1855/1970) are not currently manifested very frequently. Both were common in the 19th century, because there were then different beliefs about its nature, both among subjects and practitioners of hypnosis.

It is true, as Spanos and Hewitt assert, that Charcot's "three stages" and the convulsive crises of patients magnetized during the early Mesmeric period were shown subsequently to be artifacts entirely of social influence. But, equally, history provides other precedents, as the differential manifestations of posthypnotic amnesia over the past century demonstrate. Further, in an experimental setting, as opposed to the field setting of history, Young and Cooper (1972) found that differential expectation conveyed to subjects concerning the occurrence of posthypnotic amnesia significantly affected the actual incidence of amnesia on a subsequent test, providing a conceptual replication of Orne's (1959) classic study. The contextual manipulation, however, accounted for only about 10% of the variance in observed amnesia.

Hypnosis is fundamentally an interpersonal phenomenon, in which one person responds to suggestions offered by another. Whatever changes in perception, memory, thought, and action that occur during hypnosis must be viewed in two sets of terms: in terms of the underlying cognitive processes involved and also in terms of the social context in which the interaction between hypnotist and subject takes place.

The Issue of Replication

Spanos and Hewitt's report, and the conclusions they draw from it, raises important questions concerning how one goes about demonstrating that a phenomenon is pure laboratory artifact and nothing else. This issue goes beyond the one raised by the previous section. Even given their assumption that the reality of the hidden observer effect

is amenable to only one of two answers, there still remains a question of whether their procedures were adequate for addressing this issue. There are several aspects of their procedures that would need to be elucidated before one could feel confident that their conclusion of pure laboratory artifact is justified. These are summarized in the following sections:

Incidence of the Phenomenon

All of the studies conducted by Hilgard and his colleagues on the hidden observer effect report empirical data on the phenomenon's incidence. In the initial study, Knox, Morgan, and Hilgard (1974) chose subjects on the basis of their having "demonstrated their ability to make use of the *automatic talking* ("*hidden observer*") *technique* with subsequent amnesia for what was said" (p. 841; italics added). In this study, it was found that one of the subjects did not show the effect, so the incidence of subjects in this initial study manifesting the phenomenon was seven out of eight (87.5%).

Two subsequent studies (Hilgard, Morgan, & Macdonald, 1975; Hilgard, Hilgard, Macdonald, Morgan, & Johnson, 1978) reported a much lower incidence of the "hidden observer" effect; in the first of them, 8 of the 20 subjects (40%) manifested the phenomenon, and in the second one, 6 out of 12 (50%). The possible reasons why some, but not all, subjects manifest the phenomenon have subsequently been discussed in detail by Hilgard (1977a, 1979).

Although Spanos and Hewitt cite all of the papers in which these data are presented or discussed, they neither provide data nor discuss any differential responding by their subjects to hidden observer instruction. The reader is led to believe that every one of their 16 subjects in the two awareness conditions manifested a hidden observer effect. Although this may have actually happened in their experiment, there is no report of them actually attempting to ascertain this.

Instead, Spanos and Hewitt asked their subjects to write "a description of what had happened to them since they had first been hypnotized" (p. 1206). It is, however, a very different matter to make this particular re-

quest of subjects as opposed to asking them, either directly or indirectly, whether in fact they experienced a hidden observer effect. The wording of questions can have a major effect on what is reported (Barber, 1969; Barber, Spanos, & Chaves, 1974), and indeed, this may have influenced Spanos and Hewitt's own experimental outcome.

As it is, one is left with two unresolved questions posed by the apparent 100% incidence of the hidden observer effect in the Spanos and Hewitt study. First, if the effect is a laboratory creation, how can it be that little more than 50% of subjects in Hilgard's own experimental reports succumb to his alleged demand characteristics? Second, how can it be that Spanos and Hewitt apparently obtained the effect in 100% of their subjects in the condition designed to replicate Hilgard's procedures?

Verbal Reports

In all of the studies reported by Hilgard and his colleagues, the experimenter had elicited and reported subjects' verbal descriptions of their hidden observer experience. Typically, subjects reporting the effect have described it as being an objective, matter-of-fact observation of what is going on during hypnotic analgesia. The hidden observer effect is often equated with reality testing, and some subjects see it as an observing ego, which may serve a protective function for the individual who experiences it (Hilgard, 1977a). Spanos and Hewitt did not follow this procedure.

