To Dream, Perchance to Draw: Dream Characters' Responses to a Request in Lucid Dreams

Antonio Zadra[1] and Dave Green[2]
[1]Department of Psychology, Université de Montréal
[2]Independent Scholar, London, United Kingdom

While an increasing number of studies have investigated the psychological and neurocognitive correlates of lucid dreaming, relatively little is known about the dynamics underlying the often unexpected ways that dream characters behave in people's lucid dreams. Based on the results from various phenomenological experiments carried out by nine participants in their lucid dreams, one study's author went as far as to suggest that dream characters sometimes act as if they had a consciousness of their own. Following up on this work, the present study aimed to investigate the reactions and behaviors of dream characters asked to produce a drawing in a series of lucid dreams noted over a 2-year period by a visual artist and experienced lucid dreamer. Our results indicate that dream characters can appear to write or draw as if observing the dream scene from their own perspective, that they can contribute to the production of creative artworks, and that even in lucid dreams, the dreamer is rarely if ever aware of what characters will say or do next in the dream. These findings are discussed in relation to previous work and possible reasons why the dreaming mind keeps the actions of characters in lucid dreams outside of the dreamer's awareness are explored in the context of some contemporary dream theories.

Keywords: dreams, dreaming, creativity, art, lucid dreaming

Lucid dreams are generally defined as those in which the dreamer is aware that they are dreaming (e.g., Zerr et al., 2024). Some researchers, however, have suggested that beyond realizing that one is dreaming, lucid dreaming involves a conscious state similar to that experienced during wakefulness with access to higher cognitive functions such as reasoning, memory, and volitional control over cognitive processes

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(LaBerge, 1988; Tart, 1979). Others still view lucid dreaming as requiring an element of dream control (Drøm et al., 2023; Zhunusova et al., 2021).

Independently of how lucid dreams are conceptualized (Barrett, 1992), a growing number of studies have investigated different aspects of lucid dreaming, including induction techniques (Blanchette-Carriere et al., 2020; Carr et al., 2023; Konkoly et al., 2024; Tan & Fan, 2023), their psychological correlates (Schredl, Remedios, et al., 2022; Stocks et al., 2020; Yu & Wong, 2020), their use in clinical settings (Ellis et al., 2021; Mallett et al., 2022; Sackwild & Stumbrys, 2021; Yount et al., 2023), and their underlying neurobiology (Baird et al., 2018, 2022; Holzinger et al., 2006; Zerr et al., 2024). Phenomenological aspects of lucid dreams, however, have received considerably less attention (Gackenbach & Schillig, 1983; Konkoly et al., 2021; Schredl, Fuchs, et al., 2022; Stumbrys et al., 2014). In particular, relatively little work has been conducted on how dream characters react to and interact with lucid dreamers who are aware that the characters they are engaged with are a product of their dreaming mind (Schmidt et al., 2014; Stumbrys & Erlacher, 2017).

In one pioneering study by the late Tholey (1989), nine experienced lucid dreamers were instructed to ask characters in their lucid dreams to complete specific tasks such as writing or drawing something, coming up with a rhyming verse or a word unknown to the dreamer, or solving simple math problems. The overall results indicated that dream characters were both willing and often capable of carrying out the requested tasks. For example, when asked to write or draw something, some dream figures produced accurately rendered letters and sketches while sitting opposite from the dreamer, with the dreamers sometimes having to rotate the sketch 180° toward themselves to fully appreciate the drawing. This, to Tholey, suggested that some dream characters appeared to write or draw as if observing the dream scene from their own perspective. When one participant asked a dream character to produce a word unfamiliar to the dreamer, the character replied, "Orlog." This word was in fact unfamiliar to the dreamer. After the participant woke up, the participant looked up the word in a dictionary and learned that "orlog" was a Dutch word meaning "quarrel." When one participant asked a group of dream characters if one of them could say something about him in a rhyme, the person standing closest to him said, "In dem Dunkel der Nacht/hat er sich umgebracht," which translates to, "In the darkness of the night/he took his own life." The verse immediately reminded the dreamer of a previous lucid dream he had had during a difficult period of his life.

