

## Defining Hypnosis: The Pitfalls of Prioritizing Spontaneous Experience Over Response to Suggestion

Commentary: On the Centrality of the Concept of an Altered State to Definitions of Hypnosis.

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Theoretical disagreements regarding the mechanisms subserving hypnotic responding have long permeated definitions of hypnosis. This has led to somewhat cumbersome definitions, as highlighted by Wagstaff (this issue) in his target article. Wagstaff attempts to bring clarity to this discussion by proffering a definition of hypnosis that attempts to preserve the etymological origin of this term whilst maintaining neutrality regarding different theoretical positions. Here I argue that his definitional framework still possesses a number of limitations and that hypnosis is better defined in a procedural manner.

The absence of a definition that is agreed upon by hypnosis researchers has significant consequences for experimental hypnosis research and thus advancing such a definition represents an important endeavor (Kirsch et al., 2011). By discussing both lay and scientific definitions of hypnosis, Wagstaff (this issue) seems to be confused about the type of definition we are concerned with here. If we want a *natural language* definition of hypnosis, then we can simply look to how the term is used in the general public and be done with it. In contrast, as scientists, we seek a *formal* definition. Accordingly, by and large, we need not concern ourselves with the natural language usage of the term hypnosis nor should our formal definition be constrained by the term's etymological origins<sup>†</sup>. In addition to being sufficiently neutral so as to appeal to the majority of scientists, a definition must also not promulgate conceptual

confusion regarding hypnosis and should be based on the soundest empirical foundation available. Although Wagstaff makes a strong attempt to define hypnosis in a neutral manner, it is on the latter two criteria that his definition falls short.

My disagreement with Wagstaff's (this issue) definition hinges on his beliefs regarding the core feature of hypnosis. Wagstaff highlights the perennial debate regarding whether it is the spontaneous experiential response to an induction or an individual's responsiveness to suggestion. His definition attempts to sidestep this issue but by prioritizing spontaneous experiences over response to suggestion, it ultimately sides with the former. This prioritization has a number of serious limitations but here I highlight two that are especially significant.

The first limitation of Wagstaff's (this issue) definition is that its retention of state language invites complications regarding whether someone was or was not *in* hypnosis or was or was not *hypnotized* and the criteria for demarcating between these options. According to his definition, whether someone is in hypnosis is determined on the basis of whether the person accepts or does not accept a suggestion that she or he is in hypnosis (I am ignoring the altered state of consciousness criterion because there is no agreed upon way of evaluating this). Elsewhere, Wagstaff claims that if a participant responds to hypnotic suggestions, "it is generally inferred that hypnosis has been

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† Wagstaff's (this issue) appeals to etymology are somewhat puzzling given that he advocates abandoning all reference to sleep (*hypnos*).

\* For example, Wagstaff et al.'s (2008) instructions for depth reports make reference to subjective states, to sleep, an especially unhelpful analogy, and one's response expectancies.

† For evidence of this claim, Wagstaff (this issue) cites a study (N=20; Wagstaff, Cole, & Brunas-Wagstaff, 2008) that found that raw posthypnotic amnesia scores (total number of items recalled) correlated more strongly with a measure of hypnotic depth,  $r = -.59, p < .01$ , than SHSS:A (Weitzenhoffer & Hilgard, 1959) scores (excluding posthypnotic amnesia),  $r = -.39, p > .08$ . This looks like selective reporting. In the same study, the authors found that standard posthypnotic amnesia scores (three or fewer items recalled [responsive] or more than three recalled [non-responsive]) correlated similarly with hypnotic depth,  $r = .65, p < .01$ , and SHSS:A scores,  $r = .60, p < .01$ . Even more problematic though is the fact that the authors did not incorporate reversibility of amnesia into the measures of posthypnotic amnesia (Kihlstrom & Register, 1984) and thus, both measures conflate response to the amnesia suggestion with normal forgetting following the de-induction, rendering the meaning of these correlations ambiguous. What is clear however is that neither pair of correlations actually differs, raw posthypnotic amnesia (depth vs. SHSS:A): 95% CIs = -.060, 0.18, and standard posthypnotic amnesia (depth vs. SHSS:A): 95% CIs = .30, .41 (see Zou, 2007). Accordingly, this study does not provide evidence that self-reported depth is a better predictor of posthypnotic amnesia than responses to other hypnotic suggestions. Moreover, Barber (1999) actually placed emphasis upon spontaneous posthypnotic (...SUITE NEXT PAGE)

induced" (p. 104). However, these criteria are dissociable: a participant may respond to suggestions following a hypnotic induction, but not accept that they are hypnotized (this is often observed with low suggestible participants). Wagstaff resolves this conflict by prioritizing the criterion of accepting that one is hypnotized. That is, one's spontaneous experiences, which typically inform one's interpretation of whether or not one is hypnotized, are more fundamental than one's response to suggestions.

