EXPECTANCIES AND HYPNOTIC RESPONSIVENESS: An Experimental-Design Flaw Revealed

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Abstract: Recent research suggests that expectancies about being hypnotized have a determinant role in the hypnotic experience. The authors analyzed the relationship between expectancies and the phenomenology of hypnosis using the Phenomenology of Consciousness Inventory and Hypnotic Assessment Procedure. Participants (115) were assigned either to the imagination (hypnosis labeled as imagination) or the hypnosis conditions. Results revealed only a minor influence of expectancies and none on the label “hypnosis” across all variables. These findings indicate that the methodology commonly used to study the influence of expectancies on hypnotic responsiveness and phenomenology might represent a flaw in favor of a causal relationship between expectancies and hypnotic experience.

Recent investigations (e.g., Benham, Woody, Wilson, & Nash, 2006; Lifshitz, Howells, & Raz, 2012) found only a small effect for expectancies in hypnotic response, contrary to what has been proposed by several sociocognitive researchers (Braffman & Kirsch, 1999; Gandhi & Oakley, 2005; Kirsch, 1985; Lynn, Kirsch, & Hallquist, 2008). They propose that hypnotic responding is a product of expectancies (Barber, 1969; for more modern analyses, see Braffman & Kirsch, 2001; Kirsch, 2001) and that expectancies have a causal role in hypnotic response, being the sole proximal determinant of hypnotizability (Braffman & Kirsch, 1999; Gandhi & Oakley, 2005; Kirsch, 1985; Lynn et al., 2008; Kirsch, 2001).

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On the other hand, the subjective experience of hypnosis has received little attention (Barrett, 2007; Pekala & Kumar, 2000) and perhaps not in the most appropriate manner (Barrett, 2007; Woodard, 2003). Accordingly, a comprehensive hypnotizability assessment methodology should be able to assess hypnotism (i.e., the production, study, and use of suggestions). Phenomenology has been explained as a kind of epiphenomenon related to expectancies (Lynn et al., 2008; Wagstaff, 2010). For example, Wagstaff predicted that phenomenology would change in the same direction as responsiveness based on Gandhi and Oakley’s investigation (2005), which did not take into account hypnotic phenomenology. Therefore, in agreement with response set theory and, in general, with the sociocognitive perspective, hypnotic experiences occur when expectations activate a response set for behavior, including phenomenology (Lynn et al., 2008; Wagstaff, 2010). However, the simple observation of behavior is insufficient to consider that a hypnotic experience has occurred. Consequently, we measured the phenomenological changes that a person experiences in terms of perception, feelings, and emotions with the Phenomenology of Consciousness Inventory (Pekala, 1982). A status of causality should also be attributed to phenomenological variables. Indeed, in recent clinical research, not yet published, one of the authors of the present study (Ludeña, 2014) found that the level of surprise in respect to the hypnotic experience and the degree of hypnoidal state together explained more than 70% of the variance of therapeutic change after hypnosis in people with depression. As a matter of fact, surprise can be defined as an emotion resulting from something that is not expected (i.e., the suggestion response). In some degree, it also includes people whose expectancies are violated. This is contradictory to what has been proposed by Kirsch and colleagues, who argued that expectancies are important for their confirmation, contrary to their violation as advocated by discrepancy-attribution theory (Barnier, Dienes, & Mitchell, 2008).

It also appears important to remark that the type of methodology used in the majority of the studies testing expectancies in the experience of hypnosis may lead to outcomes that overvalue the role of expectancies. A very specific experimental context may result in an overestimation of expectancies, which can represent an experimental design flaw. The methodology established by Kirsch (1991) proposes that expectations should not be assessed before induction because it fails to find strong relationships between expectations and responsiveness. Indeed, Laurence, Beaulieu-Prévost, and Chéné (2008) made a number of criticisms regarding this methodology, such as the following: (a) Expectancy is a belief specifically based on individual past experiences; (b) thus, it is not surprising that expectancies about hypnosis can be good predictors of future hypnotic behavior when people evaluate it after experiencing suggestions provided by hypnotic
scales; (c) this prediction is not derived from a causal relationship between expectancies and hypnosis but from a relationship between expectancies and experience (i.e., it is a hypnotic response prediction based on past experiential response to suggestions).

