

DISCUSSION COMMENTARY

AN EVALUATION OF BARBER'S THREE-DIMENSIONAL THEORY OF HYPNOSIS: PROMISE AND PITFALLS

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For nearly half a century, T.X. Barber has been at the vanguard of the scientific study of hypnosis. Indeed, Barber has influenced our own thinking about hypnosis as much as any important figure in the field (see Lynn and Rhue, 1991). So it was with great interest that we read his recent attempt to advance a 'new paradigm' of hypnosis that purports to 'subsume and unify the conflicting "trance" versus "suggestion" schools of hypnosis ...' (Barber, 1999a: 37) by postulating three hypnoses, each with its own state of consciousness: the hypnosis of the fantasy-prone person, the hypnosis of the amnesia-prone person, and the hypnosis of the positively set person.

We welcome Barber's new theory to the panoply of hypnosis perspectives, we are grateful to him for advancing specific and testable predictions, and we are hopeful that his recent work will inspire a new generation of hypnosis studies, as his pioneering work has done in the past. That said, we believe that many of his thought-provoking observations can easily, if not more readily, be accommodated by existing sociocognitive models. Before we address this point, we identify a number of ambiguities in Barber's theory and limitations in the research base on which his new theory is founded.

Barber seems to be inconsistent on the theoretically important issue of whether the distinction among his three groups of hypnotic subjects is dimensional or taxonic (that is, categorical) in nature (see Meehl and Golden, 1982, for a discussion of taxonicity). For example, at times he (Barber 1999b) refers to 'three dimensions' (p.123) of hypnosis, but at other times he refers to 'three distinct types of very good hypnotic subjects' (p.124) or 'three kinds of hypnosis' (p.123). Similarly, although his more detailed chapter (Barber, 1999a) is entitled 'A Comprehensive Three-Dimensional Theory of Hypnosis', in several places in this chapter he refers to 'three types' of hypnotic subject (for example, p.33).

The distinction between dimensions and taxa is of more than semantic importance. If Barber's three putative groups of hypnotic subjects differ in kind from both one another and other individuals, then researchers should primarily focus their efforts on relatively discrete aetiological agents (for example, severe child abuse, nonadditive genetic influences) that might be responsible for producing distinctly different typologies of hypnotizability. Alternatively, if these three groups of hypnotic subjects differ only in degree from both one another and other individuals, then researchers should primarily focus their efforts on identifying continuously distrib-

uted dimensions (for example, absorption, fantasy-proneness) along which these three groups of subjects differ.

Moreover, if the three-fold distinction posited by Barber is dimensional rather than taxonic, it is not clear how these three dimensions interrelate. For example, Barber does not address the question of whether these dimensions (if they are indeed dimensions) are correlated or uncorrelated. Nor does he discuss the possibility that these three dimensions might covary sufficiently to comprise a higher-order dimension of hypnotizability. It is conceivable that the most appropriate model of hypnotizability is hierarchical, with correlated lower-order dimensions (perhaps corresponding to Barber's three dimensions?) coexisting with a general factor of hypnotizability.

One crucial line of evidence not reviewed by Barber is the research of Waller, Putnam and Carlson (1996). These investigators found that nonpathological dissociative experiences seem to reflect a dimensional trait of dissociation, whereas pathological dissociative experiences seem to reflect an underlying class variable (taxon). Subsequent research (Waller and Ross, 1997) replicated these findings and suggested that about 3.3% of the general population are members of the pathological dissociative taxon. Interestingly, whereas the non-taxon group of dissociaters was characterized by high scores on absorption and imaginative involvement test items, the taxon group of pathological dissociaters was characterized by high scores on amnesia, depersonalization/derealization and identity disturbance items (Waller et al., 1996).

The implications of Waller and colleagues' findings for Barber's three-fold distinction is intriguing, as their nonpathological dimension of dissociation corresponds in some ways to Barber's fantasy-prone group, and their latent taxon of pathological dissociation corresponds in some ways to Barber's amnesia-prone group. It is unclear whether Barber's positive-set group can be accommodated by these findings, although it is possible that the individuals in this group might comprise a subset of low-dissociation scorers who are none the less receptive to hypnosis. Further taxometric research using individual difference measures of Barber's three proposed groups in conjunction with measures of dissociation should be helpful in evaluating whether Barber's proposed groups of high hypnotizables map on to Waller and colleagues' dimension of nonpathological dissociation, their taxon of pathological dissociation, or both. In addition, epidemiological research might reveal that Barber's amnesia-prone individuals comprise about 3% of the general population, thereby bolstering the contention that these individuals are largely isomorphic with Waller and Ross' (1997) pathological dissociaters.

Some of the statistical evidence presented by Barber in support of his three-fold distinction is less compelling than it initially seems. Barber cites the cluster analytic findings of Pekala (1991) and Pekala, Kumar and Marcano (1995) as furnishing impressive corroboration for this distinction. But, in fact, the results of both studies provided evidence for two, rather than three, subtypes of hypnotic subjects, only one of which replicated across both cluster analyses. Pekala (1991) found evidence for two subtypes that seemed to correspond to Barber's fantasy-prone and amnesia-prone groups, respectively, whereas Pekala et al. (1995) found evidence for two subtypes that seemed to correspond to Barber's positively set and amnesia-prone groups, respectively. Thus, with respect to two of Barber's putative groups (namely, the fantasy-prone and positively set groups), the two studies of Pekala and colleagues can best be described as amounting to a double non-replication.