Dream characters' responses to math problems were similarly interesting and surprising. In both Tholey's original work as well in a follow-up study (Stumbrys et al., 2011), the majority of dream characters' answers to even very simple math problems (e.g., three times four, two plus three) were incorrect. In a handful of cases, dream characters first gave a wrong answer, and then corrected themselves. Even more intriguing were some of the peculiar answers and reactions noted by some of the lucid dreamers. When asked to solve a math problem, one dream character started to cry while another immediately ran away. In some cases, dream characters replied that the question was of a personal nature or that the answers involved were either too subjective or important to be openly shared.

Taken as a whole, these observations indicate that even in lucid dreams, dream figures may give the impression of behaving autonomously and independently of the dreamer, as if guided by their own subjective states and experiences. What's more, these reports indicate that while lucid dreamers may be fully aware that

they are dreaming while exerting volitional control over their thoughts and behaviors, they largely remain in the dark as to what characters in their dreams will say or do next.

It is this understudied facet of lucid dreaming—and dreams in general—that we aimed to explore. In sum, our goal was to add to the limited literature on how dream characters appear to "choose" to respond to requests in lucid dreams by having an experienced lucid dreamer and visual artist (Dave Green) conduct a series of experiments focused on asking characters in his lucid dreams to draw something for him. In addition, given the multilevel relationship between dreams, including lucid dreaming, and creativity (Bogzaran, 2003; Lacaux et al., 2019; Schädlich & Erlacher, 2018; Schredl & Erlacher, 2007; Stumbrys & Daunytė, 2018), we also examined if and how dream characters could contribute to the creation of artworks within a series of lucid dreams. Finally, a final and secondary aim was to document what happened to the dreamer's vision when he closed his eyes while lucid dreaming.

## Method

Participant and Procedure

Dave Green first contacted Antonio Zadra in 2021 to inquire about potential interest in collaborating on his lucid dream-inspired artwork. At the time, Dave Green, a 39-year-old male and long-time lucid dreamer, was creating drawings in his lucid dreams and recreating the results after waking up. Following a series of exchanges on possible phenomenological dream experiments that could be explored as part of this creative process, Antonio Zadra suggested that Dave Green try the following in his lucid dreams: (a) ask dream characters to create a drawing in his place; (b) same as (a) but while having the character standing or sitting across from him; and (c) close his eyes in the dream and imagine himself drawing. Dave Green was told that very little work had been done in this field, that he was to carefully document his dream experiences, and that no specific findings were expected. Dave Green was instructed to note his results upon awakening and to email his reports, including dream narratives and their associated drawings, to Antonio Zadra as the study progressed. While over 40 dream reports were collected over a 2-year period, only those that best captured specific lucid dream dynamics are presented in full below. The remaining reports are summarized in terms of overall patterns or used to provide specific examples of characters' unexpected behaviors in lucid dreams.

Results

The examples of dream reports detailing the various and oftentimes surprising ways dream characters reacted to being asked if they could produce a drawing are presented below. The reports are grouped along the three sets of experiments Dave Green was asked to conduct in his lucid dreams. A fourth group of dream reports containing other bizarre and intriguing turn of events is also presented. Noteworthy passages in the dream reports are presented in bold. Finally, the examples of drawings recreated by Dave Green based on the drawings he observed characters generate in his dreams are presented in Figure 1.

Figure 1

Drawings Reproduced by Dave Green From Images Created by Dream Characters in Lucid Dreams

Dream # 1:
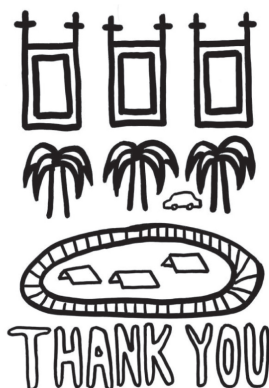
Dream 3 :

Dream # 12 :

Dream 2 :
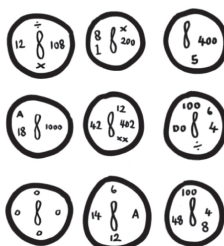
Dream 4 :

Dream # 13 :
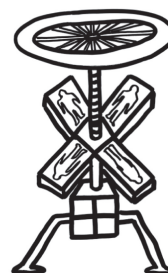
Note. Numbers refer to each drawing's accompanying dream report.

