The importance of highlighting the role of the self in hypnotherapy and hypnosis

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ABSTRACT

The role of the patient in hypnotherapy can be underestimated by both the therapist and the patient. This is likely due to the focus the hypnosis literature has had on the role played by the hypnotist/therapist and less on the phenomenological control (control over subjective experience) applied by the patient. Whilst early approaches to hypnosis and hypnotherapy included concepts such as autosuggestion and self-hypnosis, the role of the self has been largely overlooked. Here we aim to highlight the importance of the self in hypnotherapy and hypnosis by considering the concept of self-hypnosis and how it relates to hetero-hypnosis. We will show that: 1) historically the self was an important component of the concept of hypnosis; 2) extant theories emphasise the role of the self in hypnosis; 3) self-hypnosis is largely indistinguishable from hetero-hypnosis; 4) self-hypnosis is as effective as hetero-hypnosis. We also argue that highlighting the role of the self in hypnotherapy and hypnosis could increase feelings of self-efficacy, especially given that it can be considered a skill that can be advanced and implies self-control and not "mind-control". Highlighting the role of phenomenological control by the patient could also increase the uptake of hypnotherapy as treatment for various disorders.

The self has been described as the source of human agency and volition [1]. The concepts of self-control, intentionality and responsibility assume existence of a self [2]. Hypnosis, with its association with involuntariness, and giving control over to the hypnotist [3], tends to eschew the self, and yet hypnosis can be achieved in the absence of a hypnotist or hypnotherapist. This form of hypnosis, known as self-hypnosis, occurs without the direct facilitation of a hypnotherapist or hypnotist. Self-hypnosis was once considered a separate form of hypnosis but interest in it waned, likely as theories proposing the handing of control over to the hypnotist became influential [3]. More recent theories and findings indicate a more proactive involvement of the self in hypnosis [4,5] and even propose the deliberate control over awareness of one's own intentions and subjective experience in what has been referred to as phenomenological control [6,7].

Hypnosis is usually achieved following an interaction in which one person, the hypnotist, delivers suggestions to another individual, the "subject", resulting in a different mental state or mindset. An induction is usually the process initiating hypnosis whereby instructions are given to the subject to focus attention, not to attend to extraneous stimuli and to absorb themselves in an activity, image, thought or feeling. Though inductions can take other forms (such as concentrating on breathing or

imagining hands feeling heavier) it commonly takes the form of asking the subject to focus on a spot on a wall or a fixed object and to gradually relax each of their muscles. Hypnotic suggestions are verbal statements delivered to an individual who is engaged in hypnosis following the induction. A post-hypnotic suggestion is a suggestion given during hypnosis but activated or remaining active post-hypnosis. By concentrating on the suggestions delivered by oneself or a hypnotist following induction, some individuals can produce responses not usually considered achievable. Examples of such responses to hypnotic suggestion include inducing or reducing the experience of pain [8,9], altering perception of colour [10], overcoming cognitive conflict [11], and producing or extinguishing delusions (e.g., [12]; see [13], for a review).

In contrast to hetero-hypnosis which is where an operator (e.g. hypnotist, clinician, researcher) guides the hypnosis that the other person experiences, self-hypnosis involves inducing oneself into hypnosis and then following a set of self-generated suggestions. Self-hypnosis differs from hetero-hypnosis, because it does not require the direct involvement of another person, though self-hypnosis is often taught in a clinical environment by such a person prior to being undertaken independently. Eason & Parris [14] reported a meta-analysis that revealed a medium-to-large effect size (with the studies' average

effect sizes ranging from r = 0.22 to r = 0.9) for self-hypnosis in clinical treatment. Of the 22 studies to meet the inclusion criteria, 18 found self-hypnosis to be an effective form of complementary approach over and above conventional care and other active control treatments (e.g. biofeedback, cognitive restructuring, mindfulness training). The key factor that differentiates self-from hetero-hypnosis is the lack of the need for the involvement of another person [15]. This means that self-hypnosis adds a level of flexibility and self-control to the hypnosis process whereby the experience of hypnosis can be imported into a range of situations in one's life and is a wholly self-directed and self-regulated experience. These are important benefits and provide a strong motivation for generating a greater understanding of the role of the self in hypnosis. However, whilst there have been various studies and uses of self-hypnosis reported in the 40 years since the 1981 special edition of the *International Journal of Clinical and Experimental Hypnosis*, experimental and theoretical efforts to understand the role of the self in hypnosis have not progressed as much as those focusing on hypnosis led by a hypnotist or hypnotherapist. One of the reasons for this seems to be that the line that divides self-led from other-led hypnosis is not well-defined.

The varying methodologies employed by self-hypnosis studies raise important questions when seeking to understand it; in particular with regards to the input of another person. Hetero-hypnosis is often a precursor to self-hypnosis (e.g. Ref. [16–18]). Self-hypnosis is also taught as an adjunct to hetero-hypnosis or is a product of a hetero-hypnosis-delivered suggestion [19–23]. Furthermore, most individuals engaging in self-hypnosis will draw upon former experiences of hypnosis and/or prior conceptions of hypnosis such as those found in films whereby hypnosis transports the subject into a past experience [24]. Several instantiations of self-hypnosis have included the input of a hypnotist, such as having a hypnotist present who offers a hetero-hypnosis precursor [19,20,23], or who offers written or verbal instructions to follow in their presence [25], or having the recorded words of a hypnotist play on an audio recording (e.g. Ref. [21,22,26, 27]). Such instantiations reduce the perceived involvement of the self in hypnosis especially given that the types of audio inductions labelled self-hypnosis by some authors are also used in studies labelled by the authors as hetero-hypnosis (e.g. Harmon et al., 1990). In 2005, an executive committee of the American Psychological Association (APA) altered their definition of hypnosis to include self-hypnosis, which they describe as "the act of administering hypnotic procedures on one's own" ([28], p. 262). This definition seemed to suggest that self-hypnosis involves the influence of no other person. Ruch [15] stated that self-hypnosis "… would include any hypnotic behavior intentionally performed by the subject without substantial real-time guidance or intervention by a hypnotist" (p.284). However it is unclear how one would define "substantial", either from the perspective of the hypnotist or the person experiencing hypnosis. Though criticized by Lynn and colleagues (2015) for not being based "on any apparent empirical foundation" and bearing too much resemblance to an earlier definition by Spiegel and Spiegel (1987) to be considered "new", the 2014 revised APA Division 30 (Society of Psychological Hypnosis) definition defines hypnosis as "a state of consciousness involving focused attention and reduced peripheral awareness characterized by an enhanced capacity for response to suggestion." The most recent definition allows for self-hypnosis procedures though self-hypnosis is not specifically mentioned [29]. With definitions of hetero-hypnosis highlighting the active role of the subject (e.g. to focus attention) then by definition, all hetero-hypnosis could be considered self-hypnosis. With these factors in mind, one has to question whether dissociating self-hypnosis and hetero-hypnosis is possible or even necessary.