Further, Kihlstrom (2005) also critically evaluated this methodology in which expectancies are measured after participants are first exposed to a hypnotic procedure. For example, Gandhi and Oakley (2005) used the following methodological steps in their study: (a) Participants were evaluated about their responsiveness to suggestions (with the Waterloo Scale-Form C) before a hypnotic induction manipulation; (b) participants were informed that they would be assigned to a group (i.e., hypnosis, relaxation, or control) and then assessed again on their responsiveness to suggestions (i.e., suggestions were repeated). In addition, this study also supported the idea that the hypnotic label of a procedure increases responsiveness to hypnosis. However, further evidence still needs to be gathered to check the contribution of this type of procedure.

Thus, two main concerns with respect to the type of methodology are related to (a) the moment of assessment of expectancies (measurement of expectancies before and/or after a hypnotic induction) that seems to reflect a different relationship between expectancies and hypnotic responsiveness and (b) the fact, mentioned previously, that the effect of expectancies is tested with much more emphasis on the subjective behavioral response than on hypnotic phenomenology. Evaluating expectancies over a second hypnotic experience after being exposed to a first experience with suggestions might simply relate the first performance with the second, without explaining what happened during the first. Further, the assessment of expectancies after hypnosis can contribute to the fact that the person is fully aware of the benefits achieved via hypnosis, and positive results obtained through hypnosis may motivate and make the person more receptive to the assessment. The study of the nature of hypnosis and responsiveness (including phenomenology) to a hypnotic procedure (or induction) should be done prior. In the present study, expectancies were tested long before the participants had been exposed to hypnotic suggestions, ensuring that they did not acknowledge what would happen in both experimental conditions.

Given the above considerations and following the sociocognitive expectancy theory, the crucial prediction of this present study is whether expectancies have an influence on hypnotizability, specifically on its phenomenology (as assessed by the PCI altered state of consciousness and hypnoidal state scores) and whether that influence would be greater in the hypnotic group when compared to the imagination group. In addition, based on expectancy theory, we predict that the induction procedure, which was identical for both experimental groups but with
different labels (i.e., hypnosis or imagination), will produce differences between the groups on phenomenology.

**Method**

**Research Design**

This investigation used a between-subject design with two experimental conditions: imagination and hypnosis. Participants' expectancies about being hypnotizable and their phenomenology of consciousness (as assessed by the PCI altered state of consciousness and hypnoidal state scores) were evaluated during the investigation in both conditions. Participants in both groups were informed about the type of intervention, which was labeled either as hypnosis or imagination (experimental conditions were identical with exception to labeling throughout the protocols as either hypnotic or imaginative).

**Participants**

Initially, 152 students from a psychology course at the University of Coimbra volunteered to participate in the present investigation. Of these 152 participants, 31 participants did not show up for the second phase of the study (see Figure 1), and 6 were excluded for different reasons, such as items not answered, responding to items in an unreliable way, or participants who manifested suspicion related to the experiment being about hypnosis (for the imagination group prior to beginning the experiment itself). Of the total, 115 participants (101 females; 14 males) took part in this investigation and were aged between 19 and 56 years old ($M = 24$ years old; $SD = 7.90$) (see Table 1).