Their omission of an integral aspect of data presentation is curious. If the effect is an experimental creation, as they maintain, then the verbal reports of their subjects in their two "awareness" conditions should reflect the differential instructions that they were given as well as corroborate the presence of a hidden part as reflected by the pain reports. Arguably, the "hidden" reports of subjects in the MA condition should have been similar to those furnished by subjects in Hilgard's studies. By contrast, the reports of subjects in the LA conditions could be expected to vary at least in the content of their responses. Although verbal reports should not by themselves be a sufficient condition to infer the

presence of an hypnotic effect (Orne, 1980), recent research, especially in the field of post-hypnotic amnesia, has shown the importance of assessing the subjective experience of the subjects in trying to understand the cognitive processes they deploy in bringing forth a phenomenon (Spanos & D'Eon, 1980).

The eliciting and reporting of these verbal data, then, would appear crucial to Spanos and Hewitt's contention (a) that they replicated the hidden observer in the MA condition and (b) that the effect follows the cues provided by the experimenter. It is, however, solely on the basis of numerical pain ratings that Spanos and Hewitt draw this conclusion. By contrast, an attempt to demonstrate a convergence of verbal and behavioral indexes would have substantially strengthened their argument for laboratory creation.

Procedural Differences

There is a canonical method for eliciting the hidden observer effect that has been summarized elsewhere (Hilgard, 1977a; Laurence & Perry, 1981). In summary, it consists of the following: (a) The experimenter first establishes a baseline for pain experience in hypnosis without analgesia for either cold-pressor or ischemic pain, using a pain-rating scale from 1-10, where 1 = painless and 10 = severe pain. (b) At a subsequent time, he or she administers instructions for hypnotic analgesia and the subject is again requested to rate the level of pain intensity using the same pain-rating scale as that used for baseline recording. (c) Hidden observer instructions are then administered, and a third set of pain ratings is obtained on the same scale of subjective-pain intensity. (d) After hypnosis, subjects are questioned to ascertain whether they experienced a hidden observer effect. When these procedures are employed, what is typically reported is that hidden observer ratings of pain are more similar to baseline ratings than to pain ratings given during hypnotic analgesia (Hilgard, 1977a).

Spanos and Hewitt's report indicates that they departed from this procedure in two potentially crucial respects. First, they administered hidden observer instructions both before and after the analgesia suggestion, whereas in Hilgard's procedure analgesia sug-

gestions were administered and tested before the hidden observer effect was suggested. To complicate evaluation of their study further, subjects in the MA and LA conditions were treated differently during Session 1. For the MA condition, "the experimenter then raised each subject's left arm to shoulder height and asked the subject to imagine that the upraised arm was actually in his or her lap. The experimenter then touched the subject's shoulder and asked the 'hidden self' where the arm actually was" (p. 1206). By contrast, for the LA group "the experimenter lifted each subject's left arm to shoulder height and then placed it back in his or her lap. Immediately afterwards, she contacted the subject's 'hidden self' and asked if anything had been done to his or her body in the past few minutes" (p. 1206). In short, Spanos and Hewitt followed the procedure of Hilgard and his co-workers for the experimental group but not for the control group.

The Equivalence of Conditions

There are empirical reasons for supposing that the departure from Hilgard's method and the differential treatment of the MA and LA groups during the arm hallucination item may have provided a different set of cues to the two groups. It can be seen from Table 1 that the two waking control tests (by verbal report and by key press), which represent baseline readings, document the essential equivalence of both the two treatment groups and the two methods of obtaining reports before the differential instructions were administered.

After administration of the two sets of differential awareness instructions there follows, during Sessions 3 and 4, the waking analgesia observations. There is no reason to predict more than a minor amount of pain reduction under these circumstances, and indeed, none is shown for the MA group. The LA group, however, shows significant reduction in pain ratings, compared to both their previous baseline and to the waking analgesia performance of their counterparts in the MA group.