Dream Characters Asked to Create a Drawing

Dream 1: I was walking along an unknown residential road. I was lucid and I knew I had to find a dream character to do a drawing. Up ahead I saw a bus stop with some people sitting at it. I approached the first guy I came to. He looked like my friend Nathan. I gave him a pen and article and asked him to do a drawing. He replied by saying **"How many fucking times do we have to do this?"** Despite his annoyance he started drawing anyway. He drew some rectangles with crucifixes on top. A car in the jungle and some tents enclosed in a fence. As he was drawing the tents I knew them to be an Apache camp. I asked him to write something too. He wrote the words "Thank You." I did my best to memorize the artwork and when I looked up **all the other dream characters at the bus stop were crowded around me and were leaning uncomfortably close**. **I tried to walk away but they all followed me. I started trying to fight them off and it got violent. I woke up before it escalated any further** (see corresponding drawing in Figure 1).

Dream 2: This was drawn by a gentleman called Benji who I met in my dream. He was older, with grey hair and a neat beard. He looked like a professor. When I first asked him to do a drawing for me **he said he was in too much of a rush. But when I explained in more detail what I was doing he said, "How fascinating!" and enthusiastically took the pen and started to draw.** He made all these circles with numbers and mathematical symbols in them. He also wrote "Craneford Way" on the article but I somehow forgot to include that in the drawing. Craneford Way is the name of the street where we were standing. **He also asked me what day it was so he could put the date on there** but I woke up before I could reply (see corresponding drawing in Figure 1).

Dream 3: … I flew out the living room window, over the high street and into the building opposite. I found myself in a kitchen. I went up to a guy in a chef's uniform, gave him a pen and article and asked him to do a drawing. **He drew a little character sitting on a teapot, some tea cups and wrote "Fair, Drumpert" I asked him why he had drawn this and he said "because he studied drums at Columbia University"** (see corresponding drawing in Figure 1).

Character Standing or Sitting Across From the Dreamer

Dream 4: … I walked into the living room with the expectation of finding a dream character there. Antonio himself and my girlfriend Rita were sitting at the dining table. I gave Rita a pen and a piece of article and asked her to create a drawing for me. I watched from across the table as she drew a highly stylized group of people onto the page. **I made a note of the fact that the drawing was oriented towards her. As she handed me the drawing she said, "all of them." I asked her who they were and she said, "Veef."** Then I woke myself up and created the drawing in waking life (see corresponding drawing in Figure 1).

Dream 5: … I jumped down to the street below and saw a tall blond man in blue dungarees in his mid thirties. I asked him if he could do a drawing for me. He said yes and seemed pleased to help as I handed him the article. I realized we had nothing to lean on because we were both standing up. I said, "Let's get on the floor." He looked slightly put out by this idea but obliged anyway. We lay down on the pavement facing each other and he started to create a drawing. I saw the cat's head and the human head immediately. **I noted to myself that they were orientated upside down from my point of view. He spun the drawing around to show me and the orientation behaved as it would in waking life.** Now there was more stuff on the page—the shape at the top and the words. **I asked him why he drew this drawing and he responded by saying he was from the Czech Republic.**

Dream 6: There was a middle-aged woman with pink hair and a pink blazer sitting at a desk. I gave her a pen and article for her to create a drawing. **Very suddenly my viewpoint changed and I found myself experiencing the dream from this woman's point of view. I was doing the drawing as her and I heard my internal monologue in her voice (she had a Yorkshire accent) saying "This is where I'm from."**

Drawing With Eyes Closed

Dream 7: … I imagined doing a drawing but because I could still see the page with my eyes closed everything looked basically like it would with my eyes open. **It was just like watching myself do a drawing but through closed eyelids.**

Dream 8: … I was scrunching up a piece of article, then stretching it out again. I drew a circle on the article. Then I closed my eyes and tried to imagine drawing a circle. **Closing my eyes made no difference to my vision and imagining drawing a circle didn't quite work either. Everything just remained the same—dream article, dream hand, drawing a circle.** I kept on drawing the circle anyway. Just going over the same circle a few times. As I did so a 3D cube and three mannequin torsos also appeared on the article. **I made a note of the fact that my vision hadn't blacked out when I closed my eyes. As I had this thought my vision started to black out but with that the dream faded and I woke up.**

Dream 9: I closed my eyes and started imagining drawing a circle. To begin with this felt like it would in waking life. I was imagining with my "minds eye" but there were no visuals. **Then I started to feel a dream arm and a dream hand doing the drawing but everything was still black.** Following that my vision started to fade back in and I saw this dream hand drawing the circle. **I was now fully identified with this new dream hand and I had entered into a new dream from within the previous dream.**