**Procedure**

This study included two different phases (see Figure 1). During Phase 1, 152 participants were informed that this study was about psychometric proprieties of several instruments. For this reason, some weeks later they were invited to complete the same scales. Instruments were the following: the Zung Self-Rating Anxiety Scale (SAS; Ponciano, Vaz Serra, & Relvas, 1982; Zung, 1979), the Centre for the Epidemiological studies-Depression (CES–D; Gonçalves & Fagulha, 2004; Radloff, 1977), the Valencia Scale of Beliefs and Attitudes about Hypnosis-client version (VBAHS–C; Carvalho et al., 2007), and the pre-assessment form of the Phenomenology of Consciousness Inventory Hypnotic Assessment Procedure (PCI–HAP) by Pekala et al. (2010a, 2010b) to measure expectancies about being hypnotized (the expectancy scale obtained from the PCI–HAP). Only after signing the consent form
<table>
<thead>
<tr>
<th>PHASE 1</th>
<th>ADMINISTRATION OF PSYCHOMETRICS AND EXPECTANCIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEEK 1</td>
<td>$N = 152$</td>
</tr>
<tr>
<td></td>
<td>Administered the following personality scales:</td>
</tr>
<tr>
<td></td>
<td>- Zung Self-Rating Anxiety Scale--SAS, Centre</td>
</tr>
<tr>
<td></td>
<td>for the Epidemiological studies--Depression</td>
</tr>
<tr>
<td></td>
<td>(CES--D), Valencia Scale of Beliefs and</td>
</tr>
<tr>
<td></td>
<td>Attitudes about Hypnosis-client version</td>
</tr>
<tr>
<td></td>
<td>(VBAHS--C), and a measure of expectancies</td>
</tr>
<tr>
<td></td>
<td>about being hypnotized (expectancy scale was</td>
</tr>
<tr>
<td></td>
<td>obtained from the PCI HAP -- preassessment)</td>
</tr>
</tbody>
</table>

| PHASE 2 | RANDOM ASSIGNMENT OF CONDITION (after signing the  |
|---------| consent form)                                     |
| BETWEEN  | $N = 115$                                         |
| WEEKS    | Subjects were randomly assigned to either the     |
| 2 AND 4  | imagination condition or to the hypnosis condition.|

<table>
<thead>
<tr>
<th>IMAGINATION CONDITION ADMINISTERED</th>
<th>$n = 60$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subjects assigned to the imagination condition were told they would be administered an imagination procedure (i.e., they were not informed they were being subjected to a hypnotic procedure). They were administered the HAP—induction procedure—and then the PCI procedure by Pekala. All words related to hypnosis were substituted by words associated with imagination (e.g., imagine, imagination, images). Scales administered: the expectancy scale about being hypnotized (obtained from the PCI HAP preassessment), Zung Self-Rating Anxiety Scale--SAS, Centre for the Epidemiological studies--Depression (CES--D), and Valencia Scale of Beliefs and Attitudes about Hypnosis-client version (VBAHS--C).</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HYPNOSIS CONDITION ADMINISTERED</th>
<th>$n = 55$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants in the hypnosis condition were informed that the present research intended to study individual differences in the experience of hypnosis. They were then administered the HAP—induction procedure—and PCI procedure by Pekala. Scales administered: the expectancy scale about being hypnotized (obtained from the PCI HAP preassessment), Zung Self-Rating Anxiety Scale--SAS, Centre for the Epidemiological studies--Depression (CES--D), and Valencia Scale of Beliefs and Attitudes about Hypnosis-client version (VBAHS--C).</td>
<td></td>
</tr>
</tbody>
</table>

Figure 1. Procedure phases of the study.

in which participants agreed to enroll in the present investigation did research proceed to the second phase.

In the second phase (between 2 and 4 weeks after Phase 1), 115 participants were randomly assigned to the hypnosis or imagination conditions. This temporal period (i.e., between 2 and 4 weeks' time) was undertaken to maintain participants’ naive experience without
Table 1
Mean Rating Scores and Standard Deviations for Altered State of Consciousness and Hypnoidal State Variables for the Imagination and Hypnosis Groups and Levels of Expectancies