Despite these issues, some have argued that hetero- and self-hypnosis are both entirely separate entities and should be treated as such, and that though they correlate, the existence of one is not dependent on the other [30]. Moreover, the study and use of self-hypnosis could have important benefits. The aim of the present article is to explain those benefits and provide a narrative review of the history, research, and theories of self-hypnosis with a view to highlighting the importance of the role of the self in hypnotherapy and revitalizing the investigation of self-hypnosis as a potentially important clinical treatment. In the next section we briefly consider the early development of self-hypnosis to highlight the role of the self in approaches to hypnosis.

The volume of research examining and exploring the topic of self-hypnosis has not kept up with that of hetero-hypnosis despite it having greater clinical utility, theoretical importance and a clear relationship with hetero-hypnosis. In seeking to highlight the importance of the self in hypnotherapy and revitalise interest in the topic of self-hypnosis, this narrative review gives the opportunity to offer a broad perspective on the available research. Similarly, given the wide range of methodologies employed in self-hypnosis research, and the varying explanations of the involvement of the self in hetero-hypnosis, a narrative review provides the opportunity to summarize and synthesize findings we consider important and relevant to highlighting the role of the self. As well as discussing definitions, varying approaches to, and the history of, self-hypnosis, we will argue that self-hypnosis proffers clinical and theoretical benefits and presents an opportunity to correctly represent some false, commonly held characterisations of hypnosis. Furthermore, we highlight: 1) the potential self-hypnosis has to advance self-efficacy; 2) the benefits that set it apart from meditation and mindfulness and; 3) how it can be advanced as a skill that can be imported into one's everyday life.

1. The early development of self-hypnosis

Gravitz [31] reported the potential first use of self-hypnosis, by Franz Anton Mesmer, as a method of self-magnetization for a "blockage in the lower body". Hypnosis historians [32,33] consider mesmerism a precursor of hypnosis, operating on similar principles. However, Braid [34] was the first investigator to systematically explore the phenomenon of self-hypnosis, using it to aid in his own health issues. Braid's later work, *Observations on Trance or Human Hybernation* [35], provides what is one of the earliest accounts of self-hypnosis. He describes how he successfully used self-hypnosis to deal with the pain of a rheumatism attack by following all the protocols and instructions he gave his hypnosis patients. Braid reported that he went on to be free of his rheumatism for six years and highlighted that a hypnotist was not necessary. Coué [36] later supported Braid's approach by conducting a number of demonstrations of individuals experiencing hypnosis, and displaying hypnotic phenomena, without any direct involvement of or intervention from another person. Coué is seen by many as an influential figure in the development of self-hypnosis, despite his system not being referred to as self-hypnosis. Rather, he taught a process of waking self-suggestion named 'autosuggestion', which became a globally recognized self-help methodology at the beginning of the 20th century. Coué taught active imagination experiments to develop 'hypnotic phenomena', such as arm levitation and catalepsy, by simply teaching his students to affirm suggestions to themselves while engaging in vivid mental imagery with a depth of meaning, belief, and volition ([36]; 1923).

Salter's [37] three techniques to improve hypnotic responsiveness employed self-directed self- or "auto"-hypnosis. The three techniques were: 1) 'autohypnosis by post-hypnotic suggestion' whereby subjects initially underwent hetero-hypnosis to help access self-hypnosis thereafter; 2) 'autohypnosis by memorized trance instructions' whereby the subject subsequently remembers the instructions and steps of self-hypnosis, without assistance of the hypnotist; and 3) 'fractional autohypnosis' in which self-hypnosis is actualized by building component 'parts' of the experience. These 'parts' included using waking suggestions to elicit hypnotic phenomena and encourage belief to elicit greater responsiveness [37]. Within the paper, Salter gives scripted accounts of the skills training he offers his subjects; the subjects then create anesthesia (and other 'hypnotic phenomena') by engaging the imagination vividly whilst self-directing the hypnosis process.

Notably, both Coué [36]; 1923) and Salter's [37] approaches were aimed at developing and strengthening the hypnotic experience rather than treating self-hypnosis as a separate entity. The notion inherent in these approaches was that the hypnotic experience can be improved with practice. Such a notion can be seen as motivation for teaching individuals hypnotic skills within hypnotherapy sessions that can then be practiced away from the hypnotherapist.

2. Theoretical approaches to hypnosis

Next we discuss how extant theories of hypnosis account for self-hypnosis and how the role of the self is explained in these theories. That is, do these theories of hypnosis permit for a hypnosis experience that is self-regulated, self-directed and with suggestions being delivered to oneself, as previously described? If so, then it would make sense that clinicians employing hypnosis seek to include some education of the role of the self to patients, along with related self-hypnosis skills training to derive the most benefit from hypnotherapy.

2.1. Socio-cognitive approaches

In *A preface to the theory of hypnotism*, personality theorist White [38] suggests that responses to hypnosis are primarily a result of the conscious attitudes and voluntary efforts of the individual. As a result, he redefined hetero-hypnosis by stating that: "Hypnotic behavior is meaningful, goal-directed striving, its most general goal being to behave like a hypnotized person as this is continuously defined by the operator and understood by the subject" ([38], p.483). White took the perspective that *"hypnosis"* is actually a verb rather than a noun. That is, it is a skill that the individual has, rather than a passive state that automatically occurs in a mechanical fashion in response to something a hypnotist does. He noted: "This view replaces the older concepts of automatism and dissociation which have so long persisted." (p. 477). This view also offers us an early example of an emerging sociocognitive perspective of hypnosis.