Further, there is no reason in neodissociation theory to expect that hidden observer instructions will lead to a change in experienced pain in the waking analgesia condition,

Table 1
Mean Maximum Pain Ratings for More Aware and Less Aware Conditions at Baseline and During Waking Analgesia

Waking control		Waking analgesia		
Verbal	Key press	Verbal	"Hidden" (retrospective)	"Overt" hypnotic analgesia
More aware (MA) group				
15.75 _a (5.00)	15.38 _a (5.85)	13.88 _a (6.31)	15.00 _a (6.50)	6.50 _{bd} (4.93)
Less aware (LA) group				
11.25 _a (2.92)	11.75 _a (4.59)	7.88 _b (4.19)	3.38 _c (3.42)	5.50 _d (3.63)

Note. Numbers in parentheses are standard deviations. Means sharing the same subscript fail to differ significantly at $\alpha = .05$. (From "The Hidden Observer in Hypnotic Analgesia: Discovery or Experimental Creation?" by Nicholas P. Spanos and Erin C. Hewitt, *Journal of Personality and Social Psychology*, 1980, 39, 1201-1214. Copyright 1980 by the American Psychological Association. Reprinted by permission.)

and indeed, there is no such change in the MA group. But again, the LA group reports a further significant diminution of pain relative to their previous verbal reports. These puzzling results are discussed by the authors (pp. 1208-1209) in terms of differential demand characteristics for the two groups, which in itself suggests that the authors accept that their initial manipulations may have biased the LA group to the point that subjects altered their responses during waking analgesia. This effect could have easily been carried over into the hypnotic condition especially when one looks at the methodological difference between the two groups in Session 1 during the arm hallucination.

It can be argued that the differences in behavior in the MA and LA groups during the test of waking analgesia indicate that the situational demands are not comparable (except for the requested direction of the hidden reports) in the two treatment conditions, and this is so regardless of how closely the investigators think they have modeled their LA instructions on their MA ones. Demand characteristics are not controlled merely by attending to the surface structure of the various experimental treatments (Orne, 1962, 1973). If, as it appears, the situational demands were not comparable for the two groups, no conclusion can be drawn about the behavior of the MA group from the be-

havior of the LA group. All that can be said is that subjects in the MA condition furnished pain ratings that are numerically similar to those furnished in previous published reports (Knox et al., 1974; Hilgard et al., 1975; Hilgard et al., 1978).

Taken in conjunction with the previous points, and the finding of Hilgard et al. (1978) that the effect is influenced by demand characteristics when Orne's (1959, 1979) real-simulator design is employed, we would conclude that Spanos and Hewitt have not demonstrated that the effect is pure and simple laboratory creation. There are simply too many loopholes in their own design and procedure to warrant so absolute and categorical a judgment.

Discussion

The conclusions that can be drawn from experimental data are only as strong as the methodology employed to obtain them. In this respect, we wish to maintain that due to their failure to replicate Hilgard's procedures precisely, and especially their introduction of procedural differences between the experimental and control groups, no conclusions can be drawn from the Spanos and Hewitt (1980) study concerning the nature of the hidden observer in hypnotic analgesia. Perhaps the hidden observer *is* an experimental

creation, but there is nothing in their article that would convince us that this is the case.

In fact, there are compelling empirical reasons for thinking that the hidden observer is a genuine phenomenon experienced in hypnosis by about 50% of highly susceptible subjects and influenced (as all interpersonal phenomena are) by expectational and situational cues, but not wholly a product of them. In an experiment employing Orne's (1959, 1979) real-simulator design, Hilgard et al. (1978) found that subjects simulating hypnosis mimicked the hidden observer shown by those who were truly hypnotized. Interestingly, there was a higher incidence of the phenomenon in the simulators (75%) than in the six hypnotized subjects (50%), which intuitively seems to go against the hypothesis that the hypnotized subjects were simply acting in accordance with the perceived demand characteristics. More to the point, in an analysis not discussed by Spanos and Hewitt (1980), Hilgard et al. (1978) explored the effect of expectations on the hidden observer phenomenon in a postexperimental interview. Of the six hypnotized subjects who reported a hidden observer effect, 50% reported that they had been skeptical of the phenomenon prior to experiencing it, and the remaining 50% stated that they had found the suggestion of a hidden observer plausible. For the six subjects who did not have a hidden observer effect, precise figures are not specified, but at least two of them were reported as favorable to the notion of a hidden observer prior to not experiencing it. This lack of correspondence between expectations and performance, even in the face of explicit and strong demands (as revealed by simulators), appears to argue against a conceptualization of the hidden observer as merely an experimental creation.

Obviously, future research, that takes into account the methodological points raised in this critique is required in order to clarify the nature of the hidden observer phenomenon. We have no disagreement with the basic program of setting up treatment conditions in order to evaluate the degree to which this phenomenon (or any other) is influenced by experimenter-induced expectations and other features of the social context. It is our hope, however, that such research will not be

couched in the "either/or," "fact versus fiction" terms that are the usual product of theoretical controversy. With hypnosis, as with other complex cognitive and social phenomena, truth cannot usually be fitted conveniently into so procrustean a bed.