<table>
<thead>
<tr>
<th>Group</th>
<th>Phenomenological variables</th>
<th>Level of Expectancies before</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imagination</td>
<td>Hypnoidal State</td>
<td>Low</td>
<td>12</td>
<td>3.92</td>
<td>1.16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Moderate</td>
<td>42</td>
<td>5.13</td>
<td>1.10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High</td>
<td>6</td>
<td>5.14</td>
<td>0.59</td>
</tr>
<tr>
<td></td>
<td>Altered State of Consciousness</td>
<td>Low</td>
<td>12</td>
<td>2.55</td>
<td>1.09</td>
</tr>
<tr>
<td>Hypnosis</td>
<td>Hypnoidal State</td>
<td>Moderate</td>
<td>42</td>
<td>3.08</td>
<td>0.76</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High</td>
<td>6</td>
<td>3.16</td>
<td>1.13</td>
</tr>
<tr>
<td></td>
<td>Altered State of Consciousness</td>
<td>Low</td>
<td>10</td>
<td>5.12</td>
<td>0.69</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Moderate</td>
<td>32</td>
<td>5.11</td>
<td>0.72</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High</td>
<td>13</td>
<td>5.04</td>
<td>1.44</td>
</tr>
</tbody>
</table>

receiving any information that could influence their response to the experimental conditions. This precluded any noticeable connection between Phases 1 and 2; therefore, during Phase 2, the aim of the current study was reinforced to participants; that is, the study of psychometric properties of a number of psychological scales. With respect to condition assignment, to avoid the possibility of disclosing the real nature of the investigation, the first group of participants to be assigned was the imagination group. Only after that were participants of the other experimental condition (hypnosis) included. The imagination group comprised three subgroups (20 + 20 + 20) for a total of 60 participants, while the hypnosis group comprised three subgroups (18 + 18 + 19) for a total of 55 participants. Participants in the imagination condition were first informed that the aim of the research was the study of individual differences in imagination, and all words related to hypnosis were substituted with words associated with imagination during the hypnotic procedure (e.g., imagine, imagination, images). For example, “You will always hear me no matter how relaxed, how calm, how deeply in imagination you are.” On the other hand, participants in the hypnosis condition were informed that the present research was to study individual differences in the experience of hypnosis. Terms of a hypnotic nature (e.g., trance) were not referred to, and Pekala’s (audiotaped) procedure, which has no mention of such concepts, was then presented.
In this phase, all participants were exposed to the Hypnotic Assessment Procedure (HAP) and then given the Phenomenology of Consciousness Inventory (PCI) to complete retrospectively in reference to a 2-minute sitting quietly period embedded in the HAP in concordance with Pekala, Kumar, and Maurer’s administration manual (2009). Participants were asked if they had been hypnotized before and also about their expectancies about being hypnotized in the future and to what extent (in the original HAP induction procedure, this is done prior to induction; however, in this version of the HAP induction procedure, we did not use the expectancy scale immediately before the induction). In this phase, the scale was only used at the end of the PCI. In addition, participants again completed the same psychometric personality scales measuring anxiety, depression, and beliefs and attitudes toward hypnosis. Due to the study’s nature, participants were not debriefed (i.e., no explanation in respect to the study was given).

Measures

This study used a number of scales, as mentioned before, such as the Zung’s SAS, the CES-D, and the VBAHS-C. Expectancies about being hypnotized were measured with the preassessment form of the PCI–HAP. Also, a Likert scale ranging from 1 to 10 was used (e.g., “I would like to know how deeply hypnotized you expect to be when we try to hypnotize you; 1 = not hypnotized at all, and 10 = the most hypnotized that you can imagine”). The HAP includes several sections, such as relaxation instructions (called a body scan), a hypnotic induction procedure (called a mind calm), and suggestions to have a vivid hypnotic dream. It also includes an extra item to evaluate the imagery vividness dream.

