

# Inner Ghosts: Encounters With Threatening Dream Characters in Lucid Dreams

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*Lucid dreamers may encounter not only friendly but also threatening dream figures in their lucid dreams. The present study of German-speaking lucid dreamers explored the frequency of threatening dream figures in lucid dreams and how lucid dreamers responded to them. An online questionnaire was completed by 528 respondents, of whom 386 had lucid dream experience. According to their reports, about half of the dream characters encountered in lucid dreams are friendly, but about a fifth of them are threatening. Threatening dream figures are encountered more by women and more frequent nightmare sufferers, but less by more frequent lucid dreamers. When dealing with threatening dream characters, lucid dreamers most often defend themselves by fighting, with flying away and working toward resolution as the next most likely responses. More frequent nightmare sufferers showed more avoidance behavior, whereas more frequent lucid dreamers worked toward resolution of the conflict. The findings lend some support to the idea that encounters with threatening dream characters may represent the interpsychic or psychosocial conflicts of the dreamer. Thus, when encountering a threatening dream figure, lucid dreamers could perhaps be advised not to avoid it, but rather to confront the figure and seek resolution.*

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**Keywords:** lucid dreaming, dream characters, threats, social interactions, nightmares

Evolutionary dream theories propose that dreaming evolved as a virtual reality mechanism to simulate and rehearse threats and social interactions in order to better cope with them while awake (Revonsuo, 2000; Revonsuo, Tuominen, & Valli, 2015; Valli & Revonsuo, 2009). According to a study by McNamara, McLaren, Smith, Brown, and Stickgold (2005), social interactions in dreams are twice as prevalent as those in waking life, with aggressive interactions predominant

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in dream reports from rapid eye movement (REM) sleep and friendly interactions predominant in dream reports from non-REM sleep. Furthermore, the continuity hypothesis suggests that aggression in dreams might be related to aggression in waking life, although in dreams aggression is much more exaggerated (Schredl & Mathes, 2014).

An interesting opportunity for social interactions arises in lucid dreams when the dreamer is aware that he or she is dreaming and can deliberately instigate interactions with other dream characters (LaBerge, 1985). A recent survey of lucid dreamers showed that communication with dream characters was among the most popular activities intended for lucid dreams (Stumbrys, Erlacher, Johnson, & Schredl, 2014). Dream characters in lucid dreams tend to act autonomously and independently of the dreamer, as if they have their own thoughts and feelings (Tholey, 1989). Some authors even refer to dream characters as independent agents (Waggoner, 2009). Furthermore, research suggests that dream characters in lucid dreams are capable of remarkable cognitive abilities (e.g., write, draw, or find rhyming words) and can even help the dreamer with creative problem solving, especially when dealing with creative tasks, although their logical abilities, such as doing arithmetic, might be flawed (Stumbrys & Daniels, 2010; Stumbrys, Erlacher, & Schmidt, 2011; Tholey, 1989).

The question of whether dream characters are merely random creations of the brain or representations of some parts of the dreamer's personality (cf. Barrett, 1995) remains open. Recent studies, however, suggest that self–other (i.e., the dreamer—a dream character) distinction is obliterated in lucid dreams and that dream characters are not evidently independent of the dreamer and of his or her expectations (Schmidt, Stumbrys, & Erlacher, 2014; Windt, Harkness, & Lengenhager, 2014).

The interactions with other dream characters in lucid dreams are not necessarily friendly. Threatening dream figures can also be encountered in lucid dreams. According to Tholey (1988), encounters with such threatening characters provide the greatest opportunities for self-healing and psychological growth, as these encounters may represent interpsychic or psychosocial conflicts of the dreamer. Therefore, the most effective approach to dealing with such encounters would be to confront the threatening dream character and seek reconciliation, which could lead to resolution of the conflict and facilitate positive changes in waking life. In a preliminary study with 62 students, Tholey (1988) found that when threatening dream characters were confronted, they were deprived of their threatening nature in 77% of cases and achieved mutual reconciliation in 33% of cases. Most participants reported positive changes in their subsequent waking and dreaming lives. Considering the facts that lucid dreaming is mainly a REM sleep phenomenon (LaBerge & Rheingold, 1990; but see Stumbrys & Erlacher, 2012) and aggressive interactions are predominant during REM sleep (McNamara et al., 2005), encounters with threatening dream characters might be quite prevalent for lucid dreams. Yet, there has been no systematic research on how frequently threatening dream figures occur in lucid dreams or how lucid dreamers deal with them. The aim of the present study was to shed more light on such encounters. We sought to determine the proportions of friendly, neutral, and threatening dream characters encountered in lucid dreams, and how lucid dreamers tend to manage threatening encounters, further exploring the possible underlying factors of such phenomena.

