THE EFFECTS OF UNCONSCIOUS PRESENTATION OF INFORMATION ON THERAPIST CONCEPTUALIZATIONS, INTENTIONS, AND RESPONSES

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This article presents a study of the effects of tachistoscopic presentation of affective words on subjects' conceptualizations, intentions, and responses to a simulated client. The participants, 36 counseling students, were assigned randomly to one of the following treatments: (1) subliminal presentation of negative emotional concepts; (2) subliminal presentation of positive emotional concepts; (3) supraliminal presentation of positive emotional concepts. After the tachistoscopic presentations, all subjects were exposed to a simulated client, whom they were asked to evaluate, respond to, and report the cognitive intentions that guided their responses. Significant effects were found in the subliminal presentation of positive emotional concepts on subjects' conceptualizations, intentions, and responses. Some significant effects also were found for the supraliminal presentation, but only for the client evaluation measure.

What relation is there among behaviors, cognitions, and unconscious processes in the practice of counseling and psychotherapy? This research presents a new methodology useful in the systematic analysis of the multiple processes that underly overt counselor and therapist behavior.

Influenced by the microcounseling (*e.g.*, Ivey, 1971, 1983) and the human resource models (*e.g.*, Carkhuff, 1969), counseling and therapy process research, for the past 20 years, has focused on the understanding of behavioral processes, such as the effects of verbal and nonverbal skills (*e.g.*, Hill & Gormally, 1977), skills across the process (*e.g.*, Hill, Carter, & O'Farrell, 1983) and across theoretical orientations (*e.g.*, Lee, Uhlemann, & Haase, 1985). However, following the cognitive revolution (*e.g.*, Hilgard, 1980; Mahoney, 1977) several researches have attempted to clarify the covert mechanisms of the therapeutic process. This cognitive movement is illustrated by the research on therapist's conceptual strategies (*e.g.*, Hirsch & Stone, 1983; Kurpius, Benjamin, & Morran, 1985; Strohmer & Chiodo, 1984), attitudes and beliefs (*e.g.*, Hirsch & Stone, 1982; Stone & Kelly, 1983), perceptions (*e.g.*, Elliott, 1979; Elliott, Barker, Caskey, & Pistrang, 1982) and intentions (*e.g.*, Fuller & Hill, 1985; Hill & O'Grady, 1985). Martin (1984) provides a good conceptual integration, supported by recent research (Martin, Martin, Meyer, & Slemon, 1986) into the cognitive and behavioral mechanisms of the therapeutic process.

While this cognitive movement is still growing, other areas of psychology already are experiencing what some authors have chosen to call the cognitive unconscious revolution (Van Den Bergh & Eelen, 1984). More and more, the advocates of the cognitive movement are giving attention to the role of the unconscious processes (*e.g.*, Mahoney, 1980, 1985; Meichenbaum & Gilmore, 1984). In counseling and therapy process research, the influence of this movement is virtually nonexistent. An exception is the small group of studies on countertransference processes. (*Cf.* Peabody & Gelso, 1982; Singer & Luborsky, 1977.)

Recently, however, some authors have been stating the need to take into account the unconscious dimension of the therapist-client relationship (*e.g.*, Gelso & Carter, 1985). However, the unconscious, even though recognized as an important dimension

of the therapeutic interaction, presents some obstacles for the researcher. The present study will explore the possibilities of subliminal methodology to analyze the interaction among therapist's unconscious, cognitive, and behavioral dimensions.

Despite the initial controversy (*e.g.*, Eriksen, 1960), several recent reviews of the research are finding support for the important role of the unconscious processes and for the subliminal methodology as an important tool for studying those processes (*e.g.*, Bowers, 1984; Dixon, 1981; Schevrin & Dickman, 1980). We will illustrate briefly the state of the art on subliminal research with examples from studies carried out in cognitive, social, and clinical psychology.

The first group is represented by the research on masking effects. In these experiments, the perception of a given stimulus is impaired by the temporal and spatial proximity of a second stimulus, referred to as mask. Marcel (1983) found that by progressively reducing the temporal distance between the stimulus and the mask, the subjects first would lose the capacity to detect the stimulus, then the capacity for making judgments on the graphical similarity, and only finally the capacity for semantic analysis. That is, subjects were found to have access to semantic information even when they were not able to detect the presence of a given stimulus.