Sarbin [39,40] and Sarbin and Farberow [41] challenged the traditional concept of hetero-hypnosis as a state with their contribution to the sociocognitive perspective. Sarbin developed a role theory of hypnosis that relied heavily on the metaphor of role to capture parallels between the hypnotic interaction and a miniature drama in which both the hypnotist and the subject enact reciprocal roles to follow an unvoiced script. Relevant to self-hypnosis, latter theories [42,43] suggested that hypnotic responsiveness is a result of the participants' knowledge of what is required in the hypnotic situation; self- and role-related perceptions, expectations, and imaginative skills; and situational demand characteristics that guide the way the role is enacted. Sarbin (1999) and Sarbin and Coe [42], 1991) conceptualized hypnosis as believed-in imaginings and argued that the participant has a notion of their role in the hypnosis process, even before experiencing hypnosis. Therefore, they act and feel 'as if' they are experiencing hypnosis, that is, they not only follow the role of a 'typical' individual experiencing hypnosis, but also identify with it.

Sarbin's approach argued that hypnosis may be a learned social behavior. According to this theory, hypnosis does not create the hypnotic responses per sé, rather it is the belief that the response is appropriate to the role of the individual experiencing hypnosis. Sarbin used role-enactment to highlight the active nature of responding to hypnotic suggestions (see Ref. [44]) and highlighted the potential usefulness of initial education about the role of the person experiencing hypnosis and subsequent adoption of the role of self-hypnotist as a means of advancing responsiveness. Role taking implies an act of the self.

Barber [45–48]; delivered a major body of evidence showing that hypnosis is not a special state but is more a result of ordinary psychological factors, such as framing of the situation as 'hypnosis', attitudes, imagination, motivation, and expectation. Accordingly, Barber et al. [48] took perceived susceptibility to hypnosis to imply self-motivation,

compliance, and relaxation; in short, a "positive cognitive set" before the induction.

Spanos [49] elaborated on the notion of strategic role enactment. Rather than experiencing a special state of dissociation, the individual experiencing hypnosis actively transforms feelings, thoughts, and behavior so as to be in line with their notion of the hypnotic role. 'Being in hypnosis' is consequently a self-constructed role, shaped after social models and expectancies.

Kirsch and Lynn [50] concluded that hypnotic reactions differ from willed, attention controlled reactions only in perception. Whereas persons experiencing hypnosis would usually attribute their actions to their own will, during hypnosis control is attributed to an external source, i.e., the hypnotist. Therefore, actions performed following hypnotic suggestions are experienced as involuntary, but it is the act of attributing control that renders the process self-regulated. Kirsch and Lynn's response set theory makes the claim that *all* actions, hypnotic or otherwise, are at the moment of activation triggered automatically. According to Kirsch and Lynn [51] "it is not the experienced automaticity of ideomotor responses that is an illusion, but rather the experience of volition that is claimed to characterize everyday behavior" (p. 508). Indeed, research suggests that actions are routinely initiated and pursued even when people are unaware of the goals to be attained [52]. Lynn and Green [53] point out that much human behavior is initiated outside of awareness and occurs with little or no conscious deliberation. In terms of response set theory, the goals (and strategies) that people adopt during hypnosis are shaped and primed by suggestions and response sets that may operate outside of people's awareness, yet still motivate and guide their behavior. Kirsch [54,55] suggests that response expectancies, resulting in a certain response set, are anticipations of automatic and subjective behavioral responses to situational cues. Kirsch and Lynn [51] went on to state that actually response expectancies do not produce a response set, rather they *are* one type of response set (intentions being another). These bring about automatic responses in the form of self-fulfilling prophecies, indicating a strong role for the self in producing all hypnotic responses.

2.2. Dissociative control and hypnosis

Norman and Shallice [56] proposed a model of executive control of behavior based on The Supervisory Attentional System (SAS). The authors presented a two-tier model of control in which there is a supervisory controller (the SAS) and a subsystem for controlling routine behaviours called contention scheduling. The Dissociated Control Theory [3] of hypnotic responding proposed that hypnosis disrupts the SAS, leaving the participant under the guidance of the contention scheduler, the automatic controller of behavior, the output of which is controlled by schemata elicited by external cues (e.g. the hypnotist). The primary role of the SAS is to represent and maintain representations of goals to ensure behavior coincides with those goals, a function attributed to the prefrontal cortex. Under its original formulation, hypnosis results in the disruption of all or most SAS functions. However this would effectively leave the person experiencing hypnosis unable to control their behavior, rendering self-hypnosis impossible. As such, self-hypnosis would need to be considered a separate entity, requiring separate explanatory mechanisms.

Consistently, Kirsch and Lynn [57] criticized Woody and Bowers' Dissociated Control Theory (DCT; 1994) for placing great emphasis upon the loss of control during hypnosis, arguing that such a lack of control could not explain self-hypnosis. The very existence of self-hypnosis therefore has important potential implications for understanding hypnosis. Jamieson and Woody [58] proposed a modification of the DCT by suggesting that hypnotic suggestion resulted from the breakdown of particular specific but not all, supervisory operations. According to Jamieson and Woody, instead of the original proposal of control being ceded entirely to the contention schedular, some level of self-guided control is still possible during hypnosis. This more recent

formulation of the DCT might therefore allow for self-hypnosis. The involvement of proactive control mechanisms recently proposed to be involved in hypnotic responding [4,5] therefore permitting different levels of involvement of self-guided control and contention scheduling.

2.3. Cold Control Theory

Cold control theory of hypnotic responding [59] borrows the framework of consciousness proposed by Rosenthal (1986; 2002; [60,61]). According to Rosenthal's (1986; 2002; [60,61]) higher order thought (HOT) theory of consciousness, we are conscious of mental states by having thoughts about those states. A thought about being in a mental state is a second-order thought (SOT), because it is a mental state about a mental state (e.g., "I am aware that the cat I am seeing is black''). Third-order thoughts (TOTs) are also possible, by becoming aware of having a SOT (e.g. "I am aware of my awareness that the cat I am seeing is black"). Dienes and Perner's [59] Cold Control theory of hypnosis states that a successful response to hypnotic suggestions can be achieved by forming an intention to perform the action or cognitive activity required, without forming the intention-related HOTs that would normally accompany reflective performance of the action. An intention without a HOT is cold (hence Cold Control) and is thus experienced as being involuntary. This strategic control of HOTs following hypnotic induction applies whether the hypnosis was directed by another person or the self and, under this theory, is achieved by the self and not another. More recently, Dienes and colleagues have defined this form of control as phenomenological control of which hypnosis is only a part. Phenomenological control is the ability to control subjective experience so that a constructed counterfactual state of affairs appears real [6,7]. Given that it is the control of subjective experience, it is self-driven control.