The PCI is composed of 53 dipole items separated by a 7-point Likert scale of 0 to 6 (for example: 0 = I felt very calm, and 6 = I felt very anxious). The PCI generates 12 dimensions: (1) positive affect, (2) negative affect, (3) altered experience, (4) rationality, (5) visual imagery, (6) volitional control, (7) attention, (8) self-awareness, (9) arousal, (10) altered state of awareness, (11) internal dialogue, and (12) memory (there are 14 additional subdimensions that are not considered in our study). The PCI was adapted to the Portuguese population. This version was presented in the doctoral thesis of one of the authors (Ludeña, 2014). It was considered an appropriate instrument to measure the phenomenology after a hypnotic induction with an internal consistency of \( \alpha = .77 \) and the correlation between the test-retest items with values between .898 and .986 showing a good temporal stability evidence scale.

It is important to mention that the PCI dimension, altered state of consciousness, assesses whether the participants feels themselves to be in an extraordinarily unusual and uncommon state of awareness or if their state of consciousness is not different than usual. It, according
to Pekala et al. (2009), accounts for 15% of the variance of the total hypnoidal state score (see below). The PCI also generates a measure called a hypnoidal-state (or trance-state) score, also called a predicted Harvard Group Scale (pHGS) score. It is based on a regression equation using the 10 dimensions of the PCI (Pekala & Kumar, 1984, 1987) to predict the total Harvard Group Scale of Hypnotic Susceptibility (Shor & Orne, 1962) and is used to measure the depth of “hypnosis” à la Weitzenhoffer (2002). The hypnoidal-state score obtained with the PCI has a validity coefficient of .86 on the Stanford Hypnotic Susceptibility Scale: Form A, and between .62 and .67 on the Harvard Group Scale of Hypnotic Susceptibility: Form A (data provided in Pekala & Kumar, 2007). As Pekala et al. stated: “The hypnoidal state score gives a measure of trance depth or what Weitzenhoffer (2002) would call ‘hypnosis’ Being normed against the Harvard scale, the hypnoidal state score is considered a quantitative measure of ‘trance depth’” (Pekala et al., 2009, pp. 4–5).

Data Analyses

A one-way analysis of variance (ANOVA) was conducted to compare all the variables. In addition, effect sizes were calculated allowing us to ascertain the relevant changes that had occurred throughout the investigation. Therefore, in addition to obtaining $p$ values, we considered as differences of interest only those that were represented by medium and large effect sizes ($\Omega$ squared). When $p > .05$, effect sizes were not reported. The magnitude of effect sizes was based on Kirk’s criteria (1996): small ($\Omega1$), medium ($\Omega6$), and large effect sizes ($\Omega14$). Finally, Pearson’s $r$ correlations were computed to also explore the relationship between the phenomenological variables (i.e., altered state of consciousness and hypnoidal state) in both experimental conditions.

Results

Expectancies About Being Hypnotized: Phenomenological Altered State of Consciousness and Phenomenological Hypnoidal State

In order to elucidate whether the level of expectancies could have influenced the phenomenological dimensions altered state of consciousness and hypnoidal state, three levels of expectancy were constituted: high (scores of 8, 9, 10), moderate (scores of 4, 5, 6, 7), and low (scores of 1, 2, 3) (see Table 1), also considering the experimental conditions. Thus, a two-way ANOVA with Level of Expectancy as one factor and the Experimental Condition as the other factor was conducted. There was a statistically significant interaction effect between group and expectancies, $F(2, 109) = 3.25, p < .05$, but with no statistically
significant main effect for Level of Expectancy for hypnoidal, $F(2, 109) = 3.03, p > .05$. Additional analyses were conducted to explore the nature of the interaction effect found, using a one-way ANOVA. So, for the imagination group, no differences were found in the phenomenological variable altered state of consciousness between participants of low, moderate, and high expectancies, $F(2, 112) = 1.67, p > .05$. In the hypnosis group, the same statistical test revealed no significant statistical difference in the altered state of consciousness, $F(2, 112) = 2.96, p > .05$.

However, results for the imagination group revealed a significant difference in the phenomenological variable hypnoidal state between participants of low and both moderate and high expectancies, $F(2, 112) = 6.00, p < .005$, with a large effect size (.18). Results for the hypnosis group revealed no significant differences in the phenomenological variable hypnoidal state between groups, $F(2, 112) = 0.35, p > .05$. In sum, only the phenomenological variable hypnoidal state produced differences in the imagination group with a large effect.

