

Psychological considerations in pursuing lucid dreaming research

Commentary on "The neurobiology of consciousness: Lucid dreaming wakes up" by J. Allan Hobson

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1. Introduction

As an long time lucid dream researcher (Gackenbach & LaBerge, 1988), it has been with great pleasure to follow the recent developments in neuroscience on lucid dreaming. Hobson's essay, in a recent issue of the "International Journal of Dream Research" (Hobson, 2009), is a call again for the use of lucid dreaming as a methodological paradigm which offers the potential to understand more deeply the brain basis of consciousness. My purpose here is to address the areas of his essay for which I have some background. I am not a physiologist, but I have done considerable work on the psychological side of lucid dreaming.

Before I begin an analysis from the psychological side, I should mention a couple of things on the brain science side. First and foremost, is the work by Mason and Travis on witnessing in sleep (Mason, Alexander, Travis, Gackenbach, & Orme-Johnson, 1995; Travis, 1994). They have discussed being aware of sleep/dreams while asleep/dreaming both theoretically (Travis, 1994) and in an excellent sleep laboratory study (Mason, et al., 1995). They have argued that sleep consciousness was a separate state of consciousness, as seems to be the conclusion more recently of Voss, Holzmann, Tuin, and Hobson (2009). On the other hand Schonhammer (2005) has offered an excellent analysis of alternative bioscience perspectives on lucid dreaming, which also offers various suggestions for lucid dreaming as an alternative state of consciousness.

A minor second point in Hobson's essay is his incorrect citations for the brain imaging work of Michael Czisch's group. The studies Hobson cited were not about lucid dreaming. He should have cited two papers which were about lucid dreaming, that were presented at conferences (Dresler, Wehrle, Koch & Mann, 2008; Dresler, Wehrle, Spoormaker, Koch, Holsboer, Steiger, Obrig, Sämann, & Czisch, 2009). I only mention this because the conclusions are important to keep in mind, and anyone tracking back might find what I found, that the citations offered said nothing about lucid dreaming.

While Hobson emphasized an historical perspective on lucid dreaming in his article, which was largely representative, his brief survey of the psychological side was more limited.

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Over the course of my professional life I have focused upon individual differences associated with dreaming lucidly (Snyder & Gackenbach, 1988), the content of the experience of dreaming lucidly (Gackenbach, 1988), and the spontaneous behavioural antecedents to lucid dreaming (Gackenbach & Bosveld, 1989). I always preferred to view lucid dreaming in is "natural" setting and did not address issues of how to have a lucid dream. Hobson seemed to reduce these induction questions to "pre-sleep autosuggestion", when clearly the emergence of lucidity is predicated by both individual differences and various life circumstances. LaBerge and others (LaBerge, 1980; Zadra, Donderi, & Pihl, 1992; Paulsson, & Parker, 2006) have shown that autosuggestion does work. So too, Laberge and Levitan (1995) have shown that light triggers, in a mask worn while in REM sleep, can also elicit lucidity when paired with presleep suggestions. However, the incidence of success for such techniques does not come close to the spontaneous emergence of lucidity in sleep as a by-product of the practice of meditation (Alexander, 1987; Gackenbach & Bosveld, 1989; Hunt, 1989; Gackenbach & Hunt, 1992). The intent of meditation is typically not to specifically have a lucid dream, but rather is more broadly motivated and indeed the outcomes of meditation can be developmentally framed as ultimately naturally occurring (Alexander et al., 1990).

Relatedly, in an obscure study, many years ago, I also found that those in some sort of self reflective therapy also increase their lucidity through increased dream recall (Gackenbach & Bosveld, 1989). Indeed, the confound with dream recall is so substantive (Gackenbach, 1988) that if not controlled for becomes synonymous with lucid dreaming. More recently, I turned my attention to the effects of electronic media exposure on dreams. Our laboratory has repeatedly found that interactive media use, especially video game play, is more often associated with lucid dreaming, than its spontaneous emergence in those less often using such media (Gackenbach, 2006; 2009).

In none of these cases is having a lucid dream the express purpose of meditation, psychotherapy, dream recall or video game play. Yet in all cases the incidence of lucidity is the same as or higher than spontaneous lucidity emergence. Now it may be that "pre-sleep autosuggestion" is as viable as these other activities, but as far as I could tell this research has not been done. This is a research question that should be undertaken especially if, as suggested by Hobson, lucid dreaming is finally coming into its own as a research paradigm for investigating the nature of consciousness.

In-dream triggers for lucidity have been investigated as



part of LaBerge's effort to elicit lucid dreams on command and as part of my inquiry into the content of lucid dreams (LaBerge & Gackenbach, 2000). While noticing bizarre elements, as suggested by Hobson as his own in lucid dreams, was found in our lab, it only accounted for one-third of the lucid dreams which emerged spontaneously in college students. The other two ways that lucidity emerged was as a result of a nightmare and the dreamer indicating that they "just knew" (Snyder & Gackenbach, 1988).

Individual differences which may predispose dreamers to have lucid dreams seem to fall along spatial/vestibular lines (Snyder & Gackenbach, 1988). More recently, Schredl and Erlacher (2004) found no association to the big five personality characteristics, but did find some relationship to fantasy proneness and openness to experience, including absorption, which has been key in Hunt's interpretation of lucidity within the range of consciousness (Hunt, 1989). Indeed it is these sorts of individual difference variables, i.e. spatial/vestibular and absorption that can account, in part, for the higher incidence of lucidity among video game players (Gackenbach, Kuruvilla, Dopko, & Le, 2010).

Finally, and most recently, on the psychological side, Kahan and colleagues (Kahan, 1994; Kahan & LaBerge, 1994; 1996) and Kuiken's group (Kuiken, 2009; Lee & Kuiken, 2009; Lee, Czupryn, & Kuiken, 2008) have investigated lucid dreaming in metacognitive and phenomenological terms. Their respective refined analysis should be included in any comprehensive understanding of the psychological side of lucid dreaming.

In conclusion, I applaud Hobson's call for lucid dreaming to be placed center stage in our inquiries into the nature of consciousness. This critique has primarily highlighted areas of inquiry into lucidity which were either missed or misrepresented.

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