

Everything You Need To Know About Subliminals

A special report by Morry Zelcovitch

Do audio subliminals really work?

The research regarding subliminal audios is confusing to say the least. Depending on where you look you can find research that says they work, or that they don't work, or even that they can work, but only if produced in a very specific manner.

I believe that they have a beneficial effect in either case as while people listen to them they are consciously aware that there are beneficial affirmations being presented to them (even if they only hear "rain" or some other background noise) that are geared towards a specific result. What this accomplishes at the very least is an increased awareness and attention towards these goals which in itself helps to create a form of intention that I'm sure you will agree can be very beneficial.

We all know that what we think is important and in this way people will be reminded to think "the right things".

Why can't you hear the affirmations in the subliminals?

The affirmations are indeed embedded in the background sound. If you listen carefully and with your ear close to the speakers then you will hear a slight squeaking sound...

This is actually the subliminal aspect and the affirmations. They are designed like this to get past the judgement of the conscious mind.

Can you wear headphones while listening to subliminals?

To answer your question the reason you should not listen to the subliminals with headphones is that the actual subliminals are recorded at a rather high frequency and as a result if you were to listen to them too loudly (anything louder than barely audible) then you risk the possibility of damaging your hearing.

If you absolutely must listen with headphones then the volume should be as low as possible and you should just barely be able to hear the background.

Animals and subliminals...

The subliminals are encoded at a very high frequency and as such Animals may not react too well to them. I suggest you observe your pets to make sure they are not being Disturbed. If they are (you will be able to tell by how they react) you will have to remove them from the room where you are listening. It's a good idea to leave a door open so they can leave if they want to.

Can your brain handle the subliminal recordings?

A human being has about 100 billion brain cells. Although different neurons fire at different speeds, as a rough estimate it is reasonable to estimate that a neuron can fire about once every 5 milliseconds, or about 200 times a second. The number of cells each neuron is connected to also varies, but as a rough estimate it is reasonable to say that each neuron connects to 1000 other neurons- so every time a neuron fires, about 1000 other neurons get information about that firing.

If we Multiply all this out we get 100 billion neurons X 200 firings per second X 1000 connections per firing = 20 million billion Calculations per second.as such it's not unreasonable to assume it can process the approximately 2 million statement we are Sending to it subliminally in 1 hour.

End of Report

Note: The bibliography on the next pages is for your information only. It is not necessary to read them all, but highly recommended if you want to have a deeper understanding of the subliminal researches.

Subliminal research bibliography

Subliminal Messages Reduce Shoplifting

An article in TIME magazine in 1979, titled, 'Secret Voices,' Reported that nearly 50 department stores in the U.S. and Canada Were using subliminal messages in the music systems to reduce Shoplifting and employee theft. One East Coast chain was Reported to have reduced theft by 37%, amounting to the Phenomenal savings of \$600,000 over a nine-month period.

A similar story in the WALL STREET JOURNAL in 1980 stated the Installation of a subliminal message system in a New Orleans Supermarket accounted for a drop in pilferage loss from almost \$50,000 per six months to the astounding figure of less than \$13,000' an all time low! Cashier shortages dropped from \$125 Per week to less than \$10 per week. Subliminal messages found to Be effective were statements like, I take a great deal of pride In being honest. I will not steal. I am honest.

Subliminal Messages Influence Behavior

In his scholarly work titled Preconscious Processing, Dr. Norman Dixon, a psychologist at University College in London, England, Summarizes 748 scholarly research studies on subliminal Perception.

Included in Dixon's authoritative work is a research study by Zuckerman (1960), that revealed a subliminal stimulus can by- Pass conscious intent, and that it makes it unlikely a person Would resist instructions which are not consciously experienced.

Zuckerman required his subjects to write stories around Thematic Apperception Test cards. Superimposed on the ambiguous pictures On the cards were either the subliminal message, Write More or Don't Write. As long as the instructions were subliminal, these Messages had the desired effect. However, as soon as they were Able to be perceived consciously, the messages had no consistent Effect.

Dr. Lloyd H. Silverman, a psychologist at New York University, Has been at the forefront of subliminal testing for 20 years. His work, with over 40 groups of subjects, has shown significant Improvements in behavior after exposure to selected subliminal Messages. IN a 1980 study, Silverman incorporated a subliminal Message into a treatment of half of a group of smokers trying to Quit smoking using behavior modification therapy. One month After treatment ended, 66% of the group exposed to the Activating subliminal stimulus were still non-smokers, compared With 13% of the control group. Silverman says the positive Effect of subliminal messages has been observed in assertiveness Training classes, adolescents receiving psychotherapy, college Students in group therapy, alcoholics in Alcoholics Anonymous Counseling, and in people undergoing behavior modification for Insect phobias and overeating.

Subliminal Messages Improve Academic Performance

An article in the Journal of Counseling Psychology, Volume 29, 1982, reports on a study by Dr. Kenneth Parker, a psychologist At Queens College in New York. Dr. Parker's research project was Designed to see if subliminal messages can improve academic Performance. Sixty students received visual subliminal messages Using a light-flashing device called a tachistoscope. Three Times a week, before class, the students looked through the Eyepiece of the tachistoscope and saw a fast flash of bright Light, nothing more. In the four millisecond flash was embedded A single sentence. The class was divided into three groups, each Receiving a different message. Two messages were designed to Enhance academic performance; the third was a control.

Careful statistical analysis of the results of the subliminal Stimulation revealed significant improvement in academic Performance. Groups one and two, receiving activating subliminal Messages achieved average grades in the range of a high B to low A. Group three, the control, received an average grade in the Low B range. In addition, those who received subliminal messaged Had higher retention of the learned material after one month Than the control group had.

Medical Clinic Uses Subliminal Recordings to Reduce Fainting,

Smoking, and Temper Flare Ups In 1951, Dr. Hal Becker, a behavioral scientist and former Member of the Tulane University Medical Staff, began Investigating subliminal processes. Dr. Becker has published Dozens of research articles which support the effectiveness of Subliminal stimulation. One of Dr. Becker's investigations, Presented in a scientific paper to the Ninth Annual Conference Of Computer Medicine in Atlanta in 1979, involved the use of Subliminal stress reduction messages incorporated into the sound System at the McDonagh Medical Center in Kansas City, Missouri.

A seven-month trial produced dramatic results. Fainting caused By needle pain dropped to nearly zero, smoking in the staff Lounge was cut as much as 79%, and the temper flare-ups in the Crowded patient waiting room were reduced by nearly 60%. When The subliminal messages were stopped, these problems returned to Former levels.

Subliminal Messages Result In A Dramatic Weight Loss

Becker's research has shown that the use of subliminal messages Can influence weight-loss with astounding results. In Metairie, Louisiana, at Dr. Becker's weight loss clinic, patients were Exposed to videotape and audio cassette subliminal messages as Part of a behavior-modification diet plan. One woman lost 100 Pounds in one year's time. In a follow-up study, Becker found That 50% of the patients maintained at lease half their weight Loss for up to two years after leaving the subliminal program, While 23% maintained 75% to 100% of their loss. This is a Significantly better record than that of diet programs not Accompanied by subliminal messages.

Another subliminal stimulation weight-loss study involved two

Experiments conducted by Silverman, Martin, Ungaro and Mendelsohn (1978) with two groups of overweight women. In Addition to traditional diet therapy, half of the subjects Received subliminal affirmations and half received neutral Subliminal message stimulation. In both experiments, the groups Receiving the positive subliminal messages lost more weight than The control groups. The group receiving subliminal affirmations Continued to lose weight even after the experiment concluded.