Furthermore, a one-way ANOVA between groups was conducted to explore possible differences in the phenomenological variables hypnoidal state and altered state of consciousness between the two experimental groups (see Table 2). No significant statistical differences were found for hypnoidal state, $F(2, 114) = 1.07, p > .05$, and altered state of consciousness, $F(2, 114) = 0.01, p > .05$, in both groups.

**Correlations**

We also computed the correlations between expectancies and the hypnoidal and altered state of consciousness scores for each experimental condition. With the imagination group, only the variable hypnoidal state was found to have a moderate and significant correlation with expectancies ($r = .42; p < .01$), whereas in the hypnosis groups only

### Table 2

<table>
<thead>
<tr>
<th>Groups</th>
<th>Phenomenological Variables</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imagination</td>
<td>Hypnoidal State</td>
<td>60</td>
<td>4.89</td>
<td>1.16</td>
</tr>
<tr>
<td></td>
<td>Altered State of Consciousness</td>
<td>60</td>
<td>2.98</td>
<td>0.88</td>
</tr>
<tr>
<td>Hypnosis</td>
<td>Hypnoidal State</td>
<td>55</td>
<td>5.1</td>
<td>0.91</td>
</tr>
<tr>
<td></td>
<td>Altered State of Consciousness</td>
<td>55</td>
<td>2.96</td>
<td>1.29</td>
</tr>
</tbody>
</table>
the variable altered state of consciousness was moderately and significantly correlated with expectancies \((r = .32; p < .01)\). Fisher’s Z test found no statistical significant differences between the two experimental conditions in altered state of consciousness \((Z = −0.89, p > .05)\) but a statistically significant difference in hypnoidal state \((Z = 2.1, p < .01)\). These findings are consistent with the ANOVA results.

**DISCUSSION**

As mentioned in the introduction, the same sociocognitive theory that emphasizes the importance of expectancies on responsiveness also predicts this same role at the phenomenological level (e.g., Kirsch, 1985; Lynn & Kirsch; 2006; Lynn et al., 2008; Wagstaff, 2010). According to the response expectancy theory of hypnosis, hypnotic phenomena are fundamentally genuine and occur simply because subjects expect them to occur (Wagstaff, Toner, & Cole, 2002). Therefore, following the sociocognitive perspective and concerning our experiment, it would be expected that (a) the hypnosis group would have more significant changes in phenomenology compared to the imagination group, (b) within the hypnosis group, participants with high expectancies about being hypnotized would have high scores in the hypnoidal state and altered state of consciousness, and, finally, (c) within the imagination group there would be no differences between participants in relation to their expectancies and phenomenology. Our results disconfirm the hypotheses based on the theory of expectancy.

However, when comparing different levels of expectancies (i.e., low, moderate, and high) in each experimental group, findings show that only in the imagination group participants with low expectancies had significantly lower hypnoidal state scores than the participants with high and moderate expectancies (which is reflected in a moderate correlation between expectancies and hypnoidal state in this group). Participants with high expectations in both groups did not reveal higher scores in the altered state of consciousness when compared to participants with low or moderate expectancies. Further, the statistically significant—but moderate—correlation found between expectancies and altered state of consciousness, in the hypnosis group, is not contrary to these findings as the Fisher’s Z test pointed out insignificant difference between both groups on such a variable. This same test found differences for the other phenomenological variable in the study, that is, hypnoidal state, which is in accordance with the ANOVA results.