2.4. Predictive coding models of altered agency in hypnosis

Martin and Pacherie [62] recently proposed a predictive coding model of alterations in agency in hypnosis. To accurately describe this approach, we need to provide more information than we did on the other theories because, to understand them, one needs to first understand the predictive coding accounts of information processing. According to predictive coding models of cognition and behaviour, the brain is an inference machine that is continually testing hypotheses derived from a top-down or generative model of the world built from previous experiences. According to the principles underlying such models, a person's sense of agency or sense of control is based on the extent to which their predictions about the world determine their experience of it. When bottom-up sensory information, instead of top-down predictions, determines how something is experienced, a person will experience the event more passively. When top-down predictions determine a person's experience of the world, they will experience a greater sense of agency over their perceptions, thought and actions.

Martin and Pacherie's predictive coding model of hypnosis includes the central tenet that participants focus on the bottom-up sensations of their arm's movement, thereby removing the influence of top-down predictions. The explanatory framework, also known as the nonagency prior, is provided by the hypnotist. That is, that they are given the prediction by the hypnotist's suggestion that the movement will occur by itself, means that they are not concerned by the altered sense of agency (this is different in Schizophrenia for example where there is no nonagency prior and thus delusions of alien control result ([63,64], Chapter 4; [65,66], Chapter 4). [63,67]). The hypnosis context removes sensory attenuation since the situation and the words of the hypnotist invite participants to pay close attention to what is going on internally and to pay close attention to proprioceptive signals that are usually not attended. In the example of the magnetic hands suggestion, the hypnotist might say that the participants hands are being pulled together

and that they will begin to move together. The combination of the hypnotist asking participants to pay close attention to their sensations AND to pay close attention to what he/she is saying leads to the production of the movement but also renders the movement dysfluent akin to "choking" due to too much focus on proprioceptive input in expert sportspeople.

This model therefore accounts for the modified sense of agency in hypnosis as a result of: 1) how the hypnotist's suggestions modifies attention to movement; 2) the predictions from the hypnotist for the proprioceptive experience for a certain type of movement, and; 3) the nonagency prior (the hypnotist's account that the movement will feel like it is happening on its own). It therefore attributes much of the effect of the passivity experienced in hypnosis to the external influence of the hypnotist. One might reasonably question therefore how this model would account for self-hypnosis. For points 1. and 2. above the predictive coding approach seems well-suited to accounting for self-hypnosis. For example, Martin and Pacherie [62] describe the hypnotic context as leading to increased self-focussed attention which highlights a role for the self in attending more strongly to proprioceptive input. There is no reason to think this would differ between self- and hetero-hypnosis. Also, the suggestion contains wording that would lead to proprioceptive predictions, so giving the suggestion to oneself would likely have the same effect as passively listening to the suggestion on the generation of proprioceptive predictions. However, if there is no hypnotist to deliver the nonagency prior, can someone deliver to themselves the same prior; the same expectation for nonagency? Is the self-delivered narrative of nonagency enough to update the model? With research suggesting that self-hypnosis is experienced as being more voluntary than hetero-hypnosis (e.g. Ref. [68]), it is this aspect of the predictive coding account that might require modification when accounting for self-hypnosis. This difference could be accounted for, for example, by assuming reduced precision of the self-delivered nonagency prior; the self is less trusted than someone designated as the hypnotist. This might of course be a function of practice. (Interestingly, Martin and Pacherie's is not the only predictive coding model of hypnosis: See Jamieson [69] offers an alternative predictive coding model that accounts for the experience of nonagency in hypnosis by arguing that suggested movements are generated in the absence of proprioceptive predictions). Table 1 briefly summarizes these theories of hypnosis and how they can account for self-hypnosis (see Table 2).

In summary, we can see that many similarities and differences exist in the ways that hetero- and self-hypnosis are conceptualized, with most

Table 1
How theories of hypnosis can account for self-hypnosis.

Theory:	How theory can/does account for self-hypnosis
Socio-cognitive theory	Hypnosis is a cognitive skill that the individual actively engages in. The mindset, learned social behavior, adoption of hypnotized role, imagination and expectancy all contribute to hypnotic responses. As all can be generated by oneself, theory can account for self-hypnosis well.
Dissociative control theory	Initial theory contends that hypnosis hands over control of executive functioning to the hypnotist, rendering self-hypnosis impossible. Later theories contend some level of self-guided control is possible and therefore might allow for self-hypnosis.
Cold control theory	Hypnotic responses are achieved by forming an intention (higher order thought) to respond but the awareness of the intention is disabled. The removal of the higher order thought is achieved by the self and not another.
Predictive coding model	Martin and Pacherie [62] describe the hypnotic context as leading to increased self-focussed attention which highlights a role for the self in attending more strongly to proprioceptive input. However, involuntariness results from a nonagency prior delivered by the hypnotist in Martin and Pacherie's model. This would have to be delivered by the self but might result in reduced precision of the nonagency prior potentially leading to a reduced sense of involuntariness.

Table 2
Main findings of studies comparing self-hypnosis and hetero-hypnosis.