Other Unusual Reactions and Developments

Dream 10: … I looked around for someone and saw a young lady with an umbrella who looked like she was on her way to work. I gave her a pen and article and asked her to do a drawing. **She obliged and started to write some math equations. She then said something along the lines of "Oh no, sorry, you wanted a picture," then she wrote the word "face" then wrote another word and immediately crossed it out and said, "No, I'm not going there."** Then she wrote the word "Saturday" put a circle around it and said, "There we go a picture." As often happens

with these exercises **there were already some drawings on the article when I handed it to her**. In this case there was a green and yellow patterned hexagon and some moon shapes. I pointed at the hexagon and said "Can you draw a picture? You know? like this?" **Just then another dream character interjected.** A rough looking guy wearing a trilby. **He said, "look mate, you asked the lady to do a drawing and she did one, now leave her alone."** Not wanting to escalate the situation any further I woke myself up and re-created the drawing in waking life.

Dream 11: At first I was in a dark room. It was just my sense of touch and then the visuals popped in. I was in a crowded playground. I went up to the first two people I saw—two girls wearing glasses. **I asked them to do a drawing. They giggled and said, "You already asked us this last time!"**

Dream 12: … I told myself that behind the next door would be the exit and sure enough I found myself in an alleyway behind the theatre. I decided to find a dream character to do a drawing. **I looked around for someone but all I could see was a couple of dogs—golden labradors. I decided it would be interesting to get one of the dogs to do a drawing. I pulled a pen and article from my pocket and threw it on the floor near the dogs. One of them ran away but one of them somehow held the pen in his paw and sort of jumped over the article creating a drawing as he went.** I looked at what he drew and re-created it upon waking up (see corresponding drawing in Figure 1).

Dream 13: … once the man had finished his drawing, I asked him what he'd drawn and he said, "a smiling peach" (see corresponding drawing in Figure 1).

Dream 14: … I then walked inside the bar and approached a young woman sitting at one of the tables. I gave her a pen and article and asked her to do a drawing. **She said she didn't do drawings but showed me an embroidery she had done on her skirt.** It portrayed an abstract figure with long arms …

Dream 15: … I decided to find a dream character in my flat. It ended up being my girlfriend. I told her she had to do a drawing. We sat at the dining table with me facing her. I handed her a scrap of article and she started writing the word Sally. I said thank you but could you do a drawing? **She just started writing Sally again**. **I asked her why she kept writing Sally. She started crying and walked away** …

Discussion

The main goal of this study was to examine the various ways dream characters respond to a simple request to create a drawing within lucid dreams. As detailed in the dream reports presented above, while a majority of dream characters appeared willing to complete the task as requested, many ended up presenting other forms of works, like written text, symbols, and even a to do list (e.g., Dreams 2, 10, and 15). Regardless of the work produced, however, most dream reports featured characters exhibiting a wide range of unanticipated behaviors, including being annoyed or angered by the request and follow-up questions (e.g., Dream 1: "How many fucking times do we have to do this?"; Dream 10: "… look mate, you asked the lady to do a drawing and she did one, now leave her alone."), responding as if this was not the first time the request was made (e.g., Dream 11: "You already asked us this last time!"), answering that they did not draw while pointing to another artistic creation of theirs (e.g., Dream 14: "She said she didn't do drawings but showed me an embroidery she had done on her skirt."), observing one of two dogs run away while the other completed a drawing with its paw (Dream 12), as well as other forms of bizarre or inexplicable actions or responses (e.g., Dreams 3, 4, 5, and 13). Additional examples of odd replies to requests to draw something in dreams not detailed above include a woman who said, "No, I can't do that," before flying away, a man who after rendering a drawing pointed to it with a severe look on his face as if the drawing was of grave

importance, and one man who, when asked if he spoke English, stuttered while reply-ing, "Mmm. How do you say in English? I'm … I'm Swiss."

Equally intriguing was the exchange reported in Dream 2 in which a dream char-acter who first responded that he was in too great of a rush to draw before becoming fascinated with the idea. This latter example of a dream character appearing to change his mind is reminiscent of studies (Stumbrys et al., 2011; Tholey, 1989) report-ing that some dream characters corrected themselves after initially providing an incorrect answer to a simple math problem. Dave Green's experience of having a character in his dream suddenly start crying while trying to complete the requested task (Dream 15) is also similar to the report by Tholey (1989) of a character starting to cry after being asked to solve a math problem.