Positive Proof Mind Absorbs Subliminal Information

In another of Dr. Becker's controlled tests of subliminal Perception, experimental and control groups were asked to guess A three-digit number. The experimental group was exposed to the Number subliminally embedded in a hissing sound known as pink Noise.'

In three separate experiments, an average of 77% of those Exposed to the subliminal numbers guessed correctly, compared to Only 10% of those in the control group (who weren't exposed to The numbers). This confirms that subliminal messages are Perceived at a non-conscious level.

Excerpts from the Research On Subliminal Programming

Effects of Subliminal Suggestions of Oneness

Ariam, S. and Siller, J. Effects of Subliminal Oneness Stimuli

In Hebrew on Academic Performance of Israeli High School Students: Further Evidence on the Adaptation-Enhancing effects Of Symbiotic Fantasies in Another Culture Using Another Language. Journal of Abnormal Psychology, 1982, 91 (5), 343-349.

The relation between unconscious symbiotic fantasies (the Experience of partial merging of self and object representation) And adaptive behavior (mathematics improvement) in a non- English-speaking culture (Israel) was studied in an attempt to Determine both the replicability of previous findings and its Status as a more general human phenomenon rather than as an Artifact of a particular language of culture. Following Silverman's procedures, 10th grade students in 4 groups of 18 Each (matched for sex, mathematics class, and previous math Grades) were tachistoscopically presented with subliming Exposures of on of 4 Hebrew translations of verbal stimuli: Mommy and I are one (two versions); My teacher and I are one; And a neutral stimulus, People are walking in the street. Each Subject received subliminal stimulation four times a week, over A period of 6 weeks. Achievement tests administered 6 weeks Apart showed that groups

exposed to either version of Mommy and I are one was superior to the other. Neither version of Mommy And I are one was superior to the other. The results are seen as Lending support to the hypothesis that the adaptation-enhancing Effect of the symbiotic fantasy represents a general human Phenomenon. (p. 343)

The presence of unconscious libidinal and aggressive fantasies And their importance for human functioning has been a Cornerstone of psychoanalytic thinking since its very inception. (p. 343)

In the course of the past 15 years, there have been over 50 Studies carried out in a variety of laboratories demonstrating That subliminally presented fantasy-activating stimuli can Affect behavior in ways that subliminally presented neutral Control stimuli cannot (summarized in Silverman, 1982b).

Moreover, in several of these studies the supraliminal (10 sec) Presentation of the same fantasy stimuli has not had this Effect. This is consistent with psychoanalytic theory that Maintains that the effects of libidinal and aggressive fantasies On behavior can be dissipated if these fantasies are made Conscious. (p. 344). The major finding of this study was that The 4-msec exposure of both a literal and idiomatic Hebrew Translation of Mommy and I are one enhanced the mathematics Ability of Israeli high-school students. These results are Consistent with the findings of studies with varied populations (summarized in Silverman, 1982b), indicating that this Intervention can bring about positive behavior change. (pp., 347-348)

Beisgen, R.T., Jr., and Gibby, R. G., Jr., Autonomic and Verbal Discrimination of a Subliminally Learned Task. *Perceptual and*

Motor Skills, 1969, 29, 503-507. The major findings in this study support the existence of a

Subliminal process as defined by Lazarus and McCleary (1951) and Also strongly suggest that conditioning can take place on an Unconscious or subliminal level. (p. 507).

Borgeat, F., Chabot, R. and Chaloult, L. Subliminal Perception And Levels of Activation. *Canadian Journal of Psychiatry*, 1981, 26 (4), 255-259.

Evaluated the influence of auditory subliminal messages on the Level of activation evaluated through a double-blind study. 20 SS (mean age 28.7 yrs) were alternately submitted to activating And deactivating subliminal messages. Activation changes were Estimated through the variations in Mood Adjective Check List Scores. Five of 6 test factors concerned with the content of Subliminal messages responded differently according to the Nature of these messages; 4 factors were statistically Significant. Results indicate that auditory subliminal Perceptions influenced the level of activation. It is concluded That the parameters regulating subliminal response and Susceptibility remain largely undefined and in need of Systematic investigation. (p. 255)

Borgeat, F., M.D., Elie, R., M.D., Chaloult, L., M.D., and Chabot, R. B. *Ped. Psychophysiological Responses to Masked*

Auditory Stimuli. *Canadian Journal of Psychiatry*, Feb. 1985, 30, 22-27.

Verbal stimuli, masked by a 40-dB white noise, were presented to The subject at increasing intensities by increments of 5 dB Starting at 0 dB. At each increment, frontal EMG, skin Conductance and heart rate were recorded. The data were Submitted to analyses of variance and covariance.

Psychophysiological responses to stimuli below the thresholds of Identification and detection were observed. The instruction not To attend the stimuli modified the patterns of physiological Responses. The effect of the affective content of the stimuli on Responses was stronger when not attending. The results show the Possibility of Psychophysiological responses to masked auditory Stimuli and suggests that Psychophysiological parameters can Constitute objective and useful measures for research in Auditory subliminal perception. (p. 22)

Borgeat, F., M.D., and Goulet, J. *Psychophysiological Changes Following Auditory Subliminal Suggestions for Activation and Deactivation*. *Perceptual and Motor Skills*, 1983, 56, 759-766.

This study was to measure eventual Psychophysiological changes Resulting from auditory

subliminal activation or deactivation Suggestions. 18 subjects were alternately exposed to a control Situation and to 25-dB activating and deactivating suggestions Masked by a 40-dB white noise. Physiological measures (EMG), Heart rate, skin-conductance levels and responses, and skin Temperature) were recorded while subjects listened passively to The suggestions, during a stressing task that followed and after That task. Multivariate analysis of variance showed a Significant effect of the activation subliminal suggestions During and following the stressing task. This result is Discussed as indicating effects of consciously unrecognized Perceptions on Psychophysiological responses. (p. 759)

Bornstein, R.F, Leone, D.R. and Galley, D.J. The Generalizability of Subliminal Mere Exposure Effects: Influence Of Stimuli Perceived Without Awareness on Social Behavior.

Journal of Personality and Social Psychology, 1987, 53 (6), 1070-1079.

This article describes three experiments investigating the Extend to which subliminal exposure effects are obtainable not Only with simple stimuli but also with complex human stimuli in Social situations. In the first experiment, undergraduate Subjects were exposed to slides of abstract geometric figures at Both subliminal (i.e., 4 ms) and supraliminal exposure Durations. Subjects' attitudes toward the subliminally presented Stimuli became significantly more positive with repeated Exposures, even when subjects were unaware that exposures had Occurred. Experiment 2 demonstrated that similar attitude Changes are produced by subliminal exposure to photographs of Actual persons. The results of Experiment 3 indicate that Attitudes toward persons encountered in the natural environment Of the psychology experiment are also enhanced by subliminal Exposure to a photograph of that person. (p. 1070).

Brandeis, D. and Lehmann, D. Event-Related Potentials of the Brain and Cognitive Processes: Approaches and Applications. Neurophychologia, 1986, 24 (1), 151-168

Event-related potentials (ERPs) are recordings of the electric Field which the brain produces in fixed time-relation to an Even. ERPs open a time and space window onto covert steps of Brain information processing which need not be accompanied by Overt behavior or private experience. ERPs are the only Noninvasive method which resolves the dynamic pattern of events In the human brain down to the millisecond range. (p. 151) Examples of spatial analysis have shown that different ERP field Configurations follow the presentation of noun and verb meaning Of homophone words; that the ERP effects to subjective contours Resemble those to attention in time course and topography; that The cognitive' P300 component reflects the specific stimulus Location; and that subliminal information influences the Configuration of late ERP fields. (p. 151)

Brosigole, L. and Contino, A.F. Intrusion of Subthreshold Learning Upon Later Performance. Psychological Reports, 1973, 32, 795-798.