Author, date of study:	Population & N	Objectives	Design	Main findings:
[70]	23 highly hypnotizable individuals.	To index the relationship between hetero- & self-hypnosis.	Subjects turned a dial to indicate strength of their experience in response to arm levitation and age regression suggestions with self- & hetero-hypnosis.	Self- & hetero-hypnosis equally effective at passing test items, with greater sense of involuntariness & absorption experienced with hetero-hypnosis.
[71]	33 (mainly students & graduates) highly hypnotizable individuals.	To compare & contrast phenomena & characteristics of self- & hetero-hypnosis.	Subjects practised self-hypnosis skills for 1 h a day for 4 weeks while also being guided through hetero-hypnosis sessions before and during those weeks. Subjects were then given a questionnaire to report differences between self- & hetero-hypnosis experiences.	Though hetero- & self-hypnosis have many similarities, highly-hypnotizable subjects experience more vivid imagery when using self-hypnosis. Age regression & hallucinations were easier to attain with hetero-hypnosis.
[72]	48 (34 females, 14 males, mainly college graduates) inexperienced individuals.	To compare tape-assisted hypnosis (hypnotist absent hetero-hypnosis) with self-directed hypnosis (self-hypnosis).	Following hetero-hypnosis, subjects were divided into self-directed and tape-assisted groups and responded to behavioral test items accordingly. They then responded to questionnaires to report upon their experiences.	Hetero-, self- & tape-assisted hypnosis all as effective as each other. More involuntariness experienced with hetero-hypnosis with hetero-hypnosis also rating highest for range of measures of quality of hypnotic experience.
[73]	48 (25 male, 23 female, college students) inexperienced individuals.	To compare hetero- & self-hypnosis behaviorally and phenomenologically.	Participants experienced self- & hetero-hypnosis followed by test items before scores were compared and a Hypnotic Experience Inventory was completed.	Subjects reported being more cognitively active & self-controlling when using self-hypnosis.
[68]	48 (25 males, 23 females, college students) inexperienced individuals.	To make experiential and behavioral comparisons of self- & hetero-hypnosis.	Participants engaged in HGSHG:A for hetero- & ISH for self-hypnosis with test item scores compared.	Despite concluding that self- & hetero-hypnosis are similar in most behavioral & phenomenological aspects, showed hetero-hypnosis subjects to experience more unawareness, passivity and loss of control.
[74]	173 (102 male, 71 female University students).	To index opinions held about self- & hetero-hypnosis before & after self- & hetero-hypnosis experiences.	Participants completed questionnaires prior to & after self- & hetero-hypnosis experiences, responses were compared and reported.	Subjects reported responses to hetero-hypnosis to be more involuntary than with self-hypnosis.
[15]	88 (Undergraduate students) inexperienced individuals.	To investigate the effectiveness of self-hypnosis with & without hetero-hypnosis precursor.	Participants experienced hetero-, first-person adaptation & self-instructed test items with scores being compared.	Self-hypnosis as effective as hetero-hypnosis. Self-hypnosis responses worsened with hetero-hypnosis precursor. Self-hypnosis is the primary phenomenon.
[75]	29 (University students) inexperienced individuals.	To test the Inventory of Self-Hypnosis (ISH) & Harvard Group Scale (HGS:A) to compare effects on each scale.	Scales were administered in counterbalanced order & results compared.	Responsiveness to scale items varied according to scale used. ISH & HGSH measure 'largely different' phenomena.

theories equating the two. Many, if not all, theories of hetero-hypnosis have proposed an important role for the self in producing hypnotic responses and contributing to the experience of hypnosis. Dissociation theorists historically supported the view that responses to hetero-hypnotic suggestions by-passed executive control mechanisms, thus occurring non-volitionally. However later versions of this theory loosened the dissociation, permitting a role for the self [58]. Others have argued that the experience of involuntary responding is illusory, whether due to role playing (strategic or not) or the willful disabling of the awareness of intentions, insinuating the self back into the process. However, if self-hypnosis is self-directed, self-regulated, and involves self-suggestion, perhaps requiring more volition and intention than many theories of hetero-hypnosis allow, theories of hetero-hypnosis might need to be further adapted to account for self-hypnosis. Similarly, the education and explanation given by clinicians within hypnotherapy sessions may require further adaptations in order that patients understand the importance of their own role and can exercise it for enhancing responsiveness to hetero-hypnosis and practicing self-hypnosis away from the clinician.

3. Empirical comparisons of self- and hetero-hypnosis

If hypnosis can be conducted in a more self-regulated, self-directed way away from the guidance of a hypnotherapist, then are there differences between this approach and a more hetero-driven form of hypnosis? Below we summarize and discuss the few studies that have directly compared self- and hetero-hypnosis.

There has been little research exploring whether (and potentially how) self-hypnosis differs from hetero-hypnosis and the studies that engaged in such a comparison have drawn varying conclusions [68,70, 72,75].

Ruch [15] compared hetero-hypnosis with self-hypnosis in the presence of a hypnotist. Subjects were divided into three groups; a hetero-hypnosis group, a self-hypnosis group and a first person hetero-hypnosis group whereby the instructions were spoken in the first person tense by the hypnotist and the subjects instructed to incorporate the hypnotists voice as their own. Each group had two sessions of hetero-hypnosis, first person hetero-hypnosis and self-hypnosis on subsequent days before they then engaged in self-hypnosis and hetero-hypnosis on days 3 and 4 to examine the impact the former two days had upon the latter. In this study, the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) induction procedure was used with the hetero-hypnosis group and wording adapted for the hetero-hypnosis first person group. For the self-hypnosis group, the same script was used but with the wording slightly amended to indicate giving oneself the suggestions (Form C of the Stanford Hypnotic Susceptibility Scale; SHSS:C). For example the HGSHS:A script used for the hetero-hypnosis sessions stated "I am about to give you some instructions that will help you relax and gradually enter a state of hypnosis". The self-hypnosis group would read aloud "I am about to give myself some instructions that will help me to relax and gradually enter a state of hypnosis" ([15], p. 288). Subjects were then given the same period of time as the hetero-hypnosis groups to respond to the suggestions.

The study showed that self-hypnosis was as effective as hetero-hypnosis with scores achieved on the first two days. That is, subjects

achieved the same scores on the HGSHS:A and SHSS:C, regardless of whether the experimenter guided them or they administered hypnosis themselves in the presence of the experimenter. The study also reported that when hetero-hypnosis was experienced on the first day, self-hypnosis skills were inhibited on the third day. Conversely, those who engaged in self-hypnosis first reported being better engaged in hetero-hypnosis on the fourth day. In contrast to the notion that self- and hetero-hypnosis are independent, Ruch [15] concluded that self-hypnosis is the primary phenomenon and hetero-hypnosis is "in effect a form of guided self-hypnosis" (p. 296). However this raises the question of why self-hypnosis would be inhibited following hetero-hypnosis. It could be argued that the first person hetero-hypnosis process does not constitute self-hypnosis as the instructions are still being delivered by the hypnotist. Additionally, the self-hypnosis group, although self-inducing hypnosis, are still reading and following a script given to them and it could be questioned whether this constitutes fully self-regulated experience of hypnosis and therefore whether Ruch's [15] experiment truly compared hetero- and self-hypnosis and whether the conclusions drawn by the author can be relied upon.

Shor and Easton [75] developed the Inventory of Self-Hypnosis (ISH) to compare self-hypnosis and hetero-hypnosis as measured by the Harvard Group Scale of Hypnotizability, Form A (HGSH:A). The aim was that the ISH be as closely comparable to the HGSH:A as possible, thereby allowing comparison of performance between self- and hetero-hypnosis. Shor and Easton's preliminary research with 29 individuals suggested that the ISH and HGSH:A measure "largely different" phenomena. That is, responsiveness to individual items that were comparable on both scales, varied according to the scale used. The authors highlight the distinction between listening to a recording and being guided through the hetero-hypnosis HGSH:A experience compared to taking responsibility and actively directing oneself with the ISH. They argued this would likely lessen the reliability of the ISH compared to the HGSH:A, because subjects would have to be more motivated in the former.