One particularly surprising development observed in several lucid dream reports, including some not detailed above, was the sudden involvement or interjec-tion of other characters with regard to the drawing request and their subsequent role in the dream's unfolding (e.g., Dreams 1 and 10). In another example, when a char-acter asked to draw something that took an overly long time to think over what he should draw, a friend of his standing nearby snatched the pen and paper from him and jotted down something himself. When Dave Green examined the paper, the sec-ondary character had not made a drawing but written down his to do list. In yet another lucid dream, when Dave Green asked a character who had written math equations instead of producing a drawing what the numbers meant, another dream character barged into the conversation and explained that the numbers were about the "Divining of the sovereign Royal family." In Dreams Reports 1 and 10, it is also noteworthy that the extra dream characters who became involved in the action (including a crowd in Dream 10) did so in a menacing way. Like the examples of dream characters crying described above, the surge of emotional states such as anger in other dream characters is open to multiple explanations. For example, these emotional reactions may be tied to recently witnessed emotionally salient events to the dreaming mind challenging the dreamer's intentional efforts to take the dream in specific directions. Here too, more research is needed to clarify the mechanisms at work behind these fascinating dreams.

Taken as a whole, and consistent with similar descriptive studies (Tholey, 1985, 1989), our findings indicate that even in lucid dreams, the dreamer is rarely aware of what dream characters will say or do next in the dream. In fact, dream characters in the present series of lucid dreams displayed a range of surprising reactions and behaviors that came as a complete surprise to the dreamer, even when fully aware that he was dreaming and interacting with characters created by his own mind. Possible explanations as to why the dreaming mind appears to keep core facets of the dream development outside of the dreamer's conscious awareness are briefly explored in the article's final section.

Given the longstanding association between dreams and creativity (e.g., Bogzaran, 2003; Horowitz et al., 2023; Stumbrys & Daunytė, 2018), it was not surpris-ing to note that dream characters could indeed contribute to the creation of artworks within this series of lucid dreams. In fact, almost all of the drawings came as a surprise to the dreamer who often had to make a concerted effort to commit the drawing to memory in order to reproduce it to the best of his abilities upon awakening. However, it should be noted that the drawings produced by dream characters were not necessarily rendered in their own idiosyncratic styles but were more often closely

modeled after the artist's own style. Hence, what the dream characters drew was more original or creative than how they drew (i.e., the artistic style used). Whether or not the dreamer could have come up with similar creations himself—while awake or dreaming—is an open question, but given that many of the drawings seemingly arose through the characters' own thoughts and behaviors (i.e., outside of the dreamer's conscious awareness), it appears that soliciting the input of various dream characters in one's creative pursuits can be a useful tool. Furthermore, an interesting parallel can be drawn between the creativity of dream characters in their drawings and the phenomenon of fictional characters in written works "taking over" the author's plans, guiding the writer's narrative by shaping their own actions and dialogue. Finally, based on Dave Green's personal experience, the level of inherent bizarreness or absurdity in the dream state that supports creativity seems considerably greater than in waking states conductive to art creation, such as in Csikszentmihalyi's (1990) experience of "flow." More work on these intriguing questions with a larger sample of lucid dreamers and across a larger array of artistic and other creative fields is certainly warranted.

Our two other secondary aims were to (a) document the dreamer's perception of a drawing being created by character standing or sitting across from the dreamer and (b) observe what happened to Dave Green's vision when he closed his eyes and imagined himself drawing while lucid dreaming. Similar to what was reported in Tholey's (1989) original work, the drawings rendered by characters sitting across from Dave Green (e.g., Dreams 4 and 5) were seen as being orientated upside down from the dreamer's point of view and could only be correctly perceived once they were rotated 180°. Hence, from a first-person point of view, the drawing's visual elements behaved as they normally would if observed in waking reality. In one of the lucid dreams, however, Dave Green experienced a shift in his first-person point of view whereby he found himself seeing the drawing from the dream character's perspective, even going as far as hearing her Yorkshire-accented inner voice (see Dream 6).

