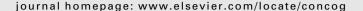
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# Consciousness and Cognition





# Using suggestion to model different types of automatic writing



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#### ABSTRACT

Our sense of self includes awareness of our thoughts and movements, and our control over them. This feeling can be altered or lost in neuropsychiatric disorders as well as in phenomena such as "automatic writing" whereby writing is attributed to an external source. Here, we employed suggestion in highly hypnotically suggestible participants to model various experiences of automatic writing during a sentence completion task. Results showed that the induction of hypnosis, without additional suggestion, was associated with a small but significant reduction of control, ownership, and awareness for writing. Targeted suggestions produced a double dissociation between thought and movement components of writing, for both feelings of control and ownership, and additionally, reduced awareness of writing. Overall, suggestion produced selective alterations in the control, ownership, and awareness of thought and motor components of writing, thus enabling key aspects of automatic writing, observed across different clinical and cultural settings, to be modelled.

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## 1. Introduction

Our sense of self includes the everyday experience that we are aware of our thoughts and movements, that we exercise control over them, and that they belong to us. However, the feelings of control, ownership, and awareness of thoughts and movements can be altered or lost, as is evident across a range of common neuropsychiatric disorders. For example, experiences of alien control are psychiatric symptoms occurring in schizophrenia and other forms of psychosis where patients describe components of experience and behaviour as being under the control of some force or entity outside the self – such as alien control of movement ('they inserted a computer in my brain. It makes me turn to the left or right'), and thought insertion ('I look out of the window and ... the thoughts of Eamonn Andrews [TV presenter] come into my mind') (Mellor, 1970). Narrowing or loss of awareness of thought and movement are exemplified in the case of psychogenic non-epileptic seizures, defined as "episodes of altered movement, sensation, or experiences resembling epileptic seizures ... not associated with ictal epileptiform discharges but which instead have a psychological origin" (Brown, Syed, Benbadis, LaFrance, & Reuber, 2011; Lesser, 1996). Awareness is partially or fully lost in up to 50% of these patients (Brown et al., 2011).

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Alien control of thought or movement associated with narrowing or loss of awareness is also described in culturally-influenced dissociative phenomena linked to spirit possession, mediumship, and shamanism, which have been widely reported across different cultures and periods of history (Rouget, 1985; Seligman & Kirmayer, 2008; Taves, 2006; Vitebsky, 2001). These phenomena are associated with culturally sanctioned attributions of alien control of thought, speech, or movement by supernatural agents (such as spirits or deities), in which a human intermediary is often viewed as a vehicle through which a supernatural agent communicates or reveals information to a human audience. One cross-culturally prominent form of revelation is "automatic writing", experienced or interpreted as the involuntary or automatic production of writing, typically attributed to an agent other than the usual conscious self, such as deity, spirit, or subconscious self, occurring with or without conscious awareness (Ellenberger, 1970).

More than one hundred years ago, James (1890) described how subjective experience could be altered in different ways during automatic writing. He proposed that the mind's "organised paths" can be "thrown out of gear" thereby giving rise to a range of different experiences. The present study evaluated James's proposals, by showing how targeted suggestions for automatic writing can dissociate aspects of thought and movement that are usually experienced as unitary. Automatic writing allows the investigation of different experiences of alien control involving both thought and movement within a single experimental paradigm because: (i) the normal experience of handwriting integrates both thought (thinking what to write) and movement (the motor act of writing); and (ii) phenomenological reports suggest that automatic writing can involve a range of dissociations of the control, ownership, and awareness of thought and movement when writing. For example, when analysing reports based on the widespread practice of automatic writing in Europe and North America in the late 1800s and early 1900s, the American physician Morton Prince described two different types of automatic writing (Janet & Prince, 1907). Some automatic writers reported that thoughts corresponding to the written words just "surged apparently from nowhere without logical associative relation into the mind". Other writers stated that they felt little or no control over their hand movements and what the hand was writing - "my arm was lifted into the air" (Koutstaal, 1992). Furthermore, practitioners of automatic writing have reported full awareness during the communication period, or alternatively were not aware of any messages communicated (Taves, 2006). Phenomenological accounts therefore suggest that automatic writing may involve a loss or reduction of the control and ownership of thoughts, or hand movement, either with or without a narrowing of awareness.

Following Prince's (Janet & Prince, 1907) classification, we employed suggestion as an experimental technique in an attempt to closely model the various types of automatic writing experience during a sentence completion task in highly hypnotically suggestible participants. Hypnosis involves controlled modulation of components of cognition, such as awareness, volition, perception, and belief, by an external agent (the hypnotist) employing techniques of attentional focusing and suggestion (Oakley & Halligan, 2009a,b; Oakley, 2008). As such, suggestions can create experimental models of different ways in which psychological functions and associated experiences can dissociate (Kihlstrom, 2013; Oakley & Halligan, 2009a,b). We chose to use hypnotic procedures for this study to maximise the effectiveness of the suggestions employed (Derbyshire, Whalley, & Oakley, 2009; Mazzoni, Venneri, McGeown, & Kirsch, 2013; McGeown et al., 2012). We have argued elsewhere that experimental hypnosis procedures should be considered as having two distinct and separate components (see for example (Oakley & Halligan, 2013)). Briefly, the first component is the use of a standardised induction script intended to create a focused attentional state, historically referred to as a hypnotic 'trance' or 'state' of hypnosis (Kirsch & Lynn, 1995; Mazzoni et al., 2013), but which we label here simply as 'hypnosis'. The second is the use of suggestion. Traditionally, some suggestions, particularly for relaxation have been introduced during the induction procedure, though it is important to note that relaxation is not an essential feature of hypnosis (Banyai & Hilgard, 1976; Miller, Barabasz, & Barabasz, 1991; Mitchell & Lundy, 1986). More relevant here are 'targeted' suggestions, which are introduced after the induction procedure has been completed and are intended to manipulate an aspect of behaviour or experience of particular experimental interest. In the present study we are interested primarily in the influence of specific targeted suggestions on writing. We also explore whether the hypnosis induction procedure itself, without targeted suggestions (sometimes called 'neutral' hypnosis), affects writing behaviour.

The main aim of the current study was to determine whether suggestions administered to highly hypnotically suggestible subjects could reproduce forms of automatic writing described by individuals in different historical and cultural settings (Deeley, 2013; Spitz, 1997). This would provide evidence that suggestive processes can produce dissociations in a complex behaviour (i.e. writing) which normally integrates thought, movement, and awareness. A key outcome of establishing such dissociations was to create a replicable experimental model of thought insertion and alien control of movement in psychosis as well as culturally influenced alterations of consciousness, such as inspired writing attributed to supernatural causation. Experimental conditions and their contrasts were therefore chosen to test the hypothesis that targeted suggestions could produce selective alterations in the control, ownership, and/or awareness of the thought and motor components of writing.

#### 2. Method

## 2.1. Participants

Twenty healthy, English speaking, highly hypnotically suggestible volunteers were recruited from a pool of approximately 350 volunteers who had been screened for suggestibility using Form A of the Harvard Group Scale of Hypnotic

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