Consistent with Shor and Easton, in comparing ISH and HGSH:A, Fromm [76] found that those scoring as highly-hypnotizable subjects reported phenomenological differences between the two experiences. These subjects experienced more idiosyncratic fantasy, ego splits and more vivid imagery during self-hypnosis with the ISH than hetero-hypnosis with the HGSH:A.

Johnson and Weight [68] showed that subjects who were inexperienced with hypnosis were as able to engage in self-hypnosis as hetero-hypnosis and as a result, refuted the need for a hetero-hypnosis experience precursor to self-hypnosis. Despite summarizing that the "overall subjective impact was the same" (p. 525) they did report that hetero-hypnosis evoked more feelings of unawareness, passivity, and loss of control in their subjects, whereas self-hypnosis evoked more feelings of activity, awareness, and being in control of one's feelings. Fromm [76] showed results to be similar for subjects measured as low and medium hypnotizables, but not necessarily for those considered highly hypnotizable whereby subjects reported phenomenological differences such as an increased sense of control and more visual imagery with self-hypnosis.

Johnson [73] later confirmed Ruch's [15] finding that inexperienced subjects are as capable of experiencing hypnosis themselves as they are of being guided into hypnosis by a hypnotist. Fromm et al. [71] showed that while studies indicate that in both self-hypnosis and hetero-hypnosis individuals experience a high level of absorption, as well as a lessening in their connection to reality, subjects measured to be highly hypnotizable seem to experience more vivid imagery when using self-hypnosis. Additionally, Johnson [77] reported that individuals stated they are more cognitively active and self-controlling when using self-hypnosis. Fromm and Kahn [30] also provided evidence showing that more visual imagery and idiosyncratic fantasies arise in self-hypnosis than in hetero-hypnosis. On the basis of these results, some authors have concluded that whilst the overall behavioral responses and experiences of subjects using self-hypnosis and hetero-hypnosis are indeed correlated, some individuals respond phenomenologically differently depending on the type of hypnosis [71,73,77].

Hammond et al. [72] compared hetero-hypnosis with two forms of self-hypnosis; self-directed and tape-assisted self-hypnosis. Experiential ratings were also taken concerning the quality of the hypnotic experience (levels of concentration, absorption, distractions from extraneous thoughts, perception of depth, perception of involuntariness, and awareness of bodily feelings). The highest ratings were consistently given to the hetero-hypnosis experience, with the lowest ratings consistently given to the self-directed experience of hypnosis. The study found no differences in response to behavioral suggestions between the hetero-hypnosis, the tape-assisted and self-directed groups and reported an increased sense of involuntariness with the hetero-hypnosis compared to self-directed, which seems to replicate previous findings [68,73].

In a study comparing self-hypnosis and hetero-hypnosis in 23 highly hypnotizable participants, Bibby et al. [70] gave subjects a dial to indicate the strength of their experience while experiencing hypnosis-induced arm levitation and age regression. Consistent with other studies [15,72,75]; the authors showed that subjects were equally likely to pass each item during self-hypnosis as they were during hetero-hypnosis. However, 83 % of subjects described the ideomotor activity of arm levitation as more real and more involuntary with hetero-hypnosis. Self-hypnosis required more active thought according to 65 % of the subjects. Fifty seven percent of the subjects reported that the hetero-hypnosis experience of the age regression suggestion as more real, and again hetero-hypnosis was reported as more involuntary by 65 % of subjects, with 87 % of subjects reporting that they perceived self-hypnosis as involving more active thought. Similar to Johnson and Weight [68] they also found that subjects reported the experience of hetero-hypnosis as more real and involuntary, and the experience of self-hypnosis as involving more active thought. Similarly, McConkey [74] examined subjects' opinions about hetero- and self-hypnosis prior to and after having experienced hetero-hypnosis administered using the HGSHS:A as well as experiencing self-hypnosis. Those opinions reported that highly hypnotizable individuals experienced hetero-hypnosis as more involuntary than self-hypnosis with a lesser sense of automacity than when responding to hetero-hypnosis. This is an important finding since the sense of responses being involuntary is a key phenomenological experience of hetero-hypnosis that theories set out to explain (e.g. Ref. [59]).

Though not all points are universally agreed upon, the studies focusing on the phenomenology of self-hypnosis tend to suggest that self-hypnosis is somewhat qualitatively different from hetero-hypnosis, and is experienced as being less involuntary, but is no more or less effective than hetero-hypnosis in terms of passing suggestions. However, the studies might have created these differences as a result of the study design. For example, Hannigan [78] notes that Fromm and colleagues worked with highly motivated, trained, and highly hypnotizable subjects and furthermore that the studies' procedures were "geared to maximize differences between self-hypnosis and hetero-hypnosis". Johnson [77] stated that a true picture is not reflected in these studies as subjects were instructed to try new things in self-hypnosis and to advance upon previous hetero-hypnotic experiences, which would create differences between the two approaches to hypnosis. Such findings could be explained by participants' associations between self-hypnosis and hetero-hypnosis; thus their ratings reflect experiences commonly attributed to hypnosis (e.g. lack of control, involuntariness). Moreover, the finding that self-hypnosis involves more active thought is not necessarily informative given that the studies are asking them to be more active in producing the effects and likely reflects the participants' understanding of what the test was aiming to investigate. Table two summarizes the main findings of the studies that have compared hetero-hypnosis and self-hypnosis.

Whilst there has been a substantial amount of research into the neural correlates of hetero-hypnosis (see Parris, 2017 for a review),

there is only one case study on neurophysiological mechanisms of self-hypnosis (see Ref. [79]). Given the current lack of research on the neural correlates of self-hypnosis it is not known if self-hypnosis is neurophysiologically unique or if it is similar to hetero-hypnosis. One reported finding from neuroimaging studies is that neuro-phenomenology largely depends upon the suggestion being made following hypnotic induction (Oakley, 2008). It would make sense for future research to therefore consider comparing the effects of the same suggestions delivered within hetero-hypnosis and self-hypnosis and compare phenomenological responses.

In summary, self- and hetero-hypnosis appear to be equally effective in terms of responding to a range of hypnotic suggestions and test items as previously explained. Whilst they might differ in how they are experienced, that difference (or more activate engagement) can be considered a benefit of the more self-directed hypnosis process.