In serial learning experiments responses were analyzed to Specify types of intrusions. Materials from the past interfered With performance. The greatest proportion of these materials Were only partially learned, thereby supporting a continuity Position. (p. 795)

This finding strongly supports the continuity position by Demonstrating that subthreshold learning may overtly interfere With subsequent performance. (p. 796).

Bryant-Tuckett, R. and Silverman, L.H. Effects of the Subliminal Stimulation of Symbiotic Fantasies on the Academic Performance Of Emotionally handicapped Students. Journal of Counseling Psychology, 1984, 31 (3), 295-305.

Sixty-four emotionally disturbed adolescents at a residential Treatment school were divided into an experimental and control Group, matched for age, IQ, and reading ability. Both groups Were seen five times a week for 6 weeks for tachistoscopic Exposures of a subliminal stimulus. (p. 295).

In keeping with the hypothesis the experimental subjects Manifested significantly greater improvement on a California Achievement Reading Test than did the controls. ON five of six Secondary variables arithmetic achievement, self-concept, the Handing in of homework assignments, independent classroom Functioning, and self-imposed limits on television viewing the Experimental subjects also showed better adaptive functioning. These findings, together with the results of three earlier Studies, indicate that the activation of unconscious symbiotic Fantasies can increase the effectiveness of counseling and Teachings. (p. 295)

In one group of studies, stimuli intended to arouse unconscious Wishes were presented to many populations, including adult male Schizophrenics (e.g., Leiter, 1982; Litwack, Wiedemann, & Yager, 1979; Silverman & Spiro, 1967), depressives (e.g., Miller, 1973; Rutstein & Goldberger, 1973), stutterers (Silverman, Bronstein & Mendelsohn, 1976; Silverman, Klinger, Lustbader, Farrell & Martin, 1972), and male homosexuals (Silverman, Kwawer, Wolitzky, & Coron, 1973; Silverman et al., 1976), and Intensifications of the behavior under study were noted that Were not in evidence after the subliminal exposure of neutral Stimuli. These results have been seen as supporting Psychoanalytic formulations concerning the relations between Oral aggressive wishes and ego pathology in schizophrenia, Aggressive wishes and depressive reactions, anal wishes, and Stuttering, and incestuous wishes and male homosexuality. (Silverman, 1976). (p. 295)

Three recently completed investigations (Ariam,& Siller, 1982; Parker, 1982; Zuckerman, 1980) have extended the application of The subliminal psychodynamic activation method to study academic Performance and yielded results directly relevant to the present Investigation. These studies have tested the hypothesis that Activating unconscious fantasies of symbiotic gratification will Increase the effectiveness of counseling and teaching and thus Enhance academic performance. (p. 296).

Briefly, the results of the three academic performance studies Were as follows: Parker (1982) exposed matched groups of Undergraduate college students, enrolled in a business law Course and receiving weekly counseling sessions, to subliminal Stimulation at the start of each class, four times a week during A 6-week summer school session. As in previous studies, the Experimental group received Mommy and I are one and the control Group received People are walking with the subjects being told That the subliminal exposures were intended to enhance their Academic performance. Parker found that the final exam grades of The experimental students were significantly higher than those Of the controls. Ariam and Siller (1982) used the same design Involving classroom teaching and counseling with a population of 10th grade students in a mathematics class in Israel, having Translated the subliminal stimuli in Hebrew. Two groups Receiving Mommy and I are one (a literal translation for one Group and an idiomatic translation for another) obtained Significantly higher final exam grades than did the control Group. (pp. 296-297)

As we predicted, repeated exposures of the subliminal stimulus Led to improvement in CAT reading scores in a sample of Emotionally disturbed adolescents. (p. 300).

Could the difference in the post experimental behavior of the Experimental and control groups be explained in some other way Than to attribute them to the differential content of the two Messages? We do not believe there is any credible alternative Explanation. Recall that (a) the procedure was carried out with

Double-blind controls, which protected against subject Expectations and experimenter bias and (b) the experimental and Control groups were no different in age, sex, race, psychiatric Diagnosis, IQ, and initial CAT reading scores. Because there is No reason to believe there were systematic differences in the Experiences of the two groups had in the school during the 6- Week intervention period (see footnote 5), one can assume that Only the differences in the subliminal messages can account for The post-experimental behavior of the two groups. (p. 301).

The improvement in academic functioning achieved by the subjects Exposed to the oneness stimulus was substantial. Whereas CAT Reading scores of control subjects increased 6 months in a 1- Year people (according to the principal, this is about average For students at the school), the scores for the experimental Subjects increased by 2 years 6 months, a difference of 2 full Years. The magnitude of this improvement suggests that when Particular conditions are met the intervention can markedly Benefit academic performance. (p. 302).

For now we will simply limit ourselves to the conclusion that What is clear from the current study, especially when considered In conjunction with almost a dozen others (summarized in Silverman, Lachmann & Milich, 1982), is that the activation of Unconscious symbiotic fantasies can increase the effectiveness Of interventions used by counselors, teachers, and Psychotherapists. (p. 304).

Charman, D.K., An Examination of Relationship between Subliminal Perception, Visual Information Processing, Levels of Processing And Hemispheric Asymmetries. *Perceptual and Motor Skills*, 1979, 49, 451-455.

A subliminal letter was exposed to the left or right hemisphere For either 15 or 20 msec. Subjective guesses were more accurate For visuo-spatial positional recognition made to presentations In the right hemisphere whereas verbal recognition was more Accurate to presentations in the left hemisphere. The 30-msec Exposure increased the accuracy of the guesses. These findings Were discussed in terms of differential triggering mechanism for Levels of hemispheric processing. (p. 451).

Cook, H., Ph.D. Effects of Subliminal Symbiotic Gratification And the Magic of Believing on Achievement. *Psychoanalytic Psychology*, 1985, 2 (4), 365-371.

The present experiment examined the effect of a subliminally Presented symbiotic gratification and a magic of believing Message on academic achievement. Graduate students were randomly Assigned to one of the two experimental message conditions, or To a control message condition, and received on the average 12 Sessions, 10 exposures per session, of 4-msec visual subliminal Presentations of one of the three messages. Each session Occurred immediately prior to a lecture in either a statistics Or a measurement class. Each of the courses was taught in a Traditional manner by the regular faculty, who were naïve Regarding the experimental conditions. Objective final Examinations for each course revealed statistically significant Differences in favor of the symbiotic gratification experimental Condition over the control condition. No difference were Obtained between the symbiotic and magic of believing Conditions. Research and clinical implications of the findings Are also explored. (p. 369).

The results of the present study provide additional evidence of The effectiveness of the subliminally presented symbiotic Gratification message in facilitating academic achievement. (p. 369)

It seems that stimulating students subliminally to perhaps feel Better about themselves (self – enhancing) may enable them to Learn more effectively. (P. 369).

Cuperfain, R. and Clarke, T. A New Perspective of Subliminal Perception. *Journal of Advertising*, 1985, 14 (1), 36-41. Tested a model of subliminal stimulation based on studies of Information processing by the right hemisphere. Differences Between the hemispheres in the way they process partial Information are outlined. College students viewed a film Concerning woolen-clothing soaps that did or did not have a Subliminal message (5 tachistoscopic presentations to the left Visual field of a picture of 1 or 2 products). One product was Widely available at the time, while the other was only Advertised on cable TV. Each subliminal presentation lasted for 1/60th of 1 second. After the film, Ss completed a questionnaire That asked them to random order 5 soaps for fine clothing and to Provide demographic information. Results indicate that the Subliminal messages did have an impact on state preference for The highly advertised, widely available product, but not for the Relatively unknown product. Demographic variables were not Significant. It is suggested that academic marketers may have Been too quick to discount the ability of subliminal Presentations to affect consumer decision making. Implications For advertising and hemispheric specialization studies are Noted. (p. 36)

Dauber, R.B. Subliminal Psychodynamic Activation in Depression:

On the Role of Autonomy Issues in Depressed College Women. *Journal of Abnormal Psychology*. 1984, 93 (1), 9-18.

