An Analogue Study of the Initial Carryover Effects of Meditation, Hypnosis, and Relaxation Using Naive College Students

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An analogue study involving two experiments was conducted to test the initial carryover effects of hypnosis, meditation, and relaxation upon self-reports of awareness. In the first experiment, concentrative meditators reported fewer nonsensorial events than controls. In the second experiment, concentrative meditators again reported fewer nonsensorial events, but covariate analysis and pretest/posttest comparisons revealed that it was the controls who had changed, increasing their nonsensorial reports. In addition, the relaxation group increased its reports of somatic awareness. Results were discussed in terms of the effects of performance demands and the possibility that meditation and hypnosis might be able to disinhibit awareness processes otherwise inhibited by normal daily routines.

KEY WORDS: self-regulation, awareness; meditation; hypnosis; relaxation.

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Several reviews have concluded that meditation, hypnosis, and relaxation do not differ much physiologically (Holmes, 1984; Morse, Martin, Furst, & Durbin, 1977; Walrath & Hamilton, 1975), although Lehrer (1982) suggested that such findings may be partly due to procedural variables. Davidson and Schwartz (1976) proposed that meditation and hypnosis may be more cognitive than physiological events, and at least two subsequent experiments supported their conjecture (Frost, Burish, & Holmes, 1978; Heide & Borkovec, 1983).

The experiments reported here studied meditation, hypnosis, and relaxation as cognitive rather than physiological events. Analyzing responses to the question, "What are you aware of right now" (Hilgard, 1980), the initial carryover effects of meditation, hypnosis, relaxation, and a control condition upon various cognitive aspects of consciousness experience (Tart, 1975) were compared. Initial carryover effects were used because Tart (1975) suggested that the cognitive effects of these practices likely carried forward for a couple of minutes after they had ended; therefore, to avoid disrupting the practices while they were occurring, and to ensure constancy of conditions across treatments, the 2 minutes following the practices were used to measure cognitive effects.

The first experiment compared concentrative and receptive meditation (Washburn, 1978) with a nontreatment control; it was hypothesized that the groups' reports would differ in content, length, and linguistic structure represented by various parts of speech. The second experiment compared concentrative meditation, hypnosis, relaxation, and a nontreatment control to replicate and expand the findings of the first, using baseline measures as covariates. Following Bradley and McCanne (1981), inexperienced subjects were randomly assigned to treatments to control for differential effects of experience. Despite Lehrer's (1982) caution against the practice to teach progressive relaxation, all instructions were given by tape recorder to avoid the possible confound of experimenters' treating some subjects differently from others.

EXPERIMENT 1

Method

Two hundred twenty-two student volunteers from undergraduate psychology courses were assigned to concentrative meditation (CM), receptive meditation (RM), or a perceptual-motor task (PM). Of these, 91 completed all phases of the experiment; dropouts were balanced across conditions. Data from 26 additional subjects were lost due to equipment