4. There is self-efficacy in self-hypnosis

Though there has been considerably less research conducted on self-hypnosis compared to hetero-hypnosis, self-hypnosis has been shown to be effective in a wide range of clinical applications, including strengthening immune functioning [80]; reducing the need for medication during childbirth (Harmon et al., 1990); and reducing stress, anxiety, and hypertension [17,81,82]. The most widely researched application of self-hypnosis, however, is in pain reduction compared to control groups [83–87]. In fact, Tan et al. [88] suggested that two sessions of face-to-face self-hypnosis training combined with 8 weeks daily use of an audio containing two suggestions that the participants responded to most may be as effective as eight sessions of face-to-face hetero-hypnosis treatment in reducing lower back pain.

One obvious benefit to self-hypnosis is the lack of need for the presence of another person. If hetero- and self-hypnosis are so similar it clearly benefits the patient that they can continue their treatment without further expense. Furthermore, there is evidence that self-hypnosis results in a sense of self-efficacy or self-confidence [89,90].

Within the literature, self-confidence is regularly attributed to positive therapeutic and performance outcomes [91,92]. Though expectancy for success had been investigated extensively previously [54,55], the classic concept of self-confidence advancing performance was redefined by Bandura [91,93,94] as *self-efficacy*: our judgment of our own ability to successfully perform a behavior. Self-efficacy theory asserts that for individuals with the correct incentives and skills or training, actual performance will be predicted by their belief in personal competence. Therefore, if an individual has the perception that they can successfully change in some way, that belief increases the likelihood that the change will successfully occur. Judgments about our own self-efficacy have been shown to predict levels of success and support this theory [95,96]. According to self-efficacy theory, efficacy expectations predict not only performance, but predict how much energy we expend and our persistence to complete an activity [97].

Support for the development of self-efficacy as a bi-product of self-hypnosis is borne out in literature exploring pediatric applications of self-hypnosis. Olness [90] noted that not only does bedwetting cease, but the children develop new self-confidence from having achieved the cure on their own using self-hypnosis. Many studies of pediatric applications of self-hypnosis have successfully demonstrated a positive clinical effect (e.g. management of asthma, reduction of headache pain, sleep disorders) when children were equipped with a self-regulatory skill [43,77,90,98–106].

As self-efficacy develops, so do other areas of self-directed skills developed by practicing self-hypnosis. Fromm et al. [71] described how their subjects experienced self-hypnosis as an opportunity for creative self-exploration and also stated that many of the subjects considered the self-hypnosis sessions a problem-solving activity they actively and constructively engaged in. Fromm et al. [71] also found that attentional skills, problem-solving skills, and creativity developed with the use of

self-hypnosis. These are surely to be considered beneficial bi-products with the potential to enrich outcomes of clinical hypnotherapy sessions.

Overall, the benefits of self-hypnosis might extend beyond the direct applications primarily explored within prior studies, in particular with regards to the advancement of self-efficacy. This aspect of self-hypnosis should be further explored in future research.

5. Advancing a skill

Spanos [49,107] developed a method of training subjects to be good/better hypnotic subjects. The Carleton Skills Training Program (CSTP) aimed to show that hypnotizability can be substantially modified. Many people who were initially measured low on a scale of hypnotic responsiveness showed an increase by the end of the program. Criticism of the CSTP by Bowers and Davidson [108] has suggested that the results were influenced by "providing a false rationale for the training program". Furthermore, later attempts at replicating the CSTP demonstrated more modest increases [109,110]. Nonetheless, follow-up studies [111–113] have suggested that hypnotizability and responsiveness can be developed as with any skill which is consistent with other research findings that have indicated that hypnotizability is not a stable trait [114,115]. The CSTP has stages whereby the hypnotic subject observes a hetero-hypnosis demonstration, then experiences the same hetero-hypnosis procedure observed and is instructed to regularly practice the hypnotic strategies in a self-directed fashion. The inherent thought is that self-hypnosis is possible and practicing helps enhance hypnotizability and responsiveness [107]. It is possible, however, that the enhancement in hypnotizability results from processes different to those utilized before training to respond to hypnotic suggestions. Since its initial hour-long format was proposed, a 10 min version [112] and a 4 min version [116] have been used with no loss of effectiveness.

In contrast to hetero-hypnosis, self-hypnosis promotes the notion that hypnosis is a skill to be practiced. It encourages patients and participants to engage in hypnosis outside of the clinic and permits skill development. Having practiced self-hypnosis, a hypnotherapy patient returns to a subsequent session potentially more responsive to hypnotic suggestions delivered by the clinician.

6. Self-control: self-hypnosis vs. meditation/mindfulness

Mindful meditation has achieved a level of credibility, popularity and acceptance by public and professional communities that the field of hypnosis has not. Yapko [117] suggests that this is due to the image of hypnosis created by TV and film that posits hypnosis as a powerful influence of one person over another contributing to much myth and misconception. Mindfulness has instead been popularised as an individual process associated with spirituality and religion. Self-hypnosis, with its emphasis on the independent, self-directed nature of hypnosis might therefore represent a pathway to greater general acceptance as a form of complementary approach.

Meditative techniques tend to emphasise mindfulness and concentration which shares some parallels with the way in which hypnosis is conceptualized. Self-hypnosis has been directly compared in efficacy to a meditational relaxation technique for anxiety [118]. Both forms of complementary approaches were shown to be effective and no differences in therapeutic efficacy were observed. Holroyd [119] drew parallels between meditation and hypnosis noting that when suggestions for self-enhancing experiences are given during mindful meditation, it is indistinguishable from hypnosis, and also noted that both meditators and self-hypnotists experience changes in imagery vividness. Holroyd highlighted phenomenological similarities between meditation [120] and self-hypnosis [121] studies noting that both meditation and self-hypnosis were associated with alterations in self-awareness, sense of time and perception.

There are however potentially fundamental differences between the two techniques. The underlying philosophy of mindfulness aims to

dissuade meditators from being goal-focused. In contrast, self-hypnosis is an overtly goal-oriented process. Dienes et al. (2016) have argued that on a metacognitive level hypnosis and meditation are different with hypnosis (and therefore self-hypnosis) resulting from a strategic failure of metacognition (that is, the disabling of the awareness of the intention to act in line with the suggestion - see [122]) and meditation being a result of enhanced metacognition (that is, awareness of one's awareness or third level higher order thoughts). Further, some authors have argued the merits of integrating hypnosis and mindfulness meditation thereby insinuating that they are different but complementary processes [44, 123,124].