Two experiments used the subliminal psychodynamic activation Method to study the effects of messages related to autonomy on Depressed college women identified by Beck Depression Inventory Scores. (p. 9)

Considering both experiments together, the solid finding that Emerged is that the message Leaving Mom is wrong increased Depressive feelings in depressed college women on the DAACL. (p. 16).

The results of the two experiments yielded by the message Leaving Mom is wrong should be considered together with a Finding reported by Schmidt (1981), who conducted a subliminal Psychodynamic activation study shortly after the current Investigation was completed He (Schmidt) found that a group of Such subjects responded with increased depression after the Subliminal presentation of the message I have been bad (when Contrasted with a subliminal neutral-control message), whereas Another group of depressed students who did not score high on Blats's

introjective depression scale were not affected by this Message. (pp. 16-17).

Reference to Schmidt, J.M. The Effects of Subliminally Presented Anaclitic And Introjective Stimuli on Normal Young Adults. Unpublished doctoral dissertation, 1981, University of Southern Mississippi. (p. 18).

Dixon, N. the Conscious-Unconscious Interface: Contributions to An Understanding. *Archiv-Fur-Psychologie*, 1983, 135 (1), 55-66.

Suggests that whatever the paradigm in which unconscious Perception is brought about and whatever the research context in Which these paradigms are used, there is hardly a single finding From subliminal perception, microgenesis, and sleep and dream Research that does not implicate 2-way interaction between Sensory inflow, emotional appraisal, and the unconscious Memory-storage systems of the human brain. Data from different Areas of research are reviewed to develop a flow model to Explain how physiological events in the brain give rise to Representations in the mind. The model depicts conditions for Achieving conscious representations of sensory inflow, which Include physical, physiological, and mental factors; whatever The mechanism through which the transition from physiological to Phenomenal representation is achieved, it is potentially Sensitive to these 3 factors. The model also encompasses Consciousness and energy; temporal parameters of consciousness; And the ubiquity of subliminal effects across receptors, sensory Dimensions, and modalities. (p. 55),

Emrich, H. and Heinemann, L. G. EEG bei-unterschwelliger Wahrnehmung emotional bedeutsamer Wörter. *Psychologische Forschung*, January 1966, 29, 285-296.

Emotional and neutral words slowly becoming visible with Increasing brightness on a translucent screen were observed by 16 Healthy subjects whose electroencephalograms and Electrocardiograms were continuously recorded. They had to Signalize the appearance of light, the visibility of contours or Letters, the moment when they could guess a word, and the moment When the word was plainly visible. (p. 295).

In a far subliminal range already significant differences were Found between emotional and neutral words in EEG and ECG. Taking Into consideration similar findings by other authors an absolute Threshold is postulated; the threshold of conscious perception (1st signal) is higher and inconstant. During the exposition of Emotional words the abundance of alpha waves was higher. The ECG Differences disappeared in the supraliminal range. (p. 295)

Fisher, S. Effects of Messages Reported to Be Out of Awareness Upon the Body Boundary. *The Journal of Nervous and Mental Disease* 1975, 161 (2), 90-99.

How many one sum up the results from the multiple studies? First Of all, it is clear that all of the out-of-awareness taped Messages which were appropriately primed produced a decrement in Boundary definiteness in men.

It should be noted that while a majority of studies by others Have found a priming procedure a necessary preliminary to Obtaining an effect with a stimulus out of awareness, there have Been instance reported where an effect appeared without priming. (p. 96)

Frauman, D. C., Lynn, S.J., Hardaway, R. and Molteni, A. Effect Of Subliminal Symbiotic Activation on Hypnotic Rapport and Susceptibility. *Journal of Abnormal Psychology*, 1984, 93 (4), 481-483.

A double-blind design was utilized in which subjects of high, Medium and low hypnotic susceptibility received either the Symbiotic stimulus Mommy and I are one or the psychodynamically Neutral stimulus People are walking. (Silverman, 1982), Presented tachistoscopically. (p. 481).

The significant multivariate effect indicates that symbiotic Fantasies had an impact on measures assumed to be relevant to Affective relationship factors in hypnosis. Our replication and Extension of Silverman's paradigm to the domain of hypnosis Suggests that hypnotized subjects are sensitive to stimuli that Are out of conscious awareness yet presumably related to Historical and contemporary experience. (p. 483).

Goncalves, O.F., Ivey, A.E. The Effects of Unconscious Presentation of Information on Therapist

Conceptualizations, Intentions, and Responses. *Journal of Clinical Psychology*, 1987, 43 (2), 237-245.

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. (p. 237)

Groeger, J.A. Evidence of unconscious semantic processing from a forced error situation. *British Journal of Psychology*, 1984, 75, 305-314.

A study was carried out to determine whether subjects extracted information from words presented below their recognition and awareness thresholds. A series of target words was used to generate the word matrix, which was a set of 24 words related to the target in specified ways. Following subthreshold exposure of a target word, subjects chose the word they thought had been shown from the word matrix for that particular target. It was held that the alternative chosen was a function of the type of processing the target was receiving. Results showed that structural analysis of the target predominated below recognition threshold whereas semantic analysis predominated below recognition threshold, whereas semantic analysis redominated below awareness threshold. (p. 305)

The data presented appear to lend support to the views of subliminal perception theorists, which suggest that unconscious semantic processing does occur (p. 311).

Guthrie, G. and Wiener, M. Subliminal perception or perception of partial cue with pictorial stimuli. *Journal of Personality and Social Psychology*, 1966, 3 (6), 619-628.

The results in all of the experiments suggest that where pictorial stimuli are exposed at subliminal levels, structural cues (lines, etc.) are the first information available to the subject. To the extent that these findings can be generalized to other investigations of subliminal effects where pictorial stimuli were used, the part-cue response-characteristic view remains a tenable explanation for these other studies as well. It appears that the part-cue response-characteristic explanation can account for the so-called subliminal effects without having to invoke a special process which responds to different classes of stimuli without the awareness of the subjects. (p. 627)

Hart, L. The effect of noxious subliminal stimuli on the modification of attitudes toward alcoholism: A pilot study. *Br. J. Addict.*, 1973, 68, 87-90.

In recent years there has been an increasing body of evidence attempting to validate the hypothesis that subliminal stimuli may affect behavior. Supposedly, a faint perceptual stimulus may affect behavior even when this stimulus is below threshold. Gudmund and his associates (1959) studied the effects of subliminal verbal stimuli and reported that the difference between meanings registered below a recognition threshold can affect conscious thoughts. In an investigation of the effects of subliminal stimuli of aggressive content upon conscious cognition, Eagle (1959) notes that stimuli that are not conscious and that are non-aggressive affected subjects' impressions of a consciously perceived stimulus. These findings support the contention that stimuli which are not consciously perceived or directly experienced can influence cognition.

This study was undertaken in an attempt to investigate the effect of noxious subliminal stimuli on the modification of attitudes toward alcoholism. (p. 87)

It was hypothesized that the programmed exposure of noxious subliminal stimuli would modify attitudes toward alcoholism. It may be concluded from the results of this study that a modification of attitudes toward alcoholism did take place over a five-day period for the experimental group. Over the same five-day period, there was no significant difference in the attitudes toward alcoholism on two separate administrations of the alcoholism questionnaire for the control group. These findings support the contention that stimuli which are not consciously perceived or directly

experienced can influence Attitudes. (p. 90)

Henley, S. Cross-modal Effects of Subliminal Verbal Stimuli. *Scand. J. Psychol.*, 1975, 16, 30-36.