References

- Barber, T. X. *Hypnosis: A scientific approach*. New York: Van Nostrand, 1969.
- Barber, T. X., Spanos, N. P., & Chaves, J. F. *Hypnosis, imagination and human potentialities*. New York: Pergamon Press, 1974.
- Braid, J. *The physiology of fascination and the critics criticized*. In M. M. Tinterow (Ed.), *Foundations of hypnosis. From Mesmer to Freud*. Springfield, Ill.: Charles C Thomas, 1970. (Originally published, 1855.)
- Hilgard, E. R. Dissociation revisited. In M. Henle, J. Jaynes, & J. Sullivan (Eds.), *Historical conceptions of psychology*. New York: Springer, 1973. (a)
- Hilgard, E. R. A neodissociation interpretation of pain reduction in hypnosis. *Psychological Review*, 1973, 80, 396-411. (b)
- Hilgard, E. R. Towards a neo-dissociation theory: Multiple cognitive controls in human functioning. *Perspective in Biology & Medicine*, 1974, 17, 301-316.
- Hilgard, E. R. *Divided consciousness. Multiple controls in human thought and action*. New York: Wiley, 1977. (a)
- Hilgard, E. R. The problem of divided consciousness: A neodissociation interpretation. *Annals of the New York Academy of Sciences*, 1977, 296, 48-59. (b)
- Hilgard, E. R. Divided consciousness in hypnosis: The implications of the hidden observer. In E. Fromm & R. E. Shor (Eds.), *Hypnosis: Developments in research and new perspectives* (2nd ed.). New York: Aldine, 1979.
- Hilgard, E. R., Hilgard, J. R., Macdonald, H., Morgan, A. H., & Johnson, L. S. Covert pain in hypnotic analgesia: Its reality as tested by the real-simulator design. *Journal of Abnormal Psychology*, 1978, 87, 655-663.
- Hilgard, E. R., Morgan, A. H., & Macdonald, H. Pain and dissociation in the cold pressor test: A study of hypnotic analgesia with "hidden reports" through automatic key pressing and automatic talking. *Journal of Abnormal Psychology*, 1975, 84, 280-289.
- Knox, V. J., Morgan, A. H., & Hilgard, E. R. Pain and suffering in ischemia: The paradox of hypnotically suggested anesthesia as contradicted by reports from the "hidden observer." *Archives of General Psychiatry*, 1974, 30, 301-316.
- Laurence, J.-R., & Perry, C. The "hidden observer" phenomenon in hypnosis: Some additional findings. *Journal of Abnormal Psychology*, 1981, 90, 334-344.
- Orne, M. T. The nature of hypnosis: Artifact and essence. *Journal of Abnormal and Social Psychology*, 1959, 58, 277-299.
- Orne, M. T. On the social psychology of the psychological experiment: With particular reference to demand characteristics and their implications. *American Psychologist*, 1962, 17, 776-783.
- Orne, M. T. Communication by the total experimental situation: Why it is important, how it is evaluated, and

- its significance for the ecological validity of findings. In P. Pliner, L. Krames, & T. Alloway (Eds.), *Communication and affect: Language and thought*. New York: Academic Press, 1973.
- Orne, M. T. On the simulating subject as a quasi-control group in hypnosis research: What, why and how. In E. Fromm & R. Shor (Eds.), *Hypnosis: Developments in research and new perspectives* (2nd ed.). New York: Aldine, 1979.
- Orne, M. T. On the construct of hypnosis: How its definition affects research and its clinical application. In G. D. Burrows & L. Dennerstein (Eds.), *Handbook of hypnosis and psychosomatic medicine*. New York: Elsevier/North Holland, 1980.
- Spanos, N. P., & D'Eon, J. L. Hypnotic amnesia, disorganized recall, and inattention. *Journal of Abnormal Psychology*, 1980, 89, 744-750.
- Spanos, N. P., & Hewitt, E. C. The hidden observer in hypnotic analgesia: Discovery or experimental creation? *Journal of Personality and Social Psychology*, 1980, 39, 1201-1214.
- Young, J., & Cooper, L. M. Hypnotic recall amnesia as a function of manipulated expectancy. *Proceedings of the 80th Annual Convention of the American Psychological Association*, 1972, 7, 857-858. (Summary)