Barber seizes on relatively small (yet statistically significant) differences (0.6 on a seven-point scale) in reported memory experiences between Pekala's fantasy-prone and 'classic' high hypnotizables, to support the fantasy-prone vs amnesia distinction. However, the memory scores of a group of very low hypnotizable subjects were quite close (within 0.5 point) to the mean of Pekala's two hypnotizable groups. Moreover, Pekala's fantasy and 'classic' highs could be reliably distinguished from one another on dimensions (for example, positive affect – 3.0 mean difference, rationality – 2.0 mean difference) that seem, at best, tenuously related to Barber's fantasy/amnesia distinction.

Barber cites the findings of Barrett (for example, 1996) as offering additional corroboration for the distinction between fantasy-prone and amnesia-prone individuals. Although Barrett's findings are intriguing, they are plagued by methodological problems, many of which render her results difficult to interpret. Interviews were not conducted blindly of knowledge concerning participants' response to hypnosis, the extent to which interview questions were standardized across participants is unclear, interrater reliability for the coding of participants' responses was not reported, and participants' child-abuse memories were not corroborated by external evidence. Furthermore, in several cases, Barrett interpreted certain questionable signs and symptoms (for example, recurring nightmares, vomiting on being touched on the thigh) as indicative of possible or probable early abuse without additional corroborating information. Relatedly, it seems reasonable to question the reliability of amnesia-prone individuals' accounts of their personal history. In addition, Barrett's assertions regarding the association between early abuse and amnesia will need to be reconciled with the recent meta-analysis of Rind, Tromovich and Bauserman (1998), who reported a very weak relation ($r=0.09$) between self-reported child sexual abuse and later dissociative symptoms among college students ($n=1324$).

The final question we address is, 'Can Barber's hypnotic types or dimensions be accommodated by existing sociocognitive models of hypnosis?' We suspect the answer to this question is 'yes'. The dimensions that Barber (1999a) identified as playing 'important roles in the responses of all subjects' (p.40), and that encompass the social psychology of the psychological experiment, the interpersonal relation between subject and hypnotist, and the effects of suggestions on responsiveness, are all identified as response determinants in sociocognitive models of hypnosis. Likewise, sociocognitive models acknowledge the shaping influence of the subject's unique personal history and characteristics, including fantasy-proneness (see Lynn and Rhue, 1991).

However, Barber's new theory represents a significant departure from sociocognitive explanations: Barber does not seem to give serious consideration to the possibility that the unique characteristics of amnesia-prone individuals are attributable to their prehypnotic beliefs and expectations concerning the nature of the hypnotic state. Indeed, the studies cited by Barber in support of his theory failed to disambiguate prehypnotic response expectancies and personality characteristics from hypnotic and posthypnotic experiences, thereby clouding the interpretation of the findings. For instance, the loss of control, self-awareness, rationality and memory reported by Pekala's (1991) amnesia-prone subjects may reflect responsiveness to demand characteristics (for example, passive wording of suggestions, droning, 'sleepy' hypnotist voice) primed by culturally based preconceptions of the excellent hypnotic subject, rather than pre-existing personality characteristics and abilities. Alternatively, certain personality characteristics may be reliably associated with response expectancies that, in turn, mediate hypnotic experiences. At any rate, an impressive body of research (see Kirsch and Lynn, 1998) indicates that responsiveness

to expectancies and demand characteristics provides a parsimonious account of responses that typify the amnesia-prone subject (for example, posthypnotic amnesia, 'hidden observer').

Research directed at ascertaining the hypnosis-related beliefs of Barber's amnesia-prone individuals may be useful in evaluating the extent to which their posthypnotic amnesia is attributable to expectancies regarding the posthypnotic state. If it could be demonstrated, for example, that amnesia-prone individuals' hypnosis-related beliefs do not differ from those of Barber's fantasy-prone individuals, the argument that the posthypnotic amnesias of the former individuals are spontaneous would be buttressed. Additionally, future researchers could assess the malleability of reported experiences among fantasy-prone and amnesia-prone persons by manipulating their prehypnotic expectancies regarding 'spontaneous' amnesia and fantasy activity. If individuals who initially present as fantasy-prone were to reliably evince spontaneous amnesia, and if individuals who initially present as amnesia-prone were to report excellent hypnotic recall and suggestion-related imagery in response to manipulated expectancies, it would provide strong evidence for the role of response expectancies in shaping these purportedly distinct hypnotic types.

Sociocognitive models of hypnosis have never denied that hypnosis can elicit 'trance-like' experiences: dramatic transformations in subjective experience have captivated the attention of constituents of all schools of hypnosis. Yet, as Barber's new theory reminds us, elucidating the extent to which such experiences are attributable to: (a) life experiences, attributes and abilities; (b) expectations, beliefs and demand characteristics; or (c) an interaction of multifarious determinants, continues to remain a formidable challenge. Barber's innovative new model and the potentially falsifiable hypotheses generated by it represent an important step in confronting this challenge. Even if his model ultimately proves to be largely subsumable under extant sociocognitive explanations of hypnosis, it will have advanced our understanding of the sources of individual differences in hypnotic responding.

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