A second group of studies are concerned with the effect of subliminal presentations on social perceptions and judgments. Bargh and Pietromonaco (1982) presented subliminally lists that contained 0%, 20%, or 80% of hostile-related words. Subjects then were confronted with an ambiguous description of a person, whom they were asked to evaluate. The data showed that the subjects' evaluations were affected significantly by the amount of hostile words presented subliminally.

Finally, the third group of studies are illustrated by the research program carried out by Silverman and associates (*e.g.*, Silverman, 1983; Silverman & Weinberger, 1985). The methodology introduced by Silverman—psychodynamic activation method—consists of the subliminal presentation of stimuli with psychodynamic content (*e.g.*, Mommy and I are one.). A considerable amount of research completed during the past 20 years has found support for the effect of these messages on the intensification and reduction of psychopathology and as adjuncts to therapeutic and educational interventions.

In sum, the research on subliminal perception tends to find support for the idea that our evaluations and responses are influenced by information presented outside of conscious awareness. Therefore, it would be legitimate to hypothesize that in the clinical situation, therapists are influenced in their cognitions and behavioral responses by information presented outside of consciousness. This statement, even though presented by Freud (1910/1958) long ago, still awaits experimental confirmation.

The present study will explore the possibilities of subliminal methodology for analyzing the effects of unconscious presentation of information on therapists' cognitions and behaviors. The general hypothesis is that therapists are influenced in their judgments, intentions, and responses by information of which they are unaware.

METHOD

Overview

The subjects, 36 counseling students, were assigned randomly to one of the following experimental treatments: (1) subliminal presentation of negative emotional concepts; (2) subliminal presentation of positive emotional concepts; (3) supraliminal presentation of negative emotional concepts; and (4) supraliminal presentation of positive emotional concepts. Therefore, four groups were compared. These groups emerged from the interaction of two independent variables (*e.g.*, condition of presentation and type of stimuli) with two conditions each (*i.e.*, subliminal *vs.* supraliminal, and positive *vs.* negative). All subjects went through the following experimental sequence:

    1.   Tachistoscopic presentations (either subliminally or supraliminally) of 14 emotional concepts (either positive or negative).

    2.   After the tachistoscopic presentation, the subjects went through the stimuli recall task, wherein they were asked to recall or guess 10 words among the stimuli presented.

    3.   Subjects then were shown a client simulation vignette.

    4.   After the vignette, subjects were asked to write a verbal response to the simulated client, provide an evaluation of the client's functioning, and report those intentions that guided their responses.

Subjects

Participants in this study were 40 students enrolled in a graduate course in counseling skills at a large northeastern American university. All participants were required to have English as their native language and normal or corrected to normal vision. From the original sample, 2 subjects revealed inappropriate vision, and 2 others did not complete all the dependent measures and subsequently were withdrawn from the experiment. The final sample consisted of 36 subjects, 4 males and 32 females, whose ages ranged from 20 to 42, with a mean of 25.4. Academic credit was offered for participation. The subjects were assigned randomly, counterbalanced by sex, to each of the four experimental treatments.

Instrumentation

Tachistoscopic stimuli. When the subjects entered into the experimental room, they were exposed to the tachistoscopic (Harvard T-1C-3 two channel) presentation of stimulus words. All subjects were presented either the negative or the positive emotional concepts, in one of the following conditions: Subliminal or supraliminal. (The conditions of stimuli presentation will be described in the Procedure section.)

The tachistoscopic stimuli consisted of 14 positive emotional words, 14 negative emotional words, 2 neutral words, and 1 mask stimulus. The 14 positive emotional words were: Loving, affectionate, compassionate, pleasant, relaxed, warmhearted, peaceful, serene, trusting, harmonious, tranquil, contented, thoughtful, and kindly. The negative emotional words were: Morbid, cruel, tortured, repulsive, hellish, violent, tragic, persecuted, shattered, suicidal, bloodthirsty, plagued, evil, and hateful. Two neutral words—window and garden—were used as examples. Finally, the mask stimulus consisted of 12 capital Xs in a straight line (*i.e.*, XXXXXXXXXXXX). All of the stimuli were printed in black capital letters, in the middle of white cards (15 cm × 10 cm).