Surprisingly, expectancies produced a stronger effect on the phenomenological variable hypnoidal state in the imagination condition than in the hypnosis condition. This is a very intriguing finding, taking
into account that the hypnoidal state is considered an objective measure of “trance depth” (Pekala et al., 2009, 2010a). Therefore, an interesting question concerns why we obtained these data in the imagination group and not in the hypnosis group. Bearing in mind that participants of the imagination group did not acknowledge that they were being subjected to a hypnotic procedure, this could be associated with a “surprise effect.” Thus, this surprise effect may be based on a violation of expectancies, that is, individuals who participate in an experiment about individual differences in imagination do not expect the occurrence of unusual subjective experiences. These results are in line with the discrepancy-attribution theory (Barnier et al., 2008) proposing that the hypnotic response occurs with the violation of expectancies (and not with its confirmation). Further, a recent unpublished study suggests that a surprise effect may be related to the violation of expectancies (Ludeña, 2014). Moreover, different factors, such as individual differences (e.g., fantasy-prone or amnesia-prone individuals), also contribute to the phenomenology and responsiveness to hypnosis as advocated, among others, by Barber (1999), Laurence et al. (2008), and Pekala (2011).

Furthermore, our research also assessed the possible effect of the hypnotic label on the phenomenological variables (our second prediction based on the expectancy theory) since findings from previous research (Gandhi & Oakley, 2005) point to the labeling of a procedure as “hypnosis” as a relevant factor influencing hypnotic phenomenology. Nevertheless, the present results evidenced that labeling a procedure as hypnosis did not have an effect on either the altered state of consciousness or in the hypnoidal-state score, that is, the procedure produced no effect on the before mentioned phenomenological variables when it was called “hypnosis” or “imagination.” Thus, despite methodological differences between this study and the Gandhi and Oakley study (2005), as described in the introduction, labeling of the procedure did not emerge as an important factor influencing the hypnotic phenomenology contrary to what is suggested by Wagstaff (2010).

The results from this investigation give support to a number of criticisms concerning the methodology generally used by sociocognitive research (Kihlstrom, 2005; Laurence et al., 2008), which overemphasizes the role of expectancies about being hypnotizable on the responsiveness and phenomenology of hypnosis. By using a methodology in which participants do not know that they will be presented with a hypnotic procedure, our findings failed to support expectancy theory. We also would like to call attention to the importance of measuring phenomenological constructs when looking at the effect of the expectancies about being hypnotized. For example, Wagstaff, Cole, and Brunas-Wagstaff (2008) suggested that depth scales may serve as a useful alternative to conventional suggestion-based tests of hypnotizability.
Further research on this matter should carefully take into account the aforementioned phenomenological, methodological, and empirical considerations when studying the effect of expectancies about being hypnotized.

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REFERENCES


Erwartungen und Hypnotische Ansprechbarkeit: Aufdeckung eines Fehlers im experimentellen Design

Catarina Tomé Pires, Maria Angeles Ludeña und Carlos Lopes Pires


Stephanie Reigel, MD

Anticipation et réceptivité aux suggestions hypnotiques: une faillie de méthodologie expérimentale mise au jour

Catarina Tomé Pires, Maria Angeles Ludeña et Carlos Lopes Pires

Expectativas y respuesta hipnótica: Un diseño experimental defectuoso evidenciado

Catarina Tomé Pires, Maria Angeles Ludeña, y Carlos Lopes Pires
Resumen: Investigaciones recientes sugieren que las expectativas sobre el estar hipnotizado tienen un rol determinante en la experiencia hipnótica. Los autores analizan la relación entre las expectativas y el la fenomenología de la hipnosis utilizando el Inventario Fenomenológico de Conciencia y el Procedimiento de Evaluación Hipnótica. Los participantes (115) fueron asignados a la condición de imaginación (se etiquetó la hipnosis como imaginación) o de hipnosis. Los resultados revelan que las expectativas solo ejercen una influencia menor, y no ejercen ninguna sobre la etiqueta de “hipnosis” en todas las variables. Estos hallazgos indican que la metodología comúnmente utilizadas para estudiar la influencia sobre las expectativas sobre la habilidad para responder a la hipnosis y la fenomenología, pudiera representar una falla a favor de una relación causal entre las expectativas y la experiencia hipnótica.

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