Abstract: In a cross-modal version of an experiment by Smith et Al. (1959), the effects of subliminal auditory cue words upon Judgments of a supraliminal visual stimulus (a neutral face) Were examined. Support was found for the hypothesis that Material in an unattended channel is fully analyzed for meaning, And may be integrated with material in an attended channel when It is relevant to the ongoing task. Contrary to expectations, The effects of the subliminal cues were found to carry over to Trials on which the face was presented without concurrent Auditory stimulation, thus providing support for the Poetzl Phenomenon. (p. 30).

There is nothing new in the finding that a stimulus which Bypasses awareness at the time of presentation can influence Subsequent behavior; many studies on the Poetzl phenomenon (See Dixon, 1971) support this view, and in one experiment by Bokander (1965), using the meta-contrast technique, it has been Shown that the characteristics of masked facial photographs may Serve to modify descriptions of a neutral face presented later. The novelty of the present results is that they imply not only That the components of a random sequence of unattended (subthreshold) stimuli be stored in the order in which they were Presented, but that they should subsequently re-emerge in the Same order to aid performance in an ongoing task. (p. 35).

Kaplan, R., Thornton, P. and Silverman, L., Further Data on the Effects of Subliminal Symbiotic Stimulation on Schizophrenics. *Journal of Nervous and Mental Disease*, 1985, 173 (11), 658-666.

Examined the effects of activating unconscious symbiotic Fantasies in 128 hospitalized schizophrenic men (aged 18-65 Years) who qualified as relatively differentiated on an Adjective rating scale and were randomly assigned to 4 groups. Each group was assessed for pathological thinking, pathological Nonverbal behavior, and self-esteem before and after the Subliminal exposure of an experimental and control stimulus. The Control stimulus for all groups was the message, People are Walking, and the experimental stimuli were the messages, Mommy And I are one, Mommy is always with me, Mommy feeds me well, and I cannot hurt Mommy (one for each group). One-half of each group Was subliminally exposed to verbal messages only and one-half Verbal messages accompanied by congruent pictures. The 1st Stimulus (Mommy and I are one) was intended to activate Unconscious symbiotic fantasies that in a number of prior Studies reduced pathology in groups of relatively differentiated Schizophrenics. The other stimuli were intended to activate

Reassuring unconscious fantasies about Mommy that were not Specifically symbiosis-related. Only the Mommy and I are one Stimulus led to more adaptive behavior and did so on all 3 Dependent variables. This supported the supposition that it is Specifically symbiosis-related gratifications that re Ameliorative for schizophrenics. (p. 658).

Kaser, V.A. The Effects of an Auditory Subliminal Message Upon The Production of Images and Dreams. *Journal of Nervous and Mental Disease*, 1986, 174 (7), 397-407.

Investigated the effect that an auditory subliminal message, Produced by speeding up the rate at which it was recorded, would Have on the imagery and dreams of a group of normal Ss (subjects). The auditory subliminal message was produced by Speeding up a message that was sung until it could not be Consciously understood. This message was mixed with a normal Music recording and played to 9 undergraduates in the Experimental group. Nine controls (primarily staff and student Interns) heard the normal music recording with without the Subliminal message. Both groups were asked to produce a pretest Drawing before the tapes were played, and imagery drawing Immediately after the tapes were played, and a dream drawing of Any dreams they might have that night. Analysis of blind ratings Given to all the drawings by 2 art therapists indicated a Significant difference between the dream drawings and imagery Drawings of the experimental and the control group. When the Drawings were examined, the effect of the subliminal message Could be seen. Findings suggest that the Unconscious/preconscious mind is able to perceive a recorded Verbal message that cannot be consciously understood... (p. 397)

Kemp-Wheeler, S.M. and Hill, A.B. Anxiety Responses to Subliminal Experience of Mild Stress. *British Journal of Psychology*, 1987, 78, 365-374.

Two groups of undergraduates (n=14 in each) matched for level of Trait anxiety participated in the

experiment. One group (E) was Presented with 20 emotional words 10 percent below detection Threshold while the other group (N) was presented with 20 Emotionally neutral words under the same conditions. Ratings of Several psychological variables were taken before and after Stimulation and two psychophysiological measure, heart and Respiration rate, were also taken. (p. 365) It is concluded that manifest anxiety and some features of Anxiety having somatic referents can be induced by subliminal Experience of mild stress. (p. 365).

Kihlstrom, J.F. The Cognitive Unconscious. *Science*, 1987, 237, 1445-1452.

Contemporary research in cognitive psychology reveals the impact Of non-conscious mental structures and processes on the Individual's conscious experience, thought, and action. Research On perceptual-cognitive and motoric skills indicates that they Are automatized through experience, and thus rendered Unconscious. In addition, research on subliminal perception, Implicit memory, and hypnosis indicates that events can affect Mental functions even though they cannot be consciously Perceived or remembered. These findings suggest a tripartite Division of the cognitive unconscious into truly unconscious Mental processes operating on knowledge structures that may Themselves be preconscious or subconscious. (p. 1445)

Kilbourne, W.E., Painton, S. and Ridley, D. The Effect of Sexual Embedding on Responses to Magazine Advertisements. *Journal of Advertising*, 1985, 14 (2), 48-55.

Conducted 2 empirical studies to assess the effectiveness of Sexual embedding (subliminal messages) in advertising. In Study 1, 424 undergraduates viewed and evaluated 2 advertisements (ads) with embeds or 2 matched ads without embeds. Results Indicate that embedding was effective in raising attitudinal Evaluations of a liquor ad but not a cigarette ad. In Study 2, Galvanic skin response (GSR) measurements were taken on 36 Undergraduates while they viewed both versions (with and without Embeds) of 2 ads. Results indicate that embedding was effective In increasing GSR measurements for the version of the ads with Embeds. Results of both studies suggest that the use of sexual Embeds in magazine advertisements influences viewers' Evaluations of the ads. (p. 48).

Kleespies, P. and Wiener, M. The Orienting Reflex as an Input Indicator in Subliminal Perception. *Perceptual and Motor Skills*, 1972, 35, 103-110.

The results of this study indicate that measures of first eye Movements (frequency and latency) are effective measures of Visual input differences. Moreover, with a subliminal exposure Duration (3 msec.), it was found that there are more first eye Movements toward the stimuli in the first second after stimulus Presentation than in the sixth second after stimulus Presentation. (p. 109).

Kostandov, E.A. and Arzumanov, Y. L. The Influence of Subliminal Emotional Words on Functional Hemispheric Asymmetry.

International Journal of Psychophysiology, 1986, 4, 143-147. The P300 component of the evoked potential was recorded over Both hemispheres in order to study interhemispheric differences In the process of perception of subliminal verbal stimuli. The Stimuli subliminal words, neutral and emotional were presented At random to the left or right visual fields. In response to an Unrecognized emotional word, the amplitude of P300 wave Increased diffusely over both hemispheres as compared to that to A neutral word, with no changes in interhemispheric differences. The interhemispheric difference changed considerably in the Presence of an unaccountable' emotion caused by a subliminal Word. This suggests unilateral activation of the right Hemisphere and a predominant role of this hemisphere in the Cortical organization of the unconscious function unaccountable' Emotion.' (p. 143).