Both the negative and the positive words were selected from the *Semantic atlas of emotional concepts* developed by Averill (1975). A factor analysis of the 558 emotional concepts of this Atlas revealed the existence of four dimensions: Activation, evaluation, depth of experience, and lack of control. All of the words selected came from high-familiarity concepts with highest and lowest scores on the evaluation factor.

Client simulation vignette. After the tachistoscopic presentation, and immediately after the stimuli recall task (described in the Measures section), all subjects went into another experimental room, where they were exposed to a client simulation vignette. In this vignette, selected from Kagan (1975), an old man communicates the following message to the observer:

Can you give me a minute? Something has been driving me frantic. For the last few years I've found myself . . . thinking about . . . little children. Wanting to touch them . . . where I shouldn't. I know it's wrong, I know it's evil, I know it's unnatural. I can't help myself. Please help me. You've got to help me.

Measures

Stimuli recall. This measure was introduced immediately after the tachistoscopic presentation and was intended to test the efficacy of the experimental treatment. Subjects from the subliminal groups were expected not to recall the stimuli, while supraliminal groups were expected to recall most of the stimuli. In order to measure the degree of stimuli recall, participants were instructed to write 10 words that they remembered from the presentation. In case they did not remember any words, they were asked to guess. Only words that corresponded exactly to the original stimuli were considered correct.

Subjects' verbal responses. Immediately after the presentation of the client simulation vignette, the subjects were instructed to generate a brief written response to the simulated client. The response was divided into units and classified according to the *Hill Counselor Verbal Response Category System-Revised* (Friedlander, 1982a, 1982b). The system consists of the following categories: Encouragement/approval/reassurance; restatement/reflection; self-disclosure; interpretation; confrontation; providing information; information seeking; direct guidance/advice; and unclassifiable. Additionally, the scale provides a measure of the degree of structure.

Client evaluation. After the verbal response, the subjects were asked to provide, on a rating scale, an evaluation of the client's functioning. This rating scale consisted of 10 emotional traits, 5 positive and 5 negative. Subjects were asked to rate the client whom they have seen by circling a number from 0 (not at all) to 10 (extremely) on each of the 10 traits.

Report of intentions. After the verbal responses and the client evaluations, the subjects were instructed to report the intentions behind their response choices. In order to do that, the list of intentions developed by Hill and O'Grady (1985) was used. The subjects were asked to select those that best apply among the following 19 intentions: Set limits, get information, support, focus, clarify, hope, change, cathart, cognitions, behaviors, self-control, feeling, insight, change, reinforce change, resistance, challenge, relationship, and therapist needs. A multidimensional scaling conducted by Hill and O'Grady revealed the existence of five clusters of intentions: Assessment, therapeutic work, change, problems, and nonspecific factors.

Judges

Four independent judges were used in this study. Two of the judges divided subjects' verbal responses into units in accordance with the rules and the training procedures specified by Friedlander (1982a) and Banaka, Birge-Wilson, and Thompson (1985). The between-judgment agreement for the construction of response units was 93%. Disagreements were solved by consensus.

Two other judges classified the response units by the *Hill Counselor Verbal Response Category System-Revised* (Friedlander, 1982a, 1982b). After the training procedures, an acceptable level of agreement was found in the classification of experimental protocols (Kappa = .77).

PROCEDURE

Experimental conditions. All subjects were assigned randomly (counterbalanced by sex) to one of the following experimental conditions: (1) subliminal presentation of negative emotional concepts; (2) subliminal presentation of positive emotional concepts; (3) supraliminal presentation of negative emotional concepts; and (4) supraliminal presentation of positive emotional concepts.

In the subliminal condition, stimuli were presented for periods of 50 milliseconds on one channel, followed immediately by the mask on the second channel. In the supraliminal condition, stimuli were presented for a period of 1000 milliseconds on one

channel, followed by the mask on the second channel. For the positive emotional concept groups, the list of 14 positive words were presented, while the other groups were exposed to the list of 14 negative words.

In sum, two variables with two conditions each were manipulated: (1) condition of presentation (subliminal *vs.* supraliminal); and (2) type of stimulus (negative *vs.* positive). From the interaction among these variables, four groups emerged, hereafter referred as (a) subliminal/negative; (b) subliminal/positive; (c) supraliminal/negative; and (d) supraliminal/positive.