As for our final phenomenological test, Dave Green's experiences of closing his eyes while trying to draw made little to no difference perception-wise in most dreams (e.g., Dream 7, "It was just like watching myself do a drawing but through closed eyelids."). However, in one lucid dream (see Dream 9), closing his eyes first resulted in the visuals going black, followed by a clearer sense of having an embodied experience which led to what was described as a "new dream" in which he could once again see himself drawing. The question of what happens to sensory experiences in dreams when we close our "dream eyes" or cover up our "dream ears" remains largely unexplored. As such, we still know very little about if and how such processes are influenced by the dreamer's waking experiences and expectancies within the dream, including in lucid dreams.

In summary, much as suggested by Tholey almost 35 years ago, the present observations suggest that even in lucid dreams, dream figures can give the impression of behaving autonomously and independently of the dreamer, as if guided by their own subjective states and experiences. This is not to say that dream figures are existentially real or possess their own states of consciousness. But the fact that dream characters can exhibit remarkable cognitive abilities, from speaking with an accent (e.g., Dream 6) to engaging in complex social interactions and displaying a range of situation-specific emotions (e.g., Dreams 1, 2, 10, and 15) reveals something about the dreaming brain which is as amazing as it is often overlooked.

When people experience a dream, their brain typically creates their sense of self (i.e., a virtual "you" with a first-person perspective on the dream) along with an entire dream world that they perceive and react to in a dynamic and ever-evolving fashion. What's more, the dreaming brain almost always creates one or more dream characters who not only interact with the dreamer (or among themselves) in any number of ways but who also appear to have access to their own subjective perception of and reaction to the events unfolding within the dream. This complex and dynamic interplay between the dreamer (or dream ego) and the rest of their dream world typically plays a key role in how the narrative content or storyline of a given dream shifts and evolves as the dream progresses. This is not only observable in many lucid dreams but, in our experience, also applies to virtually all narratively driven dream experiences, from everyday dreams to nightmares (e.g., Robert & Zadra, 2014).

It is possible that this core yet often unacknowledged aspect of dreams in which the dreaming brain keeps much of the "script," and other information underlying the nature of our dream worlds outside of our awareness plays a functional role in dreams. For example, in both the threat simulation (Revonsuo, 2000; Valli et al., 2005, 2009) and the newer social simulation (Tuominen et al., 2019) theory of dream function, having dreamers believe that their dream experiences are real, while they are in them and reacting to their contents in potentially adaptive ways plays a central role in the dream's presumed evolutionary function. Hence, keeping the ever-evolving "dream script" out of the dreamer's conscious awareness would likely assist this adaptive online process. Similarly, in Zadra and Stickgold's (2021) recently proposed model of dream function, dreaming allows the sleeping brain to enter an altered state of consciousness in which it can construct imagined narratives and have us respond emotionally to them. More specifically, they argue that while dreaming, the brain explores novel and creative associations between recently formed memories and older, often only weakly related memories, and monitors whether and how the resulting narrative constructed from these memories induces a behavioral or emotional response in the dreamer. This model suggests that one adaptive function of dreams resides in the brain's ability to imagine possibilities within our dreams, to evaluate our reactions to them, and to use this information to better prepare us for an uncertain future. Here too then, the proposed overarching function of dreams is likely optimized if people react to their dreams as if they were real, waking experiences while remaining consciously unaware of how exactly the dream is likely to unfold. Just as we can never be sure of what awaits us next in waking life, dreams appear to be constructed in such a way that we typically believe them to be real and, in many ways, even more shifty and unpredictable than wakeful reality. As shown in this article's dream reports, even in lucid dreams, where the dreamer knows that the experience is a dream, the person usually cannot predict what dream character will say and do next in the dream. This observation similarly points to an important feature of most dream experiences.

In sum, while the characters we meet in our lucid and nonlucid dreams may not have a consciousness of their own, our findings indicate that they often act as if expressing autonomous organizations of information within the dreaming brain. Our findings are also consistent with previous studies in showing that dream characters often behave as if they possessed a consciousness of their own and that we, the dreamer, routinely engage with them as if they were independent, sentient beings. Taken as a whole, the few experiments reported in this field indicate that lucid

dreaming offers a unique and exciting phenomenological window onto a variety of intriguing and little explored dream-related questions, including dreams' interpersonal dimensions, their creative potential, and the nature of the processes underlying dream construction. As such, additional research into different phenomenological aspects of lucid dreaming appears more than warranted.

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