## Method

### Participants

Five hundred twenty-eight participants (290 men and 238 women) completed an online questionnaire. Their ages ranged from 11 to 67 years, with the mean age of  $26.4 \pm 10.6$  years. There were 161 working professionals, 152 students, 125 schoolchildren, 34 in vocational training, 8 housewives/-husbands, 4 retired, 20 unemployed, and 5 in military or civilian service (18 participants marked "other occupation" and 1 participant did not provide information).

### Materials

The questionnaire primarily focused on dreams and mental health. Participants were asked to estimate their lucid dream frequency on an 8-point scale (0 = never, 1 = less than once a year, 2 = about once a year, 3 = about 2 to 4 times a year, 4 = about once a month, 5 = about 2 to 3 times a month, 6 = about once a week, 7 = several times a week), which has been shown to have a good retest reliability ( $r = .89$ ;  $p < .001$ ;  $N = 93$ ; Stumbrys, Erlacher, & Schredl, 2013). The scale included a short definition ("In a lucid dream, one is aware that one is dreaming during the dream. Thus it is possible to wake up deliberately, or to influence the action of the dream actively, or to observe the course of the dream passively") to ensure a clear understanding of lucid dreaming. Furthermore, on an equivalent 8-point scale, participants were asked to estimate their nightmare frequency. This scale similarly demonstrated good retest reliability ( $r = .75$ ;  $p < .001$ ;  $N = 93$ ; Stumbrys et al., 2013). In order to obtain units in frequency per month, both scales were recoded using the class means: 0  $\rightarrow$  0, 1  $\rightarrow$  0.042, 2  $\rightarrow$  0.083, 3  $\rightarrow$  0.25, 4  $\rightarrow$  1.0, 5  $\rightarrow$  2.5, 6  $\rightarrow$  4.0, 7  $\rightarrow$  18.0 (see Stumbrys et al., 2013).

For the first question about dream characters, those participants who had lucid dreams were asked to estimate what percentage of dream characters encountered in their recent lucid dreams they interpreted as (a) friendly, (b) neutral, and (c) threatening (in percentages, summing up to 100%). For the second question regarding interactions with threatening dream characters, those participants who encountered threatening dream characters in their lucid dreams were further asked to indicate how they dealt with these characters recently (again in percentages, summing up to 100%): (a) flew away; (b) confronted and started a conversation in order to reach resolution; (c) defended and fought (with words or physical effort) to render them harmless; (d) did not defend and accepted defeat; (e) other (open-ended question, to be specified by the participant).

### Procedure

The study was conducted in German. The online questionnaire was posted on the German Website on lucid dreaming (<http://www.klartraum.de>) between August 22, 2007, and January 8, 2008. A newsletter with an explicit reference to the study was sent by e-mail to approximately 1,500 registered users of the Website. The

survey was anonymous; however, participants were asked to provide their e-mail address in order to minimize the risk of multiple responses to the questionnaire. The responses were checked for their validity and several invalid answers (i.e., total percentage of friendly/neutral/threatening characters was not  $100\% \pm 1\%$ ,  $n = 18$ ; total percentage of interactions with threatening characters was not  $100\% \pm 1\%$ ,  $n = 13$ ) were excluded.

Statistical Analysis

SPSS (Version 17) was used for statistical analysis. Logistic regression analyses were conducted with independent variables of age, gender, lucid dream and nightmare frequencies, and dependent variables of dream character type (i.e., friendly, neutral, and threatening) and reaction to threatening dream characters (e.g., flying away).