Received June 10, 1981

Revision received November 3, 1981 ■

Manuscripts Accepted for Publication in the Section Personality Processes and Individual Differences

- The Inadequacy of Voice Recognition as a Demonstration of Self-Deception. William Douglas (School of Social Inquiry, Murdoch University, Murdoch, Western Australia 6150, Australia) and Keith Gibbins.
- Fear of Personal Death: Attribution, Structure, and Relationship to Religious Belief. Victor Florian and Shlomo Kravetz (Department of Psychology, Bar-Ilan University, Ramat-Gan, Israel).
- The Traditional-Liberated Woman Dimension: Social Stereotype and Self-Concept. Rosalind D. Cartwright (Department of Psychology and Social Sciences, Rush-Presbyterian St. Luke's Medical Center, 1753 West Congress Parkway, Chicago, Illinois 60612) and Stephen Lloyd.
- Required High Effort Increases Subsequent Persistence and Reduces Cheating. Robert Eisenberger (Department of Psychology, University of Delaware, Newark, Delaware 19711) and Fred A. Masterson.
- Control Over Stress, Type-A Behavior Pattern, and Response to Stress. Mark S. Pittner, B. Kent Houston (Department of Psychology, The University of Kansas, 426 Fraser Hall, Lawrence, Kansas 66045), and Gail Spiridigliozzi.
- The Self-Serving Function of Hypochondriacal Complaints: Physical Symptoms as Self-Handicapping Strategies. Timothy W. Smith, C. R. Snyder (Psychological Clinic, University of Kansas, 307 Fraser Hall, Lawrence, Kansas 66045), and Suzanne C. Perkins.
- An Achievement Motivation Nomological Network. William H. Cooper (School of Business, Queen's University, Kingston, Ontario, Canada K7L 3N6).
- The Dimensions of Subjective Female Orgasmic Responsiveness. Michael D. Newcomb (Department of Psychology, University of California, Los Angeles, California 90024) and P. M. Bentler.
- More Aggressive Cartoons Are Funnier. Clark McCauley (Department of Psychology, Bryn Mawr College, Bryn Mawr, Pennsylvania 19010), Kathryn Woods, Christopher Coolidge, and William Kulick.
- The Subjective Organization of Personality in Adulthood and Aging. Carol D. Ryff (Center for Advanced Study in the Behavioral Sciences, 202 Junipero Serra Boulevard, Stanford, California 94305) and Susanne G. Heincke.
- Dispositional and Situational Influences on Dominance Behavior in Small Groups. Elizabeth J. Aries (Department of Psychology, Amherst College, Amherst, Massachusetts 01002), Conrad Gold, and Russell H. Weigel.
- Social Confirmation of Dysphoria: Shared and Private Reactions to Depression. Stephen Strack (Department of Psychology, University of Miami, Coral Gables, Florida 33124) and James C. Coyne.
- Sex Role Orientation and Self-Esteem: A Critical Meta-Analytic Review. Bernard E. Whitley, Jr. (Department of Psychology, University of Pittsburgh, Pittsburgh, Pennsylvania 15206).
- Belief in Paranormal Phenomena: Assessment Instrument Development and Implications for Personality Functioning. Jerome Tobacyk (Department of Behavioral Sciences, Louisiana Tech University, Box 10048, Ruston, Louisiana 71272) and Gary Milford.
- Moral Obligation and Attitudes: Their Relationship to Behavioral Intentions. Richard L. Gorsuch (Graduate School of Psychology, Fuller Theological Seminary, 117 North Madison Avenue, Pasadena, California 91102) and John Orterg.
- Amelioration of Deception and Harm in Psychological Research: The Important Role of Debriefing. Stevens S. Smith (Department of Psychology, University of Wisconsin, W. J. Brogen Psychology, 1202 West Johnson Street, Madison, Wisconsin 53706) and Deborah Richardson.
- Dimensions of Grandparenthood Meaning: Deductive Conceptualization and Empirical Derivation. Helen Q. Kivnick (814 Edythe Street, Manteca, California 95336).
- The Impact of Divorce on Locus of Control Orientation in Adult Women: A Longitudinal Study. William J. Doherty (Department of Family Practice, University of Iowa, Oakdale Family Practice Office, Oakdale, Iowa 52319).