Subliminal emotional words connected with the subject's conflict Situation evoke the P300 of significantly larger amplitude than Subliminal neutral words. The increase is generalized over Occipital and associative areas, and at the vertex. (p. 147).

This the study of relations between unconscious mental phenomena And hemispheric functional asymmetry reveals two aspects of the Problem. Firstly, there are hemispheric relations in the Perception of subliminal emotions stimuli. Here we have not Found any peculiarities, and accordingly, we cannot speak about A dominant or particular role of one hemisphere in the Processing of subliminal verbal information. Apparently Perception without awareness' is performed with both hemispheres Acting in cooperation and each one contributes to the whole

Function. Secondly, there is the problem of hemispheric Asymmetry after unrecognized emotional verbal stimulation. The Clearly functional asymmetry observed in this case suggests the Dominant role of the right hemisphere in the forming of such an Unconscious mental process as unaccountable emotion. (p. 147).

Kunzendorf, R.G., Lacouse, Pl, and Lynch. B. Hypnotic Hypermnnesia for Subliminally Encoded Stimuli: State-Dependent Memory for Unmonitored' Sensations. *Imagination, Cognition and Personality*, 1986-87, 6 (4), 365-377.

The present study tests the hypothesis that subliminal Perception and hypnotic perception are similarly encoded altered States of perception.' (p. 365).

In this first experiment, hypnosis enhanced recognition memory Of subliminally encoded stimuli (1/100 sec faces), which were Not recognized before or after hypnosis. Moreover, in this study As in two previous studies employing bias free recognition Tests. (19, 20), hypnosis reduced recognition of consciously Encoded stimuli (1/10 sec faces), which were remembered at Above-change levels before and after hypnosis. These two state- Specific effects of hypnotic memory are perfectly consistent With our theoretical position: that both subliminal sensations And hypnotic sensations are unaccompanied by any self- Monitoring, and self-awareness that one is perceiving (rather Than imaging) the sensations. (p. 370).

In experiment 2, as in Experiment 1, hypnosis enhanced Recognition memory of subliminally encoded stimuli (1/100 sec Faces), which were not recognized before or after hypnosis. Also In Experiment 2, as in Experiment 1 and in two previous studies, Hypnosis reduced recognition of consciously encoded stimuli (1/10 sec faces), which were remembered at above-chance levels Before hypnosis (19, 20). (p. 373).

LeClerc, C. and Freibergs, V.L. Influence d'Indices Subliminaux Perceptifs et Symboliques sur la Formation d'un Concept. *Canad. J. Psychol./Rev. Canad. Psychol.*, 1971, 25 (4), 292-301.

The learning of a simple concept represented by geometric Figures was examined as a function of subliminal stimuli of Either a perceptual or a symbolic nature. Preceding each Instance of a concept, a subliminal stimulus indicating either The correct or incorrect solution was presented by the technique Of backward masking. The results showed that only symbolic Subliminal stimuli were effective in influencing the learning of A concept, and this particularly in the case where the correct Solution was indicated. It was concluded that the effect of a Subliminal stimulus depends on the degree of correspondence Between the level of complexity of he stimulus and that of the Task. (p. 292).

Lee, I. And Tyrer, P. Responses of Chronic Agoraphobics to Subliminal and Supraliminal Phobic Motion Pictures. *The Journal Of Nervous and Mental Disease*. 1980, 168 (1), 34-40.

Fifteen agoraphobics took part in a study to investigate their Responses to repeated presentations of a phobic motion picture. Five patients were shown the film supraliminally, five were Shown it subliminally, and the remaining five formed a control Group. Subjective feelings were assessed with visual analogue Scales, and three physiological measures, heart rate, skin Conductance, and respiratory rate, were recorded. An earlier Report showed that both subliminal and supraliminal presentation Produced significant improvements in phobic fear and avoidance, And the present results show that the subliminal group found the Procedure much less stressful than the supraliminal group. (p. 34).

Lee, I., Tyrer, P. and Horn, S., A comparison of Subliminal, Supraliminal and Faded Phobic Cine-Films in the Treatment of Agoraphobia. *Brit. J. Psychiat.*, 1983, 143, 356-361.

Thirty-two agoraphobic patients were randomly allocated to four Groups and treated by repeated exposure to cine-films at twice Weekly intervals for three weeks. Three of the groups saw the Same cine-film, comprising a range of agoraphobic scenes, and a Control group saw a potter working on his wheel. The three Groups seeing the phobic cine-film included one who viewed it at An illumination level below the visual threshold (subliminal Group), one seeing it under normal conditions (supraliminal Group), and one which underwent graduated exposure from Subliminal to supraliminal viewing levels as the study proceeded (faded group). The faded group showed significantly greater Improvement than the control groups and this improvement was Maintained over twelve weeks. (p. 353).

Tyrer, Horn and Lee showed in 1978 that the presentation of Subliminal phobic cine-film can be effective in reducing phobic Behavior. (P. 356).

One method of combining them is to use a treatment programme in Which the films shown in the first session are fully subliminal And, with succeeding sessions, the illumination level is Progressively increased until the films are fully supraliminal By the end of the treatment. This technique is normally referred To as fading. (p. 356).

The results of the clinical assessments were similar to those Obtained by Tyrer et al. (1978), with both subliminal and Supraliminal groups producing marked improvements in phobic Behavior and these improvements being maintained throughout Follow up assessments.' (p. 358).

Overall, the results from this experiment support our earlier Findings that both subliminal and supraliminal presentation of Phobic cine-films can be effective in reducing agoraphobic Behavior, and that the two methods are similar in terms of their Efficacy. (p. 358).

Libet, B. Responses of Human Somatosensory Cortex to Stimuli Below Threshold for Conscious Sensation. *Science*, 1967, 1597- 1600.

Averaged evoked responses of somatosensory cortex, recorded Subdurally, appeared with stimuli (skin, ventral posterolateral Nucleus, cortex) which were subthreshold for sensation. Such Responses were deficient in late components. Subthreshold Stimuli could elicit sensation with suitable repetition. The Primary evoked response was not sufficient for sensation. These Facts bear on the problems of neurophysiological correlates of Conscious and unconscious experience, and of subliminal Perception.' (p. 1597).

In contrast to earlier indications our results demonstrate that, When suitably recorded, cortical evoked potentials are Detectable with sensory inputs below the adequate level for Conscious sensation, even when the attention of the subject is Directed to the stimulus. (pp 1599-1600).

Mendelsohn, e. M. The Effects of Stimulating Symbiotic Fantasies On Manifest Pathology in Schizophrenics. *The Journal of Nervous And mental Disease*, 1981, 169 (9), 580-590.

This study was designed as a further investigation of the Ameliorative effects of stimulating a symbiotic stimulus Produced improvement on one of the measures of pathology, Replicating findings from previous studies. (p. 580)

In numerous studies completed to date, the subliminal Presentation of psychodynamically relevant wish-related verbal And pictorial stimuli have led to changes in severity of Manifest psychopathology presumably by activating whatever Relevant unconscious conflicts are salient for the subject at The time in a wide range of subject populations (26).)p. 581).

It has further been demonstrated that such effects do not occur When such stimuli are presented supraliminally (21, 24). This is Consistent with the psychoanalytic view that once a conflictual Wish becomes conscious its status as a contributor to Psychopathology may be compromised. For a fuller discussion of This point, see Silverman (23). (p. 581).

Overbeeke, C.J. Changing the Perception of Behavioral Properties by Subliminal Presentation. *Perceptual and Motor Skills*, 1986, 62, 255-258.

Experiments on subliminal perception of words suggest that the Behavioral properties rather than the physical properties of the Presented words determine the answer given. (pp. 255-256).