Results

Three hundred eighty-six respondents (73.1%) reported that they had at least one lucid dream. Two hundred sixty-three respondents (49.8%) had at least one lucid dream per month and, following Snyder and Gackenbach (1988), can be classified as frequent lucid dreamers. On average, these participants estimated to recall  $3.95 \pm 5.94$  lucid dreams per month (whole sample:  $2.93 \pm 5.40$ , 521 responses). Additionally, participants estimated to have  $1.72 \pm 4.15$  nightmares per month.

According to the reports of lucid dreamers, about half of dream characters they encounter in their lucid dreams are friendly to them, about a third are neutral, and about a fifth are threatening (see Table 1). When dealing with threatening dream characters, lucid dreamers most often defend themselves by fighting (verbally or physically), followed by flying away and then confronting in order to seek resolution (see Table 2). Very rarely do lucid dreamers accept defeat by a dream character. Among other reactions to threatening dream characters (open-ended response option), the participants most frequently mentioned the following: awakening themselves, encouraging threatening dream characters to disappear, realizing that dream characters do not pose any harm, positively changing the dream characters or the dream plot, and engaging in sex with the dream character.

Table 1  
*Responses to First Question: Proportion of Friendly, Neutral, and Threatening Dream Characters Recently Encountered in Lucid Dreams (n = 344)*

Dream character	<i>M ± SD</i>
Friendly	47.52 ± 29.44
Neutral	33.74 ± 26.49
Threatening	18.73 ± 24.40

*Note.* Answers were given in percentages (summing up to 100%).

Table 2  
*Responses to Second Question: How Lucid Dreamers Dealt With Frightening Dream Characters (n = 245)*

Scenario	<i>M ± SD</i>
Flying	23.22 ± 30.53
Confronting and seeking resolution	17.72 ± 27.51
Defending by fighting	34.97 ± 34.61
Accepting defeat	4.74 ± 14.33
Other	19.34 ± 35.70

*Note.* Answers were given in percentages (summing up to 100%).

In relation to age, gender, or lucid dream frequency, there were no differences in encountering friendly and neutral dream characters; however, women and less frequent lucid dreamers tended to report encountering threatening dream characters more often (see Table 3). Nightmare frequency was a strong predictor of the type of dream characters encountered in lucid dreams: Participants with more nightmares encountered threatening dream figures more frequently and friendly and neutral dream characters less frequently.« When dealing with threatening dream characters, frequent nightmare sufferers tended to fly away more often, whereas more frequent lucid dreamers were less likely to fly away and more likely to confront the dream figure and seek resolution (see Table 4).

Discussion

According to the results of the present survey, about half of dream characters encountered in lucid dreams are friendly, while about a fifth of dream characters are considered threatening. These characters are encountered more by women and more frequent nightmare sufferers, and less by more frequent lucid dreamers. When dealing with threatening dream characters, lucid dreamers most often defend themselves by fighting, followed by escaping (flying away) and confronting in order to resolve the conflict. More frequent nightmare sufferers tend to show escapist/avoidance behavior more often, whereas more frequent lucid dreamers are more likely to work toward resolution of the conflict rather than avoiding it.

Before discussing the findings, several limitations of the present research must be acknowledged. First, the survey was conducted within a German-speaking sample of lucid dreamers and therefore some cultural bias may exist. For example,

Table 3  
*Regression Analysis for Dream Character Types, With Age, Gender, Lucid Dream (LD) Frequency, and Nightmare Frequency as Independent Variables*

Dream character	Age	Gender	LD frequency	Nightmare frequency
Friendly	$\beta = -.06; t = -1.14$	$\beta = -.06; t = -1.03$	$\beta = .09; t = 1.65$	$\beta = -.24; t = -4.40^{***}$
Neutral	$\beta = .03; t = .47$	$\beta = -.06; t = -1.10$	$\beta = .08; t = 1.35$	$\beta = -.14; t = -2.52^*$
Threatening	$\beta = .05; t = .95$	$\beta = .13; t = 2.76^{**}$	$\beta = -.19; t = -3.94^{***}$	$\beta = .44; t = 9.15^{***}$

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 4  
*Regression Analysis for Dealing With Threatening Dream Characters, With Age, Gender, Lucid Dream (LD) Frequency, and Nightmare Frequency as Independent Variables*