Lynn et al. [125] suggest that hypnosis would be more widely used if more accurate information was disseminated. Of particular relevance to the education of hypnosis is the commonly held myth, developed in popular media, that hypnosis is a trance state induced by a hypnotist [24]. In this sense, the person being guided into hypnosis has no control. Green et al. [126] found that 49 % of those surveyed were wary of being guided into hypnosis due to the belief that they would relinquish free will to the hypnotist. Furthermore, 79 % of participants believed the success of hypnosis to be dependent upon the skill of the hypnotist. As noted above, the notion of a form of complementary approach that is effective self-control and developed as an independent skill has helped launch mindfulness meditation to the forefront of the research agenda. Hypnosis and hypnotherapy could therefore benefit from a greater focus on the self in the process.

7. Conclusions and directions for future research

Highlighting the role of the self in hypnotherapy potentially provides an opportunity to change the commonly held view that hypnosis involves giving up control to another; a perception that has likely caused a barrier for the uptake of hypnosis in clinical settings, despite strong evidence for its efficacy.

The added potential benefits of self-hypnosis for self-efficacy, perceiving suggestibility as a skill to be developed (and the inevitable reduced financial commitment for treatment) seem to provide a strong motivation for continued application and study of self-hypnosis. With that in mind we recommend that in future clinical applications and hypnotherapeutic encounters a participant or patient is encouraged, on a number of occasions, to self-regulate the hypnotic experience without the direct input from a hypnotist/therapist (after initial education and instruction from a specialist, in person or via audio recordings). Hypnosis should eventually be a self-induced, self-directed experience without the need for verbal direction from another person. This involves using one's own cognitions and mental imagery to communicate with oneself in a goal-oriented way with a positive, expectant attitude with all the benefits in perceived self-efficacy that brings.

With the main aim of highlighting the importance of the self in hypnotherapy and hypnosis the objective of the present work was to select work and theories that contribute to highlighting the importance of the self in hypnosis. As such the review was not meant to be exhaustive nor include explicit inclusion criteria. Nevertheless. our argument is supported by the latest research in the field of hypnosis and hopefully provides a basis for future research endeavours and therapeutic encounters.

Most evidence and theories indicate that self- and hetero-hypnosis are the same phenomenon and we have argued that there are benefits to highlighting the role of the self in hypnosis and hypnotherapy. However, more studies comparing self- and hetero-hypnosis are recommended. Moreover, the low samples sizes in many of the studies cited here means we can be less confident in the studies and can be less conclusive about the results of the stated effects and comparisons [127]. Given that by definition self-hypnosis requires more involvement by the individual, future research measuring changes in sense of agency following self-hypnosis is recommended both in terms of responses to self-suggestions and those given during hetero-hypnosis following

self-hypnosis training. The potential reduction in the experience of involuntariness in self-hypnosis, without a concurrent modification of effectiveness, is a challenge to those theories of hypnosis that have involuntariness as a foundational experience (e.g. Bowers, Laurence & Hart, 1998; [59,128]). Though phenomenological differences reported in studies directly comparing self- and hetero-hypnosis [68,74] could be the result of experimental design [77,78], this work at least motivates future research on the phenomenological differences between the two approaches. Finally, research is needed on the effects of self-vs hetero-hypnosis on perceived self-efficacy.

Attempts to assess self-hypnotizability have traditionally been adapted versions of hetero-hypnosis assessment scales [68,75], which is consistent with a perception of the two being strongly related. In reviewing current methods of assessing hypnotizability, Barnier, Terhune, Polito and Woody [129] suggest that hypnotizability is not a unitary construct as typical approaches tend to suggest. Rather, they argue that hypnotizability is actually interacting sub-abilities that are expressed within specific contexts. This raises questions about how to best assess self-hypnotizability given that self-hypnosis requires more willing engagement and individual responsibility [130] and perhaps a different set of sub-abilities. Orne and McConkey [130] argued that the intended and actual consequences of self-hypnosis were an important feature of assessing the willingness to engage, ability to undertake and experience hypnosis; more so than hetero-hypnosis in which more responsibility (if not all) could be placed upon the hypnotist. They highlighted at the time that findings yielded by existing methods of hypnotizability assessment were perhaps determined more by the procedures themselves than by the nature of the phenomenon, something that is being echoed more recently by researchers seeking to update methods of assessing hypnotizability [131,132]. Johnson [77] pointed out that behavioural aspects of hypnotizability assessment emphasized similarity between self-hypnosis and hetero-hypnosis. Yet as noted above, some phenomenological differences have been reported between the two approaches to hypnosis, perhaps indicating the need for a different approach to assessing self-hypnotizability. Further research is needed here to assess these possibilities.

It is recommended that future research consider the additive effect that training in self-hypnosis can offer areas where hetero-hypnosis has been shown to be effective. For example, can the addition of self-hypnosis reduce Stroop interference still further following a word blindness suggestion ([11]; Parris & Dienes, 2013)? Currently research on hypnosis tends to ask what can be achieved with hypnosis and suggestion without giving consideration to the mutability of responsiveness to suggestion. Teaching self-hypnosis as a skill to see how it affects responses to suggestion is recommended. Such research could highlight the real boundaries to the effectiveness of hypnosis as opposed to the assumed boundaries after a single dose of hypnosis. Orne and McConkey [130] suggested that the degree to which an individual is motivated and ready for self-suggested changes in self-hypnosis likely influences the impact of suggestions. To date, no research has followed up on this. It is recommended that future research consider the influence of expectancy and participant motivation and how self-hypnosis training effects such measures and also how such components influence responses to self-directed suggestions in and of themselves.

Given that the latest APA definition of hypnosis does not specifically mention self-hypnosis (though can still account for it) perhaps now is the time for researchers to explore self-hypnosis in order to provide evidence to reconsider existing definitions so that they account for self-hypnosis regardless of whether it is deemed to be a wholly separate entity or a component part of hetero-hypnosis. If evidence suggests that self-hypnosis involves a different sense of agency involving more volition, then this needs to be taken into account, for example. The current evidence tends to suggest that self-hypnosis is clinically as effective as hetero-hypnosis but is potentially phenomenologically different and therefore a definition encompassing this is needed. Finally, the efficacy of self-hypnosis against similar treatments and techniques such as

mindfulness meditation needs to be further investigated. Given the potential for similar outcomes (Benson et al., 2003) but different mechanisms (Dienes et al., 2016), different populations could benefit from the two techniques. Overall, it is our contention that encouraging and highlighting the role of the self in hypnosis and hypnotherapy could have important benefits.

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