I maintain that it is highly problematic to base demarcation criteria for hypnosis on the idiosyncratic interpretations of participants. Hypnotic inductions do not produce uniform changes in spontaneous experience across, nor within, levels of hypnotic suggestibility (Pekala & Kumar, 2007; Terhune & Cardeña, 2010) and thus spontaneous experiences following an induction do not provide a reliable method of determining whether something qualifies as hypnosis nor how responsive someone is. The use of the acceptance criterion is similarly problematic for Wagstaff's definition of hypnotizability. In contrast, questions regarding whether or not someone was hypnotized do not arise if we shift the criteria for adjudicating whether something is or is not hypnosis away from participants' experiential responses and toward the actual procedure. Considered within the context of a procedural definition, the aforementioned example of the participant who is slightly responsive to hypnotic suggestions but does not believe that s/he was hypnotized indicates that the participant took part in a hypnosis protocol and displayed a certain level of hypnotic suggestibility. There are no complications regarding whether or not the person was hypnotized. The deeper, and rarely stated, point here is that the question whether someone was or was not in hypnosis does not provide valuable information above and beyond standardized behavioural and experiential measures of hypnotic suggestibility. This question merely serves to distract researchers from fundamental questions regarding the characteristics and mechanisms of hypnosis and we should think twice about endorsing definitions that kindle this type of question.

A second limitation of Wagstaff's (this issue) definition of hypnosis is that it prioritizes hypnotic depth measures over standardized measures of hypnotic suggestibility. This is puzzling because heightened suggestibility is normally a feature of the hypnotic state according to Wagstaff's definition. It is also highly problematic because, *contra* Wagstaff's claim to the contrary, hypnotic depth measures are actually far inferior to measures of hypnotic suggestibility. The instructions for depth reports are overly broad and thus it is not clear what participants are basing their depth reports on\*. Added to this, hypnotic depth is a gross over-simplification of the panoply of spontaneous experiences that follow a hypnotic induction, particularly those in highly suggestible individuals (Cardeña, 2005). Relying on a single numerical value of an individual's spontaneous experiential response to an induction is untenable because participants will likely differentially weight particular experiential dimensions (e.g., attention, memory, time perception; Pekala & Kumar, 2007) when computing this value and thus hypnotic depth values cannot be meaningfully compared across individuals. One might counter that highly suggestible individuals reliably report greater depth than their low and medium suggestible counterparts (e.g., Cardeña, Jonsson, Terhune, & Marcusson-Clavertz, 2013). However, this is most likely because the former experience more extreme responses in particular dimensions than the latter (Terhune & Cardeña, 2010) and thus will typically compute a higher depth value irrespective of the dimension(s) they prioritize in their computation. Despite these flaws, Wagstaff argues that conventional measures of hypnotic suggestibility (see Woody & Barnier, 2008) are "less accurate" (p. 103, Box 1) than depth reports and are best considered as proxy measures of hypnotizability. This conclusion does not follow from the data he cites†. Measures of hypnotic depth are at present too flawed to provide a sound basis for understanding individual differences in response to hypnosis. A definition of hypnosis that prioritizes such measures over response to suggestion is similarly flawed.

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amnesia as a marker of a subset of highly suggestible individuals, a prediction that was not confirmed in a recent study (Terhune, Cardeña, & Lindgren, 2011). There is no clear reason to ascribe special status to spontaneous or suggested posthypnotic amnesia as a signature of hypnosis.

I would like to close by arguing that a more well-grounded approach is to define hypnosis in a procedural manner. According to this perspective, hypnosis consists of a set of procedures including a hypnotic induction, *intended* to modify suggestibility, followed by the administration of one or more suggestions, *intended* to measure hypnotic suggestibility, modulate a particular psychological phenomenon, or treat a specific symptom. This definition is neutral with regard to competing definitions of hypnosis, in particular state and non-state positions, to the requirements of an induction, as well as to the core element(s) of hypnosis. It also avoids confusions regarding whether someone was or was not hypnotized or whether or not someone has the ability to be hypnotized (these questions become meaningless).

Finally, this definition does not prioritize certain measurement methods and thus is compatible with a wide array of research orientations. The term *hypnotic suggestibility* is admittedly only preferred by a minority of clinicians and researchers (15%; Christensen, 2005), but it has the important strength of being unequivocal, which cannot be said for *hypnotizability* or *hypnotic susceptibility*. I hope that future researchers will give greater consideration to this perspective.

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