Subliminal means here that the subject can not report whether a Stimulus has been presented. Pictures instead of words were used Since the direct approach is mainly interested in structural Aspects of evens and not in semantic information procession. (p. 256).

Although the subjects in the reported experiment cannot report Whether a stimulus has been presented, the estimate of age of The supraliminal stimulus can be influenced by the subliminal One. (p. 258).

Palmatier, J.R., and Bornstein, P.H. Effects of Subliminal Stimulation of Symbiotic Merging

Fantasies on Behavioral Treatment of Smokers. *The Journal of Nervous and Mental Disease*, 1980, 168 (12), 715-719.

The subliminal psychodynamic activation method was used to Enhance the efficacy of a behavior therapy approach to smoking Cessation. Thirty-four subjects received a 3-week, group- Oriented, multicomponent behavior therapy package aimed at Smoking cessation. (p. 715).

The results revealed that the subliminally exposed message Differentially effected the post-treatment smoking behavior of The experimental group. The results were interpreted as evidence For a transference phenomena explanation for the effectiveness Of the behavioral treatment program. (p. 715)

The overall findings of the present investigation extend the Previous work of Silverman and his associates. They indicate That the subliminal stimulation of a symbiotic merging fantasy (Mommy and I are one), when repeated over a period of time and Combined with a treatment containing active components, has Practical utility in its own right. (p. 719).

Plumbo, R. and Gillman, I. Effects of Subliminal Activation of Oedipal Fantasies on Competitive Performance. *The Journal of Nervous and Mental Disease*, 1984, 172 (12), 737-741.

A subliminal psychodynamic activation experiment was conducted In which the effects of five subliminal stimuli were sought on The dart-throwing performance of male subjects. The stimuli Consisted of the following messages, each accompanied by a Congruent picture: Beating Dad is OK, Beating Dad is wrong, Beating him is OK, Beating him is wrong, and People are walking. The first two stimuli were intended to activate competitive Motives within the context of the Oedipus complex; the next two, Competitive motives outside that context; and the last was Intended as a control stimulus. Beating Dad is OK led to greater Dart-throwing accuracy than each of the other four conditions, Which in turn did not differ from each other. This finding Replicated a result reported by Silverman, L.H., Ross, D., Adler, J., and Lustig, D. (*J. Abnormal. Psychol.*, 87; 341-357, 1978) and is in keeping with the formulation that the activation Of oedipal motives can affect competitive performance. Neither a Subject variable (fear of success) nor the differential effects Of two experimenters was found to interact with stimulus Conditions in affecting dart scores. (p. 737).

Parker, K.A. Effects of Subliminal Symbiotic Stimulation on Academic Performance: Further Evidence on the Adaptation- Enhancing Effects of Oneness Fantasies. *Journal of Counseling Psychology*, 1982, 29 (1) 19-28.

Sixty college students were enrolled in an undergraduate summer Session law course with the experimenter-instructor for 6 weeks. In addition to the normal course of instruction, all subjects Received subliminal stimulation before 3 out of 5 lectures each Week, as well as before and after a 10-minute counseling session With the experimenter. (p. 19).

The results indicated that both experimental groups earned Significantly higher grades than the control group. These Results were viewed as consistent with findings of earlier Studies on schizophrenics, insect phobics, obese women, and Alcoholics which indicated that the stimulation of oneness Fantasies has an adaptation-enhancing effect on behavior. (p. 19).

Sackeim, H.A., Packer, I.K. and Gur, R.C. Hemisphericity, Cognitive Set, and Susceptibility to Subliminal Perception. *Journal of Abnormal Psychology*, 1977, 86 (6), 624-630.

The results indicate that hemisphericity and cognitive set Interact in producing subliminal effects. Left movers, or Right-hemisphericity people, showed the subliminal effect when Encouraged to think in a holistic and intuitive fashion. This Effect was predicted. Surprisingly, right movers (left-Hemisphericity people) tended to show the subliminal effect when Encouraged to think in an organized and logical manner, Indicating that hemisphericity and cognitive set may be more Mutually interdependent in affecting susceptibility to Subliminal stimulation than was originally expected. (pp. 628- 629).

Finally, the pattern of results obtained in this study Reinforces both the notions of subliminal perception and Hemisphericity. Any position that rejects the existence of Either phenomenon would be hard pressed to account for the Obtained interaction. (p. 629).

Saegert, J. Another Look at Subliminal Perception. *Journal of Advertising Research*, 1979, 19 (1),

55-57.

Reviews the research on subliminal perception that has appeared in the marketing literature and summarizes some recent clinical Psychological research (L.H. Silverman, 1976) with patient Populations that suggests that the technique can stimulate Unconscious wishes. The practical implications of this research for marketing are discussed. It is suggested that consideration of ethical questions can be postponed unless and until marketing Application can be empirically demonstrated. (p. 55).

Schurtman, R., Palmatier, J.R. and Martin, E.S. On the Activation of Symbiotic Gratification Fantasies as an Aid in the Treatment of Alcoholics. *The International Journal of the Addictions*, 1982, 17 (7), 1157-1174.

Seventy-two alcoholics being treated at Veritas Villa were divided into an experimental and a control group. In addition to the regular treatment program both groups received four subliminal exposures of a verbal message in each of six sessions over a 2-week period. The messages were "Mommy and I are one" (experimental) and "People are walking" (control), administered under double-blind conditions. In keeping with the main hypothesis, the experimental Ss were rated as significantly more involved in treatment. In addition, among the alcoholics who were more symptomatic to begin with, the "Mommy" message, when contrasted with the control, lowered anxiety and depression, enhanced self-concept, and reduced alcohol consumption after a 3-month follow-up. (p. 1157).

Shevrin, H. Brain Wave Correlates of Subliminal Stimulations, Unconscious Attention, Primary-and-Secondary-Process Thinking and Repressiveness. *Psychological Issue*, 1973, 8 (2), Mono (30), 56-87.

In this paper I will describe a series of experiments which show, for the first time to my knowledge, a relationship between the electrical activity of the brain in response to a stimulus and unconscious thought processes involving attention, perception, primary-process thinking, and repression. (p. 56).

This method draws upon two techniques, subliminal stimulation and the cortical evoked response... (p. 56).

Out of this controversy the existence of subliminal perception has emerged as a new scientific fact. This conclusion was reached by Bevan (1964), an entirely non-analytically oriented psychologist and an accomplished experimentalist, on the basis of his review of over 80 studies. (p. 57).

In a more recent comprehensive review and analysis of research on subliminal perception, Dixon (1971) concluded that the existence of subliminal perception has been demonstrated in at least eight different contexts: dreams, memory, adaptation level, conscious perception, verbal behavior, emotional responses, drive-related behavior, and perceptual thresholds. (p. 57).

Shevrin, H. Does the Averaged Evoked Response Encode Subliminal Perception? Yes. A Reply to Schwartz and Rem. *Psychophysiology*, 1975, 12 (4), 395-398.

An attempt by Schwartz and Rem (1975) to replicate a series of studies by Shevrin and coworkers purporting to show that the average evoked response encodes subliminal perception is found to be limited as are replication in a number of ways. Despite substantial departures in method and procedures Schwartz and Rem report a potentially confirmatory finding: AER cross correlations between different stimuli are significantly lower than for similar stimuli in an exposure level (3 msec) in which subjects fail to make an above chance verbal discrimination. In view of the important theoretical issues involved concerning the nature of subliminal perception and unconscious cognitive processes this cross correlation finding should be further investigated. Suggestions are made as to how this might be done. (p. 395).

In our research we demonstrated that despite the complete undetectability of the stimuli it is possible to find 1) a discriminating physiological response and 2) a verbal effect related to the perceptual content of meaning of the stimuli. Clearly, if a subject cannot report seeing two stimuli presented some 30 times each, but his brain can discriminate between them, that in itself is evidence in favor of some subliminal process although we cannot yet say that it is encoded as a perception. (p. 396).