Scenario	Age	Gender	LD frequency	Nightmare frequency
Flying away	$\beta = -.02; t = -.33$	$\beta = .10; t = 1.48$	$\beta = -.14; t = -2.25^*$	$\beta = .15; t = 2.22^*$
Confronting and seeking resolution	$\beta = .06; t = .87$	$\beta = -.05; t = -.74$	$\beta = .20; t = 3.10^{**}$	$\beta = -.08; t = -1.21$
Defending by fighting	$\beta = -.06; t = -.91$	$\beta = -.03; t = -.47$	$\beta = .03; t = .51$	$\beta = .01; t = .20$
Accepting defeat	$\beta = -.01; t = -.12$	$\beta = -.09; t = -1.29$	$\beta = .02; t = .27$	$\beta = .08; t = 1.25$
Other	$\beta = .04; t = .55$	$\beta = .02; t = .25$	$\beta = -.07; t = -1.07$	$\beta = -.11; t = -1.60$

\*  $p < .05$ . \*\*  $p < .01$ .

a prominent pioneering German book on lucid dreaming by Tholey and Utecht (1987) could have influenced how interactions with dream characters are perceived within the German-speaking lucid dream culture. Some cross-cultural differences in the lucid dream experience may exist (cf. Erlacher, Schredl, Watanabe, Yamana, & Gantzert, 2008), which could be explored in future studies. Furthermore, the survey was based on the retrospective memory and self-estimations of the participants, which may also be biased. For example, threatening dream figures might be more memorable and thus overestimated. In future studies, lucid dreamers could be asked to provide an actual report of their last dream and an independent judge could rate the incidence of threatening, friendly, and neutral dream characters. Furthermore, as the present study did not provide a clear definition of threatening dream characters, the participants could have interpreted threatening dream characters somewhat differently. For example, one participant might have considered a mean look as a threat, whereas another might consider only a physical attack threatening. Thus, providing a clear definition of a threatening dream character and acknowledging different types of threats (e.g., verbal, physical) would be useful in future studies. Additionally, the participants were self-selected due to their interest in lucid dream research, and the prevalence and frequency of lucid dreaming in the present sample is higher than in the general population (cf. Saunders, Roe, Smith, & Clegg, 2016). Furthermore, the data were collected via an online questionnaire, which may also have introduced some bias, although comparative analyses show that data gathered online are as good as data gathered via traditional methods (Gosling, Vazire, Srivastava, & John, 2004).

According to the present findings, about a half of dream characters encountered in lucid dreams are interpreted as friendly and only about 19% of dream characters are considered threatening. Previous studies which examined situations where dream characters were asked by the dreamer to perform certain tasks in lucid dreams (e.g., Schmidt et al., 2014; Stumbrys & Daniels, 2010; Stumbrys et al., 2011; Tholey, 1989) did not report any threatening situations, although some cases were reported when dream characters refused to collaborate (e.g., ran away). On the other hand, in the aforementioned studies, lucid dreamers were often asked to explicitly look for friendly dream characters. Since lucid dreams and nonlucid dreams seem to have quite similar frequencies of both aggressive and friendly interactions (Gackenbach, 1988) and aggressive interactions are predominant in REM dreams where lucid dreams are most likely to occur (LaBerge, 1990;



McNamara et al., 2005), a higher proportion of threatening dream characters might have been expected (according to McNamara et al., 2005, the dreamer is the aggressor in 52% of aggressive interactions in REM). While the survey format and the absence of polysomnographic data prevents the determination of the exact stage in which the recalled lucid dreams occurred, it nevertheless may be inferred that the majority of these lucid dreams occurred during REM sleep: Spontaneously recalled dreams in a home setting are more likely to be from REM sleep (cf. Stickgold, Pace-Schott, & Hobson, 1994) and lucid dreaming itself is mainly a REM sleep phenomenon (LaBerge, 1990). Furthermore, compared to nonlucid dreams, lucid dreams are distinguished by more positive emotions (Thomas, Pollak, & Kahan, 2015; Voss, Schermelleh-Engel, Windt, Frenzel, & Hobson, 2013). Hence, other dream characters might also be more positively perceived.