RESULTS

Two statistical analyses were performed. A two-way analysis of variance was employed to test the contribution of each independent variable for the stimuli recall. For all the other variables, given the objective of testing between-group differences, series of orthogonal *t*-test contrasts were performed. As is usual in these types of analyses, the *t*-test contrasts make possible dispensing the use of the ANOVA F test (Nie, Hull, Jenkins, Steinbrenner, & Bent, 1975).

Stimuli recall. Subjects in both subliminal conditions had less than 5% of correct recall, while subjects in supraliminal groups showed a correct recall above 65%. A two-way ANOVA (Table 1) revealed a significant effect due to condition of presentation (*i.e.*, subliminal *vs.* supraliminal). As can be seen in Table 1, no significant effect was found for the manipulation of the type of stimulus variable (*i.e.*, negative *vs.* positive) or the condition by type interaction.

Table 1
ANOVA-Stimuli Recall

Source	SS	df	M	F	p
Condition	560.11	1	560.11	507.27	.001
Stimuli	.11	1	.11	.10	.75
Condition × stimuli	1.00	1	1.00	.91	.35
Error	35.33	32	1.04		
Total	596.56	35	17.04		

Verbal responses. Table 2 shows the means and standard deviations for the only response category for which significant results were found — information seeking. Contrasts among all the groups revealed significant differences between the subliminal/positive group and both the supraliminal/negative, $t(32) = 2.00$, $p < .05$, and the supraliminal/positive, $t(32) = 2.25$, $p < .05$. That is, the two supraliminal groups used significantly more information seeking when compared with the subliminal/positive group.

Client evaluation. Table 2 also shows the means and standard deviations for the client evaluation measure. *t*-test contrasts revealed the existence of significant differences between subliminal/positive and supraliminal/negative groups, $t(32) = 2.05$, $p < .05$, and between supraliminal groups, $t(32) = 2.83$, $p < .01$. Thus, both the subliminal/positive and the supraliminal/positive groups revealed significantly more positive client evaluations than did the supraliminal/negative group.

List of intentions. Given the small number of ratings per category, only clusters of intentions were considered. Table 2 presents the only cluster for which significant differences were found — therapeutic work intentions. The scores presented were cor-

Table 2
Means and Standard Deviations for Verbal Responses, Client Evaluations, and Intentions

		Sub/neg	Sub/pos	Sup/neg	Sup/pos
Verbal response					
Information seeking	M	.89	.33	1.22	1.33
	SD	.60	.50	1.20	1.22
Client evaluation	M	11.00	14.22	2.56	18.67
	SD	12.00	10.80	10.49	14.54
Intentions					
Therapeutic work	M	.33	.22	.53	.51
	SD	.17	.21	.39	.28

Note. — Sub/neg = subliminal/negative; Sub/pos = subliminal/positive; Sup/neg = supraliminal/negative; Sup/pos = supraliminal/positive.

rected for cluster size by dividing the number of intentions in the cluster by the amount of categories per cluster. Contrasts among all possible group comparisons revealed, once again, the existence of significant differences between the subliminal/positive group and both the supraliminal/positive, $t(32) = 2.21$, $p < .05$, and supraliminal/negative, $t(32) = 1.32$, $p < .05$. That is, the subliminal/positive group reported significantly less use of therapeutic work intentions when compared with both the supraliminal groups.

DISCUSSION

This study provides some initial evidence that the overt behavior of the therapist is influenced both by internal cognitions and by unconscious processing.

More specifically, the present research revealed three main findings. First, with respect to the therapists' verbal responses, the positive/subliminal group showed a significantly smaller use of information seeking skills than did both supraliminal groups. Second, with regard to the client evaluation, the subliminal/positive group demonstrated a significantly more positive evaluation than did the supraliminal/negative group. Additionally, the supraliminal/positive group also presented a significantly more positive client evaluation than did the supraliminal/negative group. Finally, the subliminal/positive group was found to make significantly less use of therapeutic work intentions when compared with both the supraliminal groups.

In sum, even though significant effects were found for the supraliminal presentations on the client evaluation measure, only the subliminal presentation of positive emotional concepts revealed consistent effects across all the dependent variables. That is, the subliminal/positive group was the only group significantly different from the supraliminal ones in terms of client evaluation, intentions, and responses. These results suggest that in a therapeutic analogue situation, the subliminal presentation of positive emotional concepts tends to produce a more positive client evaluation, which is translated cognitively in a decrease of therapeutic work intentions and expressed behaviorally in less use of information seeking skills.

