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Lazarus, Richard S., and McLeary, Robert A. "Autonomic discrimination without awareness: a study of subception." Psychological Rev, 1951, 48, 113-122
113-122.

The term "subception" is employed to define "a process by which some kind of discrimination is made when the subject is unable to make a correct conscious discrimination" (113). The purpose of the present experiment is to test the assumption that subjects can make discriminations even when they cannot accurately report the stimulus. Several pertinent studies are mentioned as a background for the present design. One of these, McGinnies (1949) explored discrimination prior to correct recognition by measuring the Galvanic Skin Response (GSR) for a list of tachistoscopically presented words. He found that subjects' GSR's were greater for emotional words than for neutral words. The present author states that a crucial shortcoming of McGinnies' study was that the subjects could have been motivated to withhold their response on the "socially taboo" words, and thus an emotional interference with the word content would be the crucial factor in determining GSR.

The present design attempts to control the Ss motivation to withhold his report through the use of nonsense syllables. Each of nine Ss received the same three-part treatment:

1. After initial practice with the 10 nonsense syllables, they were presented on the tachistoscope, at one of 5 exposure speeds, the slowest of which always resulted in 100% accuracy, for each subject. Both the order of presentation and the exposure speed were randomized to prevent serial effects. To aid the subject in his choice of stimuli, he was given a list of the nonsense syllables. After 100 presentations (each word twice at each of 5 exposure speeds) the syllables were divided into 2 groups, equated both for number of times each syllable was used and for the number of times each was guessed correctly. Thus two balanced groups were obtained, one of which could be manipulated and then compared to the other.
2. Next the GSR was conditioned to the experimental half of the list with an unconditioned stimulus of electric shock. All exposures were at 1 sec.- well above threshold. The procedure continued until S gave consistent conditioned responses to the 5 test syllables.
3. The same random pattern as in the first section was repeated here, but now GSR's were recorded during the time between tachistoscopic flash and the subject's verbal report" (117). Since the subjects did not expect the shock to cease during this final test period, they continued to respond with the conditioned GSR throughout.

Results: The subception effect was definitely evidenced by all Ss. By taking the mean number of wrong guesses as the index of subception (ie., discrimination below the level of awareness) all Ss showed a greater number of mean-wrong guesses for the 5 shock syllables than for the 5 non-shock syllables. "There seems to be little doubt that subjects can make autonomic discriminations when they are unable to report conscious recognition." (118)

An additional observation was made regarding the perceptual accuracy of Ss. Did the shock have any effect upon the Ss final perceptual performance? No statistical differences were found between accuracy for shock and non-shock syllables,



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although one S did tend to show a higher accuracy for shock syllables.

Discussion: If autonomic activity can be regarded as a form of behavior, the authors believe they have found an experimental instance of 'unconscious process' in the subception effect. The utility of such a finding for clinical psychology and personality study is discussed. For example, in the field of psychosomatic medicine, the autonomic response to threat or conflict is a key factor. "...clinical observations in this area have emphasized the inability of many patients to identify the stimulus situation to which their symptom is presumably a response" (121).

Although there is nothing to suggest how the subception effect operates, or if there are individual differences in subception ability, the data do indicate the presence of this mechanism, as measured by the GSR, and point to the direction of further research.