Shevrin, H. Subliminal Perception and Dreaming. *The Journal of Mind and Behavior*, 1986, 7 (2-3), 379 (249), 396 (266).

Research on the relationship between subliminal perception and Dreaming initiated interest in the field of subliminal Perception. Nevertheless, over the years only a very small Number of studies (11) have investigated this relationship. A Review of these studies is presented, divided into three Sections: (a) early studies of historical and theoretical Interest, (b) quasi-clinical, empirical studies, and (c) Experimental studies. Essentially, the early findings reported Have been borne out by subsequent empirical and experimental Studies: (1) Much that remains unreported and presumably Unconscious following briefly flashed stimulus is later Recovered in dreams, (2) dreams appear to be necessary to Recover at least some kinds of transformed or primary process Aspects of the briefly presented stimulus. Implications for our Understanding of perception, the nature of consciousness, and Various states of consciousness are discussed. (p. 379).

On the whole, it can be said that Poetzl's original findings Have been borne out and amplified: (1) a subliminal stimulus Registers and is recovered in dreams, and (2) recovery is Subject to certain transformations, verbal and visual, which Appear similar to Freud's distinction between primary and Secondary processes. (p. 379).

Finally, the small set of studies dealing with the relationship Of subliminal perception and dreaming underscore the important Role that unconscious psychological processes play in our mental Life. With recent advances in methods, as provide by subliminal Techniques, we are now capable of looking into the darkest Corners of the black box.' (p. 393).

Shevrin, H., and Dickman, S. The Psychological Unconscious: A Necessary Assumption for All Psychological Theory? *American Psychologist*, 1980, 35 (5), 421-434.

The notion of complex psychological processes operating outside Of awareness has traditionally been associated with the concept Of the unconscious used by psychodynamically oriented Clinicians; it has never found an equivalent place in the Mainstream of American experimental psychology. However, Mounting evidence from several rather diverse fields of Empirical research (e.g., selective attention, cortical evoked Potentials, subliminal perception) provides support for such a Concept, and, in fact, explanatory constructs of a similar Nature have been embodied in several current models of Perceptual processing. (p. 421).

At any given time, an individual is presented with a broad array Of stimuli of varying intensities and of varying relevance to Adaptive tasks. Selection on some basis must occur. Subliminal Stimuli are those stimuli that do not become conscious simply Because they are too weak in intensity, even though they may be Highly relevant. (p./ 426)

The basic question of whether people can respond to a stimulus In the absence of the ability to report verbally on its Existence would today be answered in the affirmative by many More investigators than would have been the case a decade ago Largely because of better experimental methods and the Convincing theoretical argument that subliminal perception Phenomena can be derived from the notion of selective attention And filtering. (p. 426).

Subliminal-perception research is concerned with stimuli too Weak to become conscious immediately, no matter how much Attention is directed to the stimulus field. No amount of Shifting attention, as in dichotic-listening experiments, can Bring the stimulus into consciousness. (p. 427).

Nevertheless, these stimuli have detectable effects on conscious Processes, but immediately and, in some cases, after an interval Of time. (p. 427).

Cortical responses can be evoked by stimuli below the awareness Threshold. He (Dixon) also described an experiment by Shevrin And Rennick (1967) which indicated that subliminal stimuli Influence both cortical evoked potentials and the subjects' free Associations. And he discussed a study by Begleiter, Gross, and Kissin (1969) which suggest that it may be the meaning rather Than the structure of the subliminal stimulus that determines Both the cortical response and subsequent behavior. (p. 428).

In subliminal perception, then, the intensity of the stimulus is Great enough to elicit activity in the sensory fibers but lacks Sufficient energy to activate the nonspecific reticular system. This

information reaches the cortex without awareness of the Stimulus itself. (p. 428).

On the basis of findings from a series of evoked-potential Studies employing a pair of visual stimuli presented sub- and Supraliminally, Shevrin (1973) proposed that the evidence Strongly suggests the 9a) complex unconscious psychological Processes have identifiable neurophysiological correlates, (b) These neurophysiological processes are associated with attention To the meaning of the stimulus, © different parameters of the Evoked potential are associated with different thought processes Related to the subliminal stimulus (p. 429).

Shevrin, H., Smith, W.H. and Fitzler, D.E. Average Evoked Response and Verbal Correlates of Unconscious Mental Processes. *Psychophysiology*, 1971, 8 (2), 149-162.

A stimulus not consciously perceived can nevertheless elicit an Electrophysiological response (AER) and influence a verbal Response (free associations) which are, in turn, related to each Other in certain definable ways. Moreover, these findings are Replicable across Ss and across different methods for Identifying AER components. As such, the approach described in This study provides an objective and manipulable way of Investigating complex, unconscious s thought processes. (p. 159).

Silverman, L. And Lachmann, F. The Therapeutic Properties of Unconscious Oneness Fantasies: Evidence and Treatment Implications. *Contemporary Psychoanalysis*, 1985, 21 91), 91-115. Reviews (a) research evidence that supports the thesis that Unconscious oneness fantasies can enhance adaptation and (b) the Implications of this thesis for the conduct of psychoanalytic Treatment. A laboratory research method developed by the 1st Author, subliminal psychodynamic activation, is outlined, and Limitations of evidence from psychoanalytic treatment are Explored. Studies of oneness fantasies in schizophrenic and non- Psychotic populations are described. Issues in the treatment of Patients with developmental arrests are discussed, along with Method of differentiation. (p. 91).

References on Subliminal Programming Becker, H. C., Subliminal Communication Advances in Audiovisual Engineering Applications for Behavior Therapy and Education. Proceedings of the 1978 Institute of Electrical and Electronics Engineers Region 3 Conference.

Becker, H. C., Subliminal Communication and Hypnosis, Presentation to the American Society of Clinical Hypnosis, 25th Annual Scientific Meeting, Denver, Colorado, October 24-30, 1976.

Becker, H. C., & McDonagh, E.W., Subliminal Communication (Subliminal Psychodynamic Activation) in Rehabilitative and Preventive Medicine,

Proceedings of the 1978 Institute of Electrical and Electronics Engineering Region 3 Conference. April 10-12, 1978, Atlanta. Bower, Bruce. Subliminal Messages: Changes for the Better? *Science News*, Vol. 129, March 8, 1986

Budzynski, Thomas. Tuning in on the Twilight Zone, *Psychology Today.*, Vol. 11, August 1977, pp. 38-44. Dixon, N. F., *Preconscious Processing*, New York, John Wiley & Sons, 1981.

Dixon, N. F., *Subliminal Perception: The Nature of a Controversy*. London: McGraw Hill, 1971.

Maxwell, Neil, Words Whispered to Subconscious Supposedly Deter Thefts, Fainting. *Wall Street Journal*, November 25, 1980.

Parker, Kenneth A., Effects of Subliminal Symbolic Stimulation On Academic Performance. *Journal of Counseling Psychology*, Vol. 29 (1), 1982.

Silverman, L. H., Martin, A., Ungaro, R., & Mendelsohn, E., Effect of Subliminal Stimulation of Symbiotic Fantasies on Behavior Modification Treatment of Obesity. *Journal of Consulting Clinical Psychology*, pp. 46, 432-441, 1978.

Subliminal Communication Technology, Hearing before the Committee on Science and Technology, U.S. House of Representatives, Ninety-eighth Congress, Second Session, No. 105, August 6, 1984.

Time Magazine, Behavior Section, September 10, 1979, Secret Voices: Messages that Manipulate.