The validity of these results is supported by the finding that supraliminal groups were very accurate in their recall, while in the subliminal groups the recall was almost nonexistent. As was expected, subjects in both subliminal conditions were not able to identify consciously the stimuli presented.

The effects of supraliminal presentations (both negative and positive) on evaluation of the client are congruent with data from studies on social perception. For exam-

ple, Srull and Wyer (1979) activated, by means of a sentence completion task, the concepts of hostility and kindness. Then, subjects were asked to evaluate a person who was described ambiguously. Srull and Wyer found that subjects' evaluations were influenced in the same direction of the categories previously activated. Other authors have found similar results through use of subliminal stimuli. For example, Bargh and Pietromonaco (1982), in the experiment previously referred to, found that the evaluation of a person was dependent on the number of hostile words subliminally presented to observers. The results from the present study, which revealed the effect of subliminal presentation of positive stimuli, confirm in part the Bargh and Pietromonaco data. However, the absence of effects with the subliminal/negative group raises some interesting hypotheses. The first concerns the nature of the task in both studies. While the subjects in Bargh and Pietromonaco's study were in a nonspecified social-judgment context, in the present research subjects were in a therapeutic analogue situation, in which the simulated client presentation was much closer to reality. It also could be hypothesized that the subliminal presentation of negative stimuli had interfered with counselors' covert processes, namely, attitudes of warmth and positive regard toward the client. However, one question still remains: Why has that happened for the subliminal/negative presentations and not for the supraliminal/negative ones? Although still speculative, these results seem to support the hypothesis of a privileged relationship between the presentation of unconscious information and therapists' inner processes. This hypothesis is reinforced by the results for the other dependent measures, in which for both intentions and verbal responses, no significant effects of the supraliminal presentations were found. This hypothesis also seems to be consistent with the two central findings of Silverman's research (*e.g.,* Silverman, 1983). First, the impact of certain messages is much more dramatic when presented subliminally. Second, there is an ideal matching between content of the messages and subjects' psychological processes. For example, the presentation of the message, "Mommy and I are one" had no effect when presented supraliminally, and women were more impacted by the subliminal message, "Daddy and I are one." Future research should explore in greater detail the relationship between characteristics of the message and individual variables of the therapist.

According to Hill and O'Grady (1985), the cluster of therapeutic work intentions reflect the therapist's attempt to help the "client to reach a deeper or new cognitive or emotional understanding and to internalize responsibility" (p. 18). Apparently, the presentation of subliminal stimuli, probably due to an activation of positive categories, resulted in a decrease of therapeutic work intentions.

As was expected, given the fact that it was an initial interaction with the client, all groups exhibited a greater amount of information seeking skills. This could explain in part why significant differences were found only in this category. Once again, the subliminal/positive group, possibly due to a more stable positive client evaluation and less therapeutic work intentions, felt less need to probe the client.

In spite of the interesting results found, the data from the present research should be analyzed in light of four major limitations. First, we are in the presence of a therapeutic analogue situation. Therefore, any attempt to generalize these results should be cautious and await further studies.

Second, the angles of vision were not controlled. This could have transformed, for some subjects, the subliminal presentations into infraliminal ones. If this is true, one should expect much more dramatic differences after angles of vision have been controlled.

Third, and as suggested by Marcel (1983), the awareness threshold varies from one subject to another. As such, the definition of an individual threshold would be a more accurate way to establish the subliminal and supraliminal conditions.

Finally, it should be noted that the large number of statistical comparisons increased the likelihood of Type I error. However, this was both necessary and understandable given the small sample size and the exploratory nature of the study.

Despite these limitations, the data from this study point to promising possibilities of using subliminal methodology to evaluate the contribution of unconscious mechanisms in the therapy process. Additionally, this study found support for the idea that therapists are influenced, in their conceptualizations, intentions, and responses, by information of which they are not aware.

Needless to say, further studies need to be conducted to overcome certain methodological deficiencies. Also, it is imperative to carry out these studies in more naturalistic contexts. We hope at least to have contributed to the exploration of methodological tools that will enable counseling and therapy process researchers to open their inquiries into unconscious processes — "the operant researcher seldom 'saw' any cognitive influence because he or she seldom looked for it. I would like to think that cognitive researchers will not repeat this scenario in the appraisal of unconscious processes" (Mahoney, 1980, p. 164).

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