When dealing with threatening dream characters, lucid dreamers were most likely to confront them and defend themselves (either physically or verbally), followed by escapist/avoidance behavior (flying) and by more constructive behavior, according to Tholey (1988), to confront them and seek resolution. Very infrequently did lucid dreamers accept defeat from a threatening dream character. Interestingly, more frequent lucid dreamers showed more constructive behavior (i.e., more working toward resolution and less avoidance behavior) and also encountered fewer threatening dream characters than less frequent lucid dreamers. On the other hand, nightmare sufferers tended to show more avoidance behavior when dealing with threatening dream characters, and encountered them much more often. Together, these findings accord with Tholey's (1988) idea that encounters with threatening dream characters may represent internal conflicts of the dreamer. If the dreamer works toward resolution, the conflict may subconsciously be resolved. Whereas if the dreamer tries to escape the conflict, the conflict may reoccur in a dream (as another encounter with a threatening dream figure). Alternatively, it might be argued that greater experience with lucid dreams is the influencing factor itself: It could be that due to more frequent exposure, the phenomenological features of lucid dreams change over time. Further experimental and longitudinal studies are needed to disentangle the interrelationships. For example, one group of lucid dreamers could be instructed to seek resolution in encounters with threatening dream characters, while the second group—to fly away in such situations. After a certain amount of time, one could compare the proportion of threatening dream figures in lucid dreams between groups. Similarly, a longitudinal study could be conducted over a group of lucid dreamers to see how the incidence of threatening dream characters and the dreamer's reactions to them change over the time. A further finding that women tended to encounter frightening dream characters more than men perhaps might be explained by the fact that women have nightmares more often (Schredl & Reinhard, 2011), although we did control for nightmare frequency in the regression analysis.

Considering these findings together, lucid dreamers could perhaps be advised not to avoid the threatening dream figure they encounter in their lucid dreams (e.g., by flying away), but rather to confront this figure and seek resolution. This may contribute to less frequent threatening encounters in the future. Additionally, by developing the ability to lucid dream and having lucid dreams more often, lucid dreamers may also become less likely to encounter threatening dream characters. Future longitudinal and experimental studies could help to disentangle the inter-

relations between lucid dream frequency, the prevalence of threatening dream figures in lucid dreams and the dreamer's reaction to them.

## References

- Barrett, D. (1995). The dream character as prototype for the multiple personality alter. *Dissociation: Progress in the Dissociative Disorders*, 8, 61–68.
- Erlacher, D., Schredl, M., Watanabe, T., Yamana, J., & Gantzert, F. (2008). The incidence of lucid dreaming within a Japanese university student sample. *International Journal of Dream Research*, 1, 39–43.
- Gackenbach, J. (1988). Psychological content of lucid versus nonlucid dreams. In J. Gackenbach & S. LaBerge (Eds.), *Conscious mind, sleeping brain: Perspectives on lucid dreaming* (pp. 181–220). New York, NY: Plenum Press. [http://dx.doi.org/10.1007/978-1-4757-0423-5\\_9](http://dx.doi.org/10.1007/978-1-4757-0423-5_9)
- Gosling, S. D., Vazire, S., Srivastava, S., & John, O. P. (2004). Should we trust web-based studies? A comparative analysis of six preconceptions about internet questionnaires. *American Psychologist*, 59, 93–104. <http://dx.doi.org/10.1037/0003-066X.59.2.93>
- LaBerge, S. (1985). *Lucid dreaming. The power of being awake and aware in your dreams*. Los Angeles, CA: Tarcher.
- LaBerge, S. (1990). Lucid dreaming: Psychophysiological studies of consciousness during REM sleep. In R. R. Bootzen, J. F. Kihlstrom, & D. L. Schacter (Eds.), *Sleep and cognition* (pp. 109–126). Washington, DC: American Psychological Association. <http://dx.doi.org/10.1037/10499-008>
- LaBerge, S., & Rheingold, H. (1990). *Exploring the world of lucid dreaming*. New York, NY: Ballantine Books.
- McNamara, P., McLaren, D., Smith, D., Brown, A., & Stickgold, R. (2005). A “Jekyll and Hyde” within: Aggressive versus friendly interactions in REM and non-REM dreams. *Psychological Science*, 16, 130–136. <http://dx.doi.org/10.1111/j.0956-7976.2005.00793.x>
- Revonsuo, A. (2000). The reinterpretation of dreams: An evolutionary hypothesis of the function of dreaming. *Behavioral and Brain Sciences*, 23, 877–901. <http://dx.doi.org/10.1017/S0140525X00004015>
- Revonsuo, A., Tuominen, J., & Valli, K. (2015). The avatars in the machine dreaming as a simulation of social reality. In T. Metzinger & J. M. Windt (Eds.), *Open MIND*, 32(T). Frankfurt am Main, Germany: MIND Group. <http://dx.doi.org/10.15502/9783958570375>
- Saunders, D. T., Roe, C. A., Smith, G., & Clegg, H. (2016). Lucid dreaming incidence: A quality effects meta-analysis of 50 years of research. *Consciousness and Cognition*, 43, 197–215. <http://dx.doi.org/10.1016/j.concog.2016.06.002>
- Schmidt, S. C. E., Stumbrys, T., & Erlacher, D. (2014). Dream characters and the dream ego: An exploratory online study in lucid dreams. *Dreaming*, 24, 138–151. <http://dx.doi.org/10.1037/a0036942>
- Schredl, M., & Mathes, J. (2014). Are dreams of killing someone related to waking-life aggression? *Dreaming*, 24, 176–181. <http://dx.doi.org/10.1037/a0037213>
- Schredl, M., & Reinhard, I. (2011). Gender differences in nightmare frequency: A meta-analysis. *Sleep Medicine Reviews*, 15, 115–121. <http://dx.doi.org/10.1016/j.smrv.2010.06.002>
- Snyder, T., & Gackenbach, J. (1988). Individual differences associated with lucid dreaming. In J. Gackenbach & S. LaBerge (Eds.), *Conscious mind, sleeping brain: Perspectives on lucid dreaming* (pp. 221–259). New York, NY: Plenum Press. [http://dx.doi.org/10.1007/978-1-4757-0423-5\\_10](http://dx.doi.org/10.1007/978-1-4757-0423-5_10)
- Stickgold, R., Pace-Schott, E., & Hobson, J. A. (1994). A new paradigm for dream research: Mentation reports following spontaneous arousal from REM and NREM sleep recorded in a home setting. *Consciousness and Cognition*, 3, 16–29. <http://dx.doi.org/10.1006/ccog.1994.1002>
- Stumbrys, T., & Daniels, M. (2010). An exploratory study of creative problem solving in lucid dreams: Preliminary findings and methodological considerations. *International Journal of Dream Research*, 3, 121–129.
- Stumbrys, T., & Erlacher, D. (2012). Lucid dreaming during NREM sleep: Two case reports. *International Journal of Dream Research*, 5, 151–155.
- Stumbrys, T., Erlacher, D., Johnson, M., & Schredl, M. (2014). The phenomenology of lucid dreaming: An online survey. *American Journal of Psychology*, 127, 191–204. <http://dx.doi.org/10.5406/amerjpsyc.127.2.0191>
- Stumbrys, T., Erlacher, D., & Schmidt, S. (2011). Lucid dream mathematics: An explorative online study of arithmetic abilities of dream characters. *International Journal of Dream Research*, 4, 35–40.
- Stumbrys, T., Erlacher, D., & Schredl, M. (2013). Reliability and stability of lucid dream and nightmare frequency scales. *International Journal of Dream Research*, 6, 53–56.
- Tholey, P. (1988). A model for lucidity training as a means of self-healing and psychological growth. In J. Gackenbach & S. LaBerge (Eds.), *Conscious mind, sleeping brain: Perspectives on lucid dreaming* (pp. 263–287). New York, NY: Plenum Press. [http://dx.doi.org/10.1007/978-1-4757-0423-5\\_11](http://dx.doi.org/10.1007/978-1-4757-0423-5_11)



- Tholey, P. (1989). Consciousness and abilities of dream characters observed during lucid dreaming. *Perceptual and Motor Skills*, 68, 567–578. <http://dx.doi.org/10.2466/pms.1989.68.2.567>
- Tholey, P., & Utecht, K. (1987). *Schöpferisch Träumen: Der Klartraum als Lebenshilfe* [Creative dreaming: The lucid dream as an aid to life]. Niedernhausen, Germany: Falken-Verlag.
- Thomas, S., Pollak, M., & Kahan, T. L. (2015). Subjective qualities of dreams with and without awareness. *Dreaming*, 25, 173–189. <