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THE ROLES OF RESPONSE EXPECTANCIES, BASELINE EXPERIENCES, AND HYPNOTIZABILITY IN SPONTANEOUS HYPNOTIC EXPERIENCES

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Abstract: This study evaluated factors underlying individual differences in spontaneous (unsuggested) experiences during hypnosis. Participants varying in hypnotizability (low, medium, and high) completed a questionnaire about various dimensions of consciousness they would expect to experience at the "deepest level of hypnosis" (expectancy), an eyes-closed resting condition (baseline), and their actual experiences during "neutral hypnosis" (hypnosis). Responses during hypnosis were characterized by higher scores in dimensions related to alterations in conscious experience, affect, and imagery, and lower scores in rationality and agency. Only highs and mediums evinced increases in altered experience and body image. Across conditions, highs reported greater alterations in time experience and lower self-awareness than other groups. Participants overall tended to overestimate the changes they would experience in hypnosis. Baseline and hypnosis correlated in various dimensions, including affect, arousal, and internal dialogue. After controlling for baseline scores and hypnotizability, expectancies correlated with some dimensions having to do with alterations in consciousness. In sum, spontaneous experiences during hypnosis are driven by response expectancies, hypnotizability, and baseline experiences, which show differential effects.

A discussion by White (1941) on the importance of individuals' expectations on their responses to hypnosis was the impetus for important research and theoretical developments (e.g., Kirsch, 1991; Shor, 1971). In recent decades, as part of a broader line of research on the role of expectations in human behavior and experience (Kirsch, 1999), various studies have investigated whether

response expectancies are accurate predictors of behavioral and experiential responses to hypnotic suggestions, with implications for the cognitive mechanisms underlying hypnotic responding and the clinical application of hypnosis (for a review, see Kirsch, 1997). However, the *extent* to which expectancies contribute to hypnotic responses remains in contention (e.g., Benham, Woody, Wilson, & Nash, 2006), and there has been scant research on the role of expectancies and other individual differences in spontaneous (unsuggested) experiences during hypnosis.

Response Expectancies in Hypnosis

Two main areas of investigation into expectancies have been developed in experimental hypnosis research. The first focuses on the effect of the manipulation of participants' expectancies for how they will respond to hypnotic suggestions on their subsequent behavioral and experiential responses to them. The manipulations have varied, with an important one seeking to enhance response expectancies by surreptitiously manipulating environmental stimuli so as to give participants the impression that they are highly responsive to hypnotic suggestions, under the assumption that this will translate into an increase in hypnotizability (responsiveness to hypnotic suggestions). The results have been equivocal, with some studies finding a clear relation between manipulated expectancies and subsequent behavior and experience, and others not (e.g., Benham, Bowers, Nash, & Muenchen, 1998; Lynn, Milano, & Weekes, 1991; Silva & Kirsch, 1987; Simon & Salzberg, 1985; Wickless & Kirsch, 1989). It may be that manipulations are more effective when they are consistent with the participants' own expectancies (Brown & Krasner, 1969) and are not identified as manipulations (Kirsch, Wickless, & Moffitt, 1999), but even so, the actual experience of a difficult hypnotic suggestion such as a negative hallucination may run counter to one's expectations (Wagstaff, Toner, & Cole, 2002). Overall, those having low expectancies of responding successfully to hypnosis have been found to be more accurate prognosticators than those with higher expectancies (Spanos, Burnley, & Cross, 1993). Moreover, expectancies have not accounted for the efficacy of other methods that have successfully augmented hypnotizability and nonhypnotic suggestibility, such as transcranial magnetic stimulation (Dienes & Hutton, 2013) and nitrous oxide (Whalley & Brooks, 2009). Cumulatively, these studies suggest that, although response expectancies can be manipulated, such changes do not reliably translate to increases in responsiveness to suggestion.

The second area of investigation on expectancies and hypnotic responses, and the one most relevant to this article, concerns the impact of nonmanipulated expectancies. Response set theory maintains that

expectancies about behaviors and subjective experience activate responses consistent with them (Kirsch, 1999). In general, response expectancies have been consistent predictors of later behavioral and experiential responses to hypnotic suggestions in research (Kirsch, 1999; Meyer & Lynn, 2011) and clinical (Montgomery et al., 2010) contexts, although the magnitude of the relation has been debated (e.g., Benham et al., 2006). Spanos and colleagues (1993) described strong and weak versions of the response expectancy hypothesis: The former maintains that expectancies may be the sole determinant of hypnotic responses, whereas the latter proposes that expectancy is but one of a number of potentially interacting variables influencing hypnotic responding. For instance, Spanos et al. (1993) reported that adopting an active stance toward hypnotic suggestions was an independent predictor of responsiveness, above and beyond expectancies. More recent studies have sought to estimate the amount of variance explained by response expectancies and other variables, such as a general cognitive ability, rather than presenting expectancies as the only important predictor (e.g., Benham et al., 2006; Kirsch, 1991).

Multiple studies have found support for the weak version of the response expectancy hypothesis. For instance, Milling (2009) reported that expectations explained 25% of the variance in response to an analgesia suggestion. A structural equation modeling study with repeated assessments of response expectancies after sets of suggestions showed a bidirectional effect between expectancies and hypnotic responses, with each one weakly affecting the other, and a latent trait underlying responses to behavioral suggestions (hypnotizability) that accounted for most of the variance (Benham et al., 2006). The latent trait was a stronger predictor of behavioral responsiveness (coefficients of .39, .68) than expectancies (coefficients of around .12). As for what this trait might be, Meyer and Lynn (2011) reported that nonhypnotic suggestibility is an important predictor of hypnotizability above and beyond response expectancies and contextual factors. Another study (Green & Lynn, 2010) parsed this proposal further, showing that a combination of 13 psychometric items relating to absorption, imaginative involvement, expectancies, and changes in time perception were good predictors of behavioral response to hypnotic suggestions.

Little is known as to the provenance of response expectancies, but they may partly reflect previous experiences outside of the hypnotic context (Laurence, Beaulieu-Prévost, & de Chéné, 2008), such as a general predisposition to experience alterations of consciousness (Cardeña & Terhune, 2014). Laurence et al. (2008, p. 247) reported that the correlation between expectancies and hypnotizability went from .42 to .01 when the contribution of nonhypnotic suggestibility, which they attributed to past experiences, was controlled for. They

also found that medium and high hypnotizables were better at predicting subsequent hypnotic responses than low hypnotizables, who tended to overestimate their responses. Also in agreement with the proposal that previous experience partly determines expectancies is the finding that expectancies predict hypnotizability more strongly when evaluated after, rather than before, the hypnotic induction (Council, Kirsch, & Hafner, 1986).

A set of studies by Pekala and collaborators provided additional support for a multifactorial model of hypnotic responses. Pekala, Kumar, and Hand (1993) reported that preinduction expectancies accounted for approximately 11% of the variance in hypnotizability, whereas spontaneous resting state experiences following the induction accounted for an additional 15%. They also reported, in contrast to Laurence et al. (2008), that whereas the expectancies of low hypnotizables (lows) accurately predicted their hypnotic performance, those of high hypnotizables (highs) underestimated some alterations in consciousness. Their preinduction condition, however, might have conflated expectancies with hypnotic-like experiences, because they asked participants to close their eyes for 4 minutes and experience what it would feel like to be hypnotized.

Despite the many studies investigating the role of expectancies in response to hypnosis, few studies have investigated the impact of expectancies on spontaneous experiential changes after a hypnotic induction. In a dissertation, Henry (1985, cited in Kirsch, 1989, p. 154) found that participants' expectations about how an induction would affect various dimensions of consciousness predicted spontaneous alterations in consciousness and hypnotizability, but the details of this study have not been published. That there is a relation between expectancies and unsuggested experiences is also supported by a study in which scores on a global measure of hypnotic depth were predicted by responsiveness to a dream suggestion, spontaneous consciousness alterations, expectancies, and an eye-catalepsy suggestion (Pekala et al., 2010a, 2010b), an effect that was subsequently replicated (Pekala et al., 2017; Tomé Pires, Ludeña, & Lopes Pires, 2015; for a critique, see Terhune & Cardeña, 2010b). Using an open-ended question about what hypnotic virtuosos would experience during their "deepest" hypnotic state, Cardeña (2005) found mixed results, with descriptions varying in accuracy as to what participants subsequently experienced during a neutral hypnotic procedure. Overall, the studies reviewed suggest that response expectancies relate to spontaneous experiences following a hypnotic induction, but the magnitude of this effect is unknown, as is the extent to which it may vary according to level of hypnotizability.

Hypnotizability and Spontaneous Hypnotic Experiences

A generally accepted finding is that individuals differ consistently in their responsiveness to hypnotic suggestions (McConkey & Barnier, 2004), and this difference is generally stable over time (Piccione, Hilgard, & Zimbardo, 1989; but see Fassler, Lynn, & Knox, 2008). Furthermore, as compared with those who are less hypnotizable, the highs (particularly if they are also more dissociative) report having more unusual experiences and alterations of consciousness in their daily lives (Pekala, Kumar, & Marcano, 1995). This propensity to experience alterations in consciousness seems to carry over to the hypnotic context. Some individuals reliably report alterations in body image, sensations, and the sense of reality; a disinclination to act; and a sense of compulsion (Pekala & Kumar, 2007), even when no specific suggestions for these effects have been administered. There is consistent evidence that these effects covary with hypnotisability, with highs experiencing the most pronounced changes in experience (for a review, see Pekala & Kumar, 2007). For instance, a sample of highs reported that, as compared with a resting state control condition, a neutral hypnotic procedure minimizing specific suggestions produced changes in many dimensions of consciousness, including alterations in body image, time sense, perception, and meaning; a sense of being in an altered state; reduced self-awareness and rationality; and others (Cardeña, 2005). Similarly, in a series of studies Pekala, Kumar, and collaborators found that high hypnotizability was associated with unsuggested changes in consciousness in general (including body image, time sense, perception, and meaning), a sense of being in an altered state, and others (Pekala & Kumar, 2007). The few discrepancies between their results and Cardeña's (2005; e.g., no differences in affect or imagery) might be due to methodological differences. Furthermore, some specific spontaneous alterations of consciousness during hypnosis have cortical correlates (Cardeña, Jönsson, Terhune, & Marcusson-Clavertz, 2013). Although we refer to these unsuggested experiences as *spontaneous*, it is important to bear in mind that they occur in a context labeled as *hypnosis*, which participants may have been exposed to previously (see also Gandhi & Oakley, 2005).

The Present Study

This study evaluated the roles of expectancies, hypnotizability, and baseline experiences in spontaneous experiences during neutral hypnosis procedure. The central aim was to test the prediction that experiences during a neutral hypnosis procedure would be associated with response expectancies, independent of nonhypnotic baseline experiences and hypnotizability. We also assessed whether

expectancies had differential effects on various dimensions of consciousness, and whether the accuracy of response expectancies varied as a function of hypnotizability.

Methods

Participants

From an original pool of 186 individuals from Lund University and the surrounding community tested for hypnotizability (66% women, M_{Age} = 29.16, *SD* = 11.00, range = 18–66), 46 participants who scored high (scores 9–12), medium (5–7), or low (0–3) on the Harvard Group Scale of Hypnotic Susceptibility (HGSHS; Shor & Orne, 1962) were further evaluated with the Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C; Weitzenhoffer & Hilgard, 1962), and the Brief Symptom Inventory (BSI; Derogatis, 1975). Among these, 39 participants continued to score consistently as either high, medium, or low on the SHSS:C; consented to take part in further research; and did not report marked distress during the previous week. Two of these 39 individuals experienced negative emotional responses at the beginning of their sessions, and their participation was discontinued, and data were unreliable for a third one. Thus, the final sample consisted of 36 participants, compensated with 90 SEK (~9 EUR). The first author acted as the experimenter for all parts of the study. The study was approved by the Swedish Federal Human Subjects Agency (Etikprövningsnämden).

Materials

The HGSHS (Shor & Orne, 1962) is a group screening measure of hypnotizability. It consists of a standard relaxation-based hypnotic induction followed by 12 hypnotic suggestions of increasing difficulty. Response to each suggestion is retrospectively scored in a binary fashion; the scale has a scoring range of 0 to 12 and good psychometric properties (Council, 1999).

The SHSS:C (Weitzenhoffer & Hilgard, 1962) measures hypnotizability in an individual setting. The scale has the same structure as the HGSHS but includes more difficult cognitive-perceptual suggestions, is scored by the hypnotist, and is considered the "gold standard" of hypnotic assessment (Council, 1999).

The BSI (Derogatis, 1975) is a widely used 53-item questionnaire that measures general distress using a Likert scale from 0 to 4 for each item. The BSI scores were not entered as data but used only to screen out potential participants who reported distress for the week preceding their possible participation in the study.

The Phenomenology of Consciousness Inventory (PCI; Pekala, 1991) is a 53-item questionnaire that evaluates different dimensions of conscious

experience in reference to a preceding resting state interval. It consists of 12 dimensions (and 14 subdimensions): altered experience (body image, time sense, perception, and meaning), positive affect (joy, sexual excitement, and love), negative affect (anger, sadness, and fear), attention (direction and absorption), imagery (amount and vividness), self-awareness, altered state, arousal, rationality, volitional control, memory, and internal dialogue. Each item consists of opposite statements describing specific experiences and is scored using a 0-to-6 scale. PCI scores that did not have acceptable reliability indexes according to the original author's norms were not analyzed further. For a review of the use of this measure in hypnosis research, see Pekala and Kumar (2007).

Procedure

Participants took part in two sessions, sitting in a comfortable chair in a quiet laboratory. Analyses of data in those two sessions other than those reported here can be found elsewhere (Cardeña et al., 2013, 2012). The first session involved the recording of EEG during voluntary versus suggested arm levitation (Cardeña et al., 2012). Prior to the EEG recording, participants completed the PCI in reference to what they expected their experience to be at the "deepest level of hypnosis" (expectancy). They were also taught a self-report scale of hypnotic depth, which they used in both sessions. In the second session, after being fitted with an EEG cap, participants were in a nonhypnotic baseline condition involving a 2-minute eyes-closed resting period in which they were asked not to practice meditation or hypnosis but just to sit quietly and relax. They subsequently completed the PCI in reference to their experiences during this condition (baseline).

Next, the experimenter administered a neutral hypnosis induction consisting of a 1-to-30 count with the *single* suggestion to go into a deep state of hypnosis throughout the hypnotic procedure. After the induction, and every 5 minutes for about 30 minutes in total, participants were prompted to provide a hypnotic depth report and asked to describe their experiences during the preceding 5-minute period (Cardeña et al., 2013). Following a deinduction using an alerting 10-to-1 count, participants completed the PCI in reference to their experienced deepest state during hypnosis (hypnosis).

Analyses

Data were analyzed using two sets of 2 (condition) x 3 (hypnotizability) mixed-model ANOVAs. In the first set, the repeated measures independent variable condition included two levels (baseline vs. hypnosis), whereas in the second the levels of condition were different (expectancy vs. hypnosis). In both sets of analyses, the between-groups independent variable (hypnotizability) included three levels (low vs. medium vs. high). Significant main effects and interactions were followed up with one-way ANOVAs and *post hoc* Tukey HSD tests. Data that violated the

assumption of homogeneity of variance were analyzed using one-way Welch ANOVAs (F_W; uncorrected *df*s are reported). Because of the large number of analyses, we used a corrected α level of .01 for both set of ANOVAs. Zero-order and partial correlations were conducted to analyze associations between PCI scores across conditions. A false discovery rate (FDR; Benjamini & Yekutieli, 2001) correction was applied to the set of correlations, which amounted to three sets of correlations for each of 26 dimensions (i.e., 78), in order to determine the threshold for statistical significance, which resulted in a critical α value of .024 (corresponding to an *r* of .376 with this sample size).

Results

Sample Characteristics

The sample included 12 lows, 12 mediums, and 12 highs. The groups did not have uniform gender distributions (there were 10, eight, and six women among highs, mediums, and lows, respectively), but the difference was not significant, χ^2 (2) = 3.0, p = .22. There was a main effect of group on age, $F_W(2, 33) = 6.28$, p = .041, with highs being older (M = 34.42, SD = 10.87) than mediums (M = 25.50, SD = 4.12), t (22) = 2.66, p = .02, and lows (M = 25.08, SD = 4.91), $t(22) = 2.71$, p = .02, who did not differ from one another, $t(22) = 0.23$, p = .82. Because including age as a covariate in an analysis of covariance (ANCOVA) would violate the assumption of homogeneity of regression slopes across the groups, we did not control for it. Furthermore, previous research has not found that age among adults is an important contributor to responses to hypnotic inductions (Morgan & Hilgard, 1973; Ronald J. Pekala, personal communication, July 2017).

Phenomenological Differences Between Baseline and Hypnotic Experience

We first examined the impact of neutral hypnosis on resting state experiences as a function of hypnotizability. Table 1 presents descriptive and inferential statistics for the effects of condition (baseline vs. hypnosis), hypnotizability (low vs. medium vs. high), and their interaction. There were main effects of condition on multiple PCI dimensions, reflecting higher scores during hypnosis in altered experience and its subdimensions (body image, time sense, perception, and meaning), joy, imagery (and amount of), and experiencing an altered state; and lower scores in rationality and volitional control. Many of these effects were large ($\eta_p^2 > .35$).

These effects were accompanied by smaller main effects of hypnotizability on variables related to alterations in consciousness that were similar in magnitude (η_p^2 range: .24–.31). Across conditions, highs displayed greater alterations in time perception (time sense) and lower self-awareness than mediums and lows, ps < .024, who did not differ

Table 1
PCI Dimension Scores (M and SD) as a Function of Condition and Hypnotizability

	Hypnotizability			F (η^{p^2})		
PCI Dimension	Low	Medium	High	Condition (Baseline or Expected vs. Hypnosis)	Hypnotizability	Condition × Hypnotizability
Altered experience						
	1.08	0.63	1.59			
Baseline	(1.07)	(0.55)	(1.29)	35.38*** (.52)	5.85* (.26)	6.73** (.29)
	2.43	2.85	3.47			
Expected	(1.13)	(1.31)	(0.79)	8.88* (.21)	7.24** (.31)	2.33 (.11)
	1.26	2.56	3.20			
Hypnosis	(1.03)	(1.10)	(1.31)			
Body Image						
	1.28	0.94	1.89			
Baseline	(1.12)	(0.79)	(1.58)	28.96*** (.47)	4.44 (.21)	6.16* (.27)
	2.47	2.70	3.72			
Expected	(1.64)	(1.51)	(1.05)	0.43 (.01)	5.26 (.24)	4.26 (.21)
	1.50	3.45	3.47			
Hypnosis	(1.32)	(1.30)	(1.70)			
Time Sense						
	1.22	0.69	2.14			
Baseline	(1.64)	(1.01)	(1.99)	17.91*** (.35)	5.31* (.24)	1.48 (.08)
	2.83	3.47	4.25			
Expected	(1.03)	(1.76)	(1.06)	9.70** (.23)	6.63** (.29)	0.65 (.04)
	1.78	2.36	3.83			
Hypnosis	(1.46)	(1.80)	(1.38)			
Perception						
	1.00	0.42	1.31			
Baseline	(1.51)	(0.57)	(1.37)	17.59*** (.35)	3.01 (.15)	5.30 (.24)
	1.89	2.39	2.67			
Expected	(1.32)	(1.16)	(1.01)	0.26 (.01)	5.46* (.25)	1.76 (.10)
	0.96	2.72	2.81			
Hypnosis	(1.42)	(1.25)	(1.94)			
Meaning						
	0.90	0.50	1.17			
Baseline	(0.89)	(0.75)	(1.07)	21.13*** (.39)	3.10 (.16)	4.10 (.20)

(*Continued*)

Table 1
(*Continued*)

	Hypnotizability			F (η^{p^2})		
PCI Dimension	Low	Medium	High	Condition (Baseline or Expected vs. Hypnosis)	Hypnotizability	Condition × Hypnotizability
	2.50	2.85	3.29			
Expected	(1.29)	(1.35)	(1.18)	21.68*** (.40)	3.20 (.16)	1.54 (.09)
	1.02	1.96	2.71			
Hypnosis	(0.95)	(1.56)	(1.70)			
Positive Affect						
	1.28	0.54	1.49			
Baseline	(1.16)	(0.81)	(1.20)	4.31 (.12)	3.38 (.17)	1.23 (.07)
	2.22	1.76	2.76			
Expected	(1.05)	(1.09)	(0.88)	34.20*** (.51)	3.44 (.17)	0.53 (.03)
	1.26	1.06	2.11			
Hypnosis	(1.21)	(1.00)	(1.08)			
Joy						
	1.13	0.46	1.88			
Baseline	(1.09)	(0.86)	(1.58)	8.73* (.21)	3.93 (.19)	0.14 (.01)
	2.46	2.46	2.88			
Expected	(1.30)	(1.21)	(1.09)	10.16** (.24)	1.53 (.09)	1.24 (.07)
	1.71	1.38	2.63			
Hypnosis	(1.57)	(1.45)	(1.67)			
Sexual Excitement						
	0.88	0.33	0.71			
Baseline	(1.19)	(0.89)	(1.29)	0.01 (.00)	1.10 (.06)	0.04 (.00)
	1.25	0.67	2.33			
Expected	(1.20)	(0.78)	(1.29)	12.64** (.28)	4.23 (.20)	3.16 (.16)
	0.88	0.25	0.75			
Hypnosis	(1.43)	(0.72)	(1.20)			
Love						
	1.83	0.83	1.88			
Baseline	(1.61)	(1.23)	(1.35)	2.20 (.06)	3.64 (.18)	3.76 (.19)
	2.96	2.17	3.08			
Expected	(1.12)	(1.59)	(0.82)	13.59** (.29)	3.32 (.17)	5.73* (.26)
	1.19	1.54	3.08			
Hypnosis	(1.43)	(1.53)	(1.74)			

(*Continued*)

Table 1
(*Continued*)

	Hypnotizability			F (ηp^2)		
PCI Dimension	Low	Medium	High	Condition (Baseline or Expected vs. Hypnosis)	Hypnotizability	Condition × Hypnotizability
Negative Affect						
	0.61	0.13	0.68			
Baseline	(0.98)	(0.29)	(1.36)	6.27 (.16)	1.21 (.07)	1.77 (.10)
	1.36	1.27	1.82			
Expected	(1.26)	(0.98)	(1.22)	12.51** (.28)	1.48 (.08)	0.05 (.00)
	0.59	0.61	1.20			
Hypnosis	(0.76)	(0.58)	(1.40)			
Anger						
	0.50	0.04	0.67			
Baseline	(1.07)	(0.14)	(1.50)	5.53 (.14)	0.99 (.06)	0.25 (.02)
	1.25	0.98	1.79			
Expected	(1.25)	(1.13)	(1.32)	1.44 (.04)	1.46 (.08)	0.05 (.00)
	0.83	0.75	1.38			
Hypnosis	(1.11)	(1.59)	(1.81)			
Sadness						
	0.67	0.29	0.63			
Baseline	(1.15)	(0.86)	(1.15)	1.51 (.04)	1.52 (.08)	2.42 (.13)
	1.25	2.00	2.00			
Expected	(1.36)	(1.31)	(1.46)	12.54** (.28)	1.80 (.10)	1.90 (.10)
	0.58	0.25	1.46			
Hypnosis	(0.87)	(0.62)	(2.12)			
Fear						
	0.67	0.04	0.75			
Baseline	(0.96)	(0.14)	(1.62)	5.74 (.15)	0.54 (.03)	0.45 (.03)
	1.58	0.83	1.67			
Expected	(1.47)	(1.13)	(1.42)	2.44 (.07)	0.57 (.03)	0.77 (.05)
	1.02	0.88	1.17			
Hypnosis	(1.76)	(1.23)	(1.90)			
Attention						
	3.90	4.05	3.90			
Baseline	(0.87)	(0.89)	(1.22)	0.00 (.00)	1.37 (.08)	1.85 (.10)

(*Continued*)

Table 1
(*Continued*)

	Hypnotizability			F (η^{p^2})		
PCI Dimension	Low	Medium	High	Condition (Baseline or Expected vs. Hypnosis)	Hypnotizability	Condition × Hypnotizability
	3.88	4.72	4.70			
Expected	(0.77)	(0.68)	(0.56)	6.18 (.16)	5.14 (.24)	0.68 (.04)
	3.40	3.97	4.50			
Hypnosis	(1.24)	(0.83)	(1.35)			
Direction						
	3.92	3.72	3.86			
Baseline	(0.95)	(1.14)	(1.29)	0.98 (.03)	0.86 (.05)	1.72 (.09)
	3.97	4.89	4.61			
Expected	(0.90)	(0.72)	(0.95)	3.76 (.10)	3.48 (.17)	0.39 (.02)
	3.47	4.36	4.47			
Hypnosis	(1.59)	(0.93)	(1.31)			
Absorption						
	3.88	4.54	3.96			
Baseline	(0.93)	(1.20)	(1.51)	2.05 (.06)	1.40 (.08)	3.60 (.18)
	3.75	4.46	4.83			
Expected	(1.25)	(0.96)	(0.78)	6.13 (.16)	5.12 (.24)	0.95 (.06)
	3.29	3.38	4.54			
Hypnosis	(1.44)	(0.91)	(1.50)			
Imagery						
	2.69	2.50	2.15			
Baseline	(1.36)	(1.16)	(1.28)	22.42*** (.40)	0.10 (.01)	3.79 (.19)
	2.88	3.60	3.65			
Expected	(1.05)	(1.29)	(1.08)	0.22 (.01)	1.41 (.08)	1.16 (.07)
	3.19	3.22	4.02			
Hypnosis	(1.36)	(1.63)	(1.56)			
Amount						
	2.38	2.17	1.75			
Baseline	(1.86)	(1.40)	(1.53)	32.28*** (.49)	0.22 (.01)	4.48 (.21)
	2.71	3.67	3.88			
Expected	(1.56)	(1.27)	(1.57)	0.43 (.01)	2.89 (.15)	0.92 (.05)
	3.17	3.29	4.38			
Hypnosis	(1.57)	(1.53)	(1.51)			

(*Continued*)

Table 1
(*Continued*)

	Hypnotizability			F (η^{p^2})		
PCI Dimension	Low	Medium	High	Condition (Baseline or Expected vs. Hypnosis)	Hypnotizability	Condition × Hypnotizability
Vividness						
Baseline	3.00 (1.77)	2.83 (1.30)	2.54 (1.37)	6.10 (.16)	0.02 (.00)	0.65 (.04)
Expected	3.04 (1.01)	3.54 (1.53)	3.42 (1.10)	0.63 (.02)	0.28 (.02)	0.43 (.03)
Hypnosis	3.42 (1.33)	3.42 (1.73)	3.75 (1.62)			
Self-Awareness						
Baseline	4.69 (0.96)	5.17 (0.50)	4.33 (1.03)	7.27 (.18)	7.49** (.31)	2.89 (.15)
Expected	4.11 (0.96)	3.92 (1.14)	3.25 (1.39)	1.79 (.05)	5.84* (.26)	0.99 (.06)
Hypnosis	4.86 (1.27)	4.17 (1.12)	3.20 (1.04)			
Altered State						
Baseline	1.36 (1.42)	1.31 (1.27)	2.00 (1.48)	38.60*** (.54)	4.78 (.22)	4.77 (.22)
Expected	3.25 (1.22)	4.56 (1.09)	4.42 (0.83)	5.62 (.15)	10.31*** (.39)	1.44 (.08)
Hypnosis	1.97 (1.70)	4.14 (1.59)	4.19 (1.42)			
Arousal						
Baseline	1.67 (1.35)	1.17 (0.86)	1.33 (0.69)	5.61 (.15)	0.88 (.05)	0.17 (.01)
Expected	1.88 (1.17)	0.67 (0.69)	1.29 (1.08)	5.71 (.15)	2.52 (.13)	0.71 (.04)
Hypnosis	2.29 (1.16)	1.71 (1.45)	1.67 (1.75)			
Rationality						
Baseline	4.67 (1.36)	4.86 (1.22)	4.33 (1.41)	10.44** (.24)	1.22 (.07)	0.87 (.05)

(*Continued*)

from one another, *p*s > .92. Highs also reported greater altered

Table 1
(*Continued*)

	Hypnotizability			F (η^{p^2})		
PCI Dimension	Low	Medium	High	Condition (Baseline or Expected vs. Hypnosis)	Hypnotizability	Condition × Hypnotizability
	3.31	3.81	3.44			
Expected	(1.17)	(1.09)	(1.51)	0.02 (.00)	0.46 (.03)	1.96 (.11)
	4.17	3.31	3.19			
Hypnosis	(1.52)	(1.32)	(1.67)			
Volitional Control						
	4.30	4.28	4.08			
Baseline	(1.31)	(1.60)	(1.21)	27.28*** (.45)	1.86 (.10)	1.73 (.10)
	2.89	2.45	2.56			
Expected	(1.17)	(0.91)	(1.06)	0.13 (.00)	3.08 (.16)	1.52 (.09)
	3.56	2.47	2.14			
Hypnosis	(1.57)	(1.39)	(1.05)			
Memory						
	4.95	5.14	3.86			
Baseline	(1.14)	(0.85)	(1.63)	0.24 (.01)	3.52 (.18)	0.34 (.02)
	4.49	4.61	3.75			
Expected	(0.93)	(0.47)	(1.27)	1.35 (.04)	2.69 (.14)	0.01 (.00)
	4.70	4.86	4.03			
Hypnosis	(1.49)	(1.05)	(1.36)			
Internal Dialogue						
	1.75	2.42	2.50			
Baseline	(2.25)	(2.31)	(2.25)	0.02 (.00)	0.21 (.01)	0.38 (.02)
	1.63	2.04	2.04			
Expected	(1.17)	(1.36)	(1.36)	0.73 (.02)	0.18 (.01)	0.10 (.01)
	2.04	2.38	2.13			
Hypnosis	(2.40)	(2.28)	(1.88)			

Notes: Dimensions are in **bold**.
* p < .01, ** p < .005, *** p < .001,

experience than lows, Tukey HSD $p = .005$, but did not differ significantly from mediums, $p = .085$, who did not differ from lows, $p = .49$.

Differences across conditions and groups were further qualified by two condition × hypnotizability interactions on altered experience and body image. Subsidiary ANOVAs showed that there were large increases in both dimensions during hypnosis for highs (altered

Table 2
Correlation Coefficients of PCI (Sub)Dimensions Between Conditions

	Baseline × hypnosis (r)	Expectancy × hypnosis (r)	Expectancy × hypnosis (r_p: covariates: baseline & hypnotizability)
AE	.34	.56	.40*
bi	.26	.51**	.39*
ts	.40	.48**	.29
pe	.13	.28	.16
mn	.39*	.60**	.53
PA	.55**	.76***	.66***
jy	.50	.59**	.51**
se	.56**	.33	.18
lo	.34	.56	.57**
NA	.67***	.45*	.22
an	.41	.24	.09
sd	.57**	.26	.14
fe	.58**	.63***	.45
ATT	.15	.41*	.28
dr	.09	.51**	.45*
co	.13	.31	.18
IM	.50	.53**	.24
am	.39*	.35	.15
vi	.30	.46*	.35
SA	.07	.37	.27
AS	.27	.49	.37
AR	.55**	.32	.47*
RA	.05	.14	.15
VC	.21	.26	.19
ME	.40*	.48	.33
ID	.65***	.48**	.19

Notes: AE = altered cxperience, bi = body image, ts = time sense, pe = perception, mn = meaning, PA = positive affect, jy = joy, se = sexual excitement, lo = love, NA = negative affect, an = anger, sd = sadness, fe = fear, ATT = attention, dr = direction, co = concentration, IM = imagery, am = amount, vi = vividness, SA = self-awareness, AS = altered state, AR = arousal, RA = rationality, VC = voluntary control, ME = memory, ID = internal dialogue. p-values reflect FDR-corrected p-values. *$p < .05$, **$p < .01$, ***$p < .001$.

experience: $F(1,11) = 9.96$, $p = .009$, $\eta^2 = .48$; body image: highs, $F(1,11) = 7.99$, $p = .016$, $\eta^2 = .42$), and even larger ones for mediums (altered experience: $F(1,11) = 45.95$, $p < .001$, $\eta^2 = .81$; body image: $F(1,11) = 30.32$, $p < .001$, $\eta^2 = .73$), but no significant changes for lows (altered experience: $F(1,11) = 0.62$, $p = .45$, $\eta^2 = .05$; body image: $F(1,11) = 0.41$, $p = .54$, $\eta^2 = .04$). Thus, although hypnosis was associated with various changes across groups, altered experience and changes in body image were greater only for highs and mediums.

Expectancies vs. Hypnotic Experiences

The next set of analyses examined to what extent *expected* experiential responses to the hypnotic procedure corresponded to the *actual* experiences during hypnosis. As can be seen in Table 1, participants tended to *overestimate* their experiential response to hypnosis, with main effects of condition (expected vs. hypnosis) on altered experience (and time sense and meaning), positive affect (and joy, sexual excitement, and love), and negative affect (and sadness), with effect sizes of η_p^2 range: .21–.51. There were also main effects of hypnotizability on altered experience (and time sense and perception), self-awareness, and altered state (η_p^2 range: .25–.39). Whereas highs and mediums did not significantly differ in any of these dimensions (ps > .06), highs differed from lows in all of them (ps < .02), and mediums and lows differed in altered state ($p = .001$) and perception ($p = .012$; all other ps >.08). Finally, there was a single condition × hypnotizability interaction on love, showing a greater tendency for lows to overestimate this dimension in hypnosis, $F(1,11) = 27.26$, $p < .001$, $\eta^2 = .71$, relative to mediums, $F(1,11) = 2.57$, $p = .14$, $\eta^2 = .19$, and highs, $F(1,11) = 0.00$, $p = 1$, $\eta^2 = .00$. Although this was the only significant interaction, it is worth noting that, as compared with highs, lows numerically, albeit nonsignificantly, overestimated their experiential response to hypnosis in 23 of 26 PCI (sub)dimensions.

Baseline Experiences and Expectancies as Predictors of Hypnotic Experiences

The final set of analyses considered the extent to which baseline, expected, and hypnosis scores correlated with one another (see Table 2). Scores in the baseline and hypnosis conditions correlated positively in various dimensions: time sense, meaning, positive and negative affect (and most subdimensions), imagery (and amount), arousal, memory, and internal dialogue. The entire set of correlations ranged from .05 to .67 ($M = .36$, 95% CIs: .29, .43). The results suggest that differences in various dimensions of experience during a neutral hypnosis condition can be partly predicted (~13% of the variance on average) from baseline resting state experiences.

PCI scores similarly correlated in the expected and hypnosis conditions in multiple dimensions: altered experience (and all

subdimensions, except perception), positive and negative affect (and some subdimensions), attention (and direction), imagery (and vividness), altered state, memory, and internal dialogue. The set of correlations ranged from .14 to .76 (M = .44, 95% CIs: .38, .49), showing that participants' expectancies moderately predicted (~19% of the variance on average) their experiences during hypnosis.

The final set of analyses examined the impact of baseline experiences and hypnotizability in the relation between expected and hypnosis PCI scores by computing the partial correlations between expected and hypnosis, controlling for baseline and hypnotizability. This yielded positive correlations for altered experience (and the subdimensions body image and meaning), positive affect (and joy and love), fear, direction (of attention), and arousal (range: .11–.68; M = .37, 95% CIs: .31, .42). Correlation coefficient magnitudes declined by M = .07 (95% CIs: .04, .10), with the most notable being for time sense, negative affect, imagery, and internal dialogue. Overall, the results show that what participants expected in relation to their experiences in hypnosis with respect to alterations in consciousness, affectivity, attention, and arousal were consistent with what they actually experienced, even when controlling for baseline experiences and hypnotizability.

Discussion

This study examined the roles of response expectancies, baseline experiences, and hypnotizability in the spontaneous experiences during a neutral hypnosis procedure. The findings replicate results that a hypnotic procedure relates to reports of changes in dimensions of consciousness, including increases in altered experience, affect, and imagery, and decreases in rational processes. These results were partly qualified by level of hypnotizability (Cardeña, 2005; Cardeña et al., 2013; Pekala & Kumar, 2007). Specifically, as compared with baseline, during hypnosis highs and mediums reported greater altered experience and changes in body image, whereas the lows did not. Across conditions, highs reported lower self-awareness and greater altered time sense than the other two groups and greater altered experience than the lows, suggesting a general predisposition for the highs to have alterations of consciousness even outside of a hypnotic context (Cardeña & Terhune, 2014).

Participants overall tended to overestimate how much the hypnotic procedure would affect their consciousness and affect. Furthermore, highs differed from lows in some dimensions of alterations of consciousness and in self-awareness, with mediums and lows differing in altered state and perception. The only significant interaction showed

that lows tended to overestimate how much love they would experience in hypnosis, a result for which we do not have a ready explanation.

Multiple dimensions in both baseline and expectancy experiences correlated moderately to strongly with the experiences during hypnosis. The correlations between baseline and hypnosis tended to refer more to everyday experiences, such as affectivity and memory, whereas those between expectancies and hypnosis also referred to alterations of consciousness. Response expectancies for the impact of hypnosis predicted experiences during hypnosis even after controlling for baseline and hypnotizability. The results overall suggest that spontaneous experiences during neutral hypnosis are driven by a confluence of variables, including a general propensity to experience alterations of consciousness as well as expectancies regarding one's experiential response to a hypnotic procedure, partly informed by baseline resting state experiences.

Our results support the ego theory of hypnosis of Erika Fromm (1977), which proposes that enhanced "primary processing" increases during hypnosis. The results on hypnotizability for highs and mediums but not for lows replicate findings of individual differences regarding the propensity to experience alterations of consciousness inside or outside of a hypnotic context (Cardeña & Terhune, 2014; Kumar & Pekala, 1988).

A promising new finding is that highs reported lower self-awareness across conditions than mediums and lows. This is a different finding than a general decrease in self-awareness during states of attentional absorption (Pekala, Wenger, & Levine, 1985), because it was present across conditions, and highs did not report significantly greater absorption than the other groups. Nonetheless, both findings may be related, insofar as the scales for self-awareness and absorption did not correlate significantly at baseline ($r = .04$, $p > .8$), but correlated negatively during hypnosis ($r = -.40$, $p < .02$). The self-awareness items of the PCI measure reflective consciousness (e.g., "I was continually conscious," "I was very aware of being aware"), and the finding of less self-awareness among highs has implications for recent theories of hypnosis. Our results are arguably consistent with cold control theory (Dienes & Perner, 2007), which proposes that people who are less aware of the intentions associated with their actions are more likely to be highly hypnotizable. Similarly, the integrative cognitive theory (Brown & Oakley, 2004) hypothesizes that a decrease in "high-level attention" (and presumably self-awareness) relates to hypnotizability.

The low self-awareness of highs may similarly relate to the "classical suggestion effect" of involuntariness (Weitzenhoffer, 1980; see also Terhune & Hedman, 2017). Cardeña and Spiegel (1991, p. 104) earlier

stated that, "because of the diminished competition with other types of mental occurrences (including self-reflective appraisals), hypnotic suggestions entail greater salience, influence, and perceived involuntariness." Given their reported lower self-awareness, highs may be more likely to experience such involuntariness during hypnotic responding than the other groups (and hypnotizability likely interacts with dissociativity, see Cardeña & Marcusson-Clavertz, 2016). However, the lower self-awareness of highs was not predicted by us in advance and needs to be replicated. It is consistent with Pekala and Kumar's (2007) finding of low self-awareness among a subtype of high hypnotizables, the "classic highs."

Highs and mediums reported a few more significant alterations during hypnosis than lows (Kumar & Pekala, 1988), but we suspect that a study with greater statistical power would have found additional differences, as suggested by other data from this sample (Cardeña et al., 2013). Another interesting result was that changes in body image were more clearly associated with hypnosis by mediums, similar to what was reported by highs during "medium hypnosis" in another study (Cardeña, 2005), and to the content analysis of the participants' in-session reports in this study (Cardeña et al., 2013). It may be that highs have a more liminal experience of their bodies in general and are more prone to altered bodily states even at baseline, so this dimension is impacted less by an induction than is the case for mediums.

Participants tended to overestimate their experiential response to the hypnotic procedure. Although nonsignificant, there was a general tendency for highs to have more accurate expectations than lows, particularly in (sub)dimensions related to alterations of consciousness, which the study probably lacked sufficient statistical power to identify. Notably, this tendency is the opposite of what Pekala et al. (1993) reported but is consistent with the findings of Laurence et al. (2008) and with their proposal that past experiences similar to those in a hypnotic context—for instance, of absorptive states—may inform the expectancies for a hypnotic condition. This discrepancy with Pekala et al.'s (1993) finding might be explained by their having tested participants inexperienced in hypnosis, as compared with ours, who had had previously experienced hypnosis on at least two occasions. On the other hand, Pekala et al. (1993) had their volunteers close their eyes for 4 minutes and imagine they were hypnotized before measuring expectancies, so their lows had some immediate experiences about how much they might experience hypnosis but without the demand for introspection as in our study, in which they were asked to provide depth and experiential reports. The discrepant findings of Pekala et al. (1993) with those of Laurence et al. (2008) and our data deserve further attention. Future research, for instance, should study participants of

varying levels of hypnotizability but naïve to hypnosis and include control conditions that measure nonhypnotic resting state experiences without reference to imagination or hypnosis.

Based on the correlational analyses, baseline scores accounted, on average, for approximately 13% of the variance in scores in the hypnosis condition. This association was significant for more everyday dimensions that may persist from a brief rest to a hypnotic experience, such as positive and negative affect, arousal, and internal dialogue. There were significant correlations in other processes—including time sense, meaning, imagery, and memory—suggesting that these dimensions may be somewhat stable and show heterogeneity during a resting state, a question deserving further investigation. The finding about time sense is particularly intriguing, as changes in time perception are generally posited to accompany a hypnotic induction (Naish, 2007). Overall, the data suggest that a moderate proportion of the variance in the spontaneous experiential response to a neutral hypnotic procedure is attributable to individual differences in baseline resting state experiences.

On the other hand, expectancies scores accounted for, on average, approximately 19% of the variance in experiences during neutral hypnosis, an estimate within the midrange of other studies that have focused on suggested responses (Milling, 2009; Pekala et al., 1993). Although some of the correlations were similar to those for baseline scores predicting hypnosis scores, they differed in other dimensions, with expectancies tending to be more predictive of phenomena associated with alterations in consciousness, such as a general sense of being in an altered state, and specific alterations in experience. Thus, the value of expectancies, above and beyond that of baseline, may be as predictors for alterations in consciousness. This was partly confirmed by the partial correlations between expectancies and hypnosis scores controlling for baseline and hypnnotizability, in which significant effects for altered experience and the subdimensions of body image and meaning remained significant. Understanding the distinctive predictive values of baseline and expectancies has theoretical import for our understanding of the role and source of expectancies.

Our data support a weak rather than strong version of response set theory concerning the role of response expectancies in hypnotic spontaneous experiences. Response expectancies accounted for a modest amount of the variance in such experiences, comparable to that accounted for by baseline experiences. The results, however, provide some interesting divergences with regard to which experiential dimensions are more likely to relate to expectancies. Expectancies were more robust predictors of dimensions commonly associated with hypnosis, including increased altered experiences and decreased arousal, and these results are generally consistent with those

described by Tomé Pires et al. (2015). Our study cannot reveal the source of the associations between expectancies and the actual experiential responses during hypnosis, which could be a product of general cultural expectations, participants' previous experience with hypnosis testing and similar phenomena, or a combination of these and other factors.

Interpretation of the study's results should consider the study's limitations. Expectancies were not naïve, as all participants had previously participated in two hypnotizability sessions that involved standard relaxation and focusing instructions and suggestions, imagination instructions, and suggestions to experience physical and cognitive alterations. Thus, participants' expectancies were likely informed by their previous exposure to both spontaneous and suggested hypnotic phenomena. Future research about spontaneous phenomena in hypnosis will benefit from measuring beliefs and expectancies before any exposure to hypnotic phenomena, using a neutral induction as the first exposure to hypnosis, and evaluating a similarly phrased induction but independent of the context of a hypnotic procedure. Another limitation is that the study ran parallel to EEG recording (Cardeña et al., 2013), which is not as pleasant or relaxing as simply sitting or lying down comfortably and may have attenuated participants' responses. Moreover, the sample sizes of the different groups are relatively small, f, and we corrected for multiple analyses, so many of our analyses had low statistical power. Thus, nonsignificant results should be interpreted with great caution.

Because of the large number of analyses, we did not evaluate the covariations among PCI dimensions (Kumar, Pekala, & Cummings, 1996; Terhune & Cardeña, 2010a). Highs were significantly older than the two other groups, although age has not been found to affect the response to hypnosis among adults, other than in a study that reported that women of childbearing age were more hypnotizable than their counterparts (Morgan & Hilgard, 1973). Also, although gender did not differ significantly in our study, women predominated among the highs, as we have found earlier (Cardeña, Kallio, Terhune, Buratti, & Lööf, 2007), so research with a larger sample size should assess the potential impact of gender and age.

Our study provides new and specific information about how hypnotizability, baseline experiences, and response expectancies impact spontaneous experiences during neutral hypnosis. Research using various methods, including qualitative ones, will further clarify the sources of individuals' expectancies about their hypnotic response, their propensities to have alterations of consciousness, and the processes through which expectancies change depending on spontaneous or manipulated beliefs and experiences. Additional research should

ideally evaluate both intergroup (e.g., hypnotizability) and intragroup (e.g., different subtypes and processes among highs; cf., Terhune & Cardeña, 2010a, 2015) differences, as well as measuring expectancies before and after exposure to hypnotic or other procedures.

Disclosure statement

No potential conflict of interest was reported by the authors.

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Die Rolle von Antworterwartungen, Baseline-Erfahrungen und Hypnotisierbarkeit in spontanhypnotischen Erfahrungen

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Abstract: Diese Studie untersuchte Faktoren, die den individuellen Unterschieden in spontanen (nicht suggerierten) Erfahrungen während Hypnose zugrundeliegen. Teilnehmer unterschiedlicher Hypnotisierbarkeit (niedrig, mittel, hoch) füllten einen Fragebogen ihrer Erwartung bezüglich der Erfahrung auf der „tiefsten Ebene von Hypnose“ (Erwartung), in einem Ruhezustand mit geschlossenen Augen (Baseline) und ihrer aktuellen Erfahrungen während einer „neutralen Hypnose“ (Hypnose) aus. Die Antworten während Hypnose waren durch Zunahme von Änderungen der bewußten Erfahrungen, Affekt, Bilder und Abnahme in Rationalität und Handeln charakterisiert. Nur hoch und mittel Hypnotisierbare zeigten eine Zunahme der veränderten Wahrnehmung und des Körperbildes. Im

Querschnitt der Bedingungen berichteten hoch Hypnotisierbare von größeren Veränderungen bezüglich der Zeitwahrnehmung und von niedrigerer Selbstwahrnehmung als andere Gruppen. Über alle Gruppen hinweg tendierten Teilnehmer dazu, die Veränderungen, die sie während der Hypnose erfahren würden, zu überschätzen. Baseline und Hypnose korrelierten in unterschiedlichen Dimensionen, inklusive alltäglicher Phänomene wie Affekt, Erregung und interner Dialog. Nach der Kontrolle von Baseline-Punkten und Hypnotisierbarkeit korrelierten Erwartungen mit einigen Dimensionen, die mit veränderten Erfahrungen zu tun haben. Zusammenfassend läßt sich sagen, daß Spontanerfahrungen während Hypnose von Antworterwartungen, Hypnotisierbarkeit und Baseline-Erwartungen angetrieben werden, die andere Effekte zeigen.

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Le rôle des attentes en matière de réaction, des expériences de référence et de la susceptibilité hypnotique dans des expériences hypnotiques spontanées

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Résumé: Cette étude a permis d'évaluer les facteurs sous-jacents aux différences individuelles au cours d'expériences spontanées (non suggérées) pendant l'hypnose. Des participants ayant divers degrés de susceptibilité hypnotique (faible, moyen ou élevé) ont répondu à un questionnaire sur les différentes dimensions de la conscience qu'ils s'attendraient à connaître au « niveau le plus profond de l'hypnose » (attentes), en état de repos les yeux fermés (mesure de base), et pendant leur expérience réelle de « l'hypnose neutre » (hypnose proprement dite). Les réactions des participants durant l'hypnose ont révélé une augmentation de l'altération de l'expérience consciente, de l'affect et de l'imagerie, et une diminution de la rationalité et de l'agentivité. Seuls les participants dont le degré de susceptibilité hypnotique était élevé ou moyen ont manifesté une altération de l'expérience et de l'image de soi. Dans l'ensemble, le groupe des participants très susceptibles à l'hypnose ont déclaré avoir connu une plus grande altération de l'expérience du temps et une plus faible conscience de soi que les participants des autres groupes. Globalement, les participants ont eu tendance à surestimer les changements dont ils feraient l'expérience en état d'hypnose. La mesure de base et l'état d'hypnose présentaient une corrélation dans diverses dimensions, notamment dans des phénomènes quotidiens tels que l'affect, l'excitation et le discours interne. Après avoir tenu compte des scores de référence et de la susceptibilité hypnotique, les attentes montraient une corrélation avec certaines dimensions liées à des expériences altérées. En somme, les expériences spontanées pendant l'hypnose sont dictées par l'attente de la réaction, le degré de susceptibilité hypnotique et les expériences de référence, lesquels montrent des effets différentiels.

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Los Roles de las Expectativas de Respuesta, las Expectativas Basales y la Hipnotizabilidad en las Experiencias Hipnóticas Espontáneas

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Resumen: Este estudio evaluó los factores subyacentes a las diferencias individuales de experiencias espontáneas (no sugeridas) durante la hipnosis. Participantes con distintos niveles de hipnotizabilidad (baja, media y alta) completaron un cuestionario sobre varias dimensiones de conciencia que esperarían experimentar en: (a) los "niveles más profundos de hipnosis" (expectativa), (b) una condición de descanso con los ojos cerrados (línea basal), y sus experiencias reales durante la "hipnosis neutra" (hipnosis). Las respuestas durante hipnosis se caracterizaron por incrementos en alteraciones en experiencia consciente, afecto y visualizaciones, y decrementos en racionalidad y sentido de agencia. Solamente los altos y medios mostraron incrementos en experiencia alterada e imagen corporal. A través de las distintas condiciones, los altos reportaron mayores alteraciones en la experiencia temporal y menor autoconciencia en comparación a los otros grupos. En general, los participantes mostraron una tendencia a sobreestimar los cambios que experimentarían en hipnosis. La línea basal y la hipnosis correlacionaron en varias dimensiones, incluyendo fenómenos cotidianos como afecto, nivel de alerta y diálogo interno. Después de controlar las puntuaciones basales e hipnotizabilidad, las expectativas correlacionaron con algunas dimensiones involucradas con experiencias alteradas. En resumen, las experiencias espontáneas durante hipnosis están impulsadas por las expectativas de respuesta, hipnotizabilidad, y experiencias basales, que muestran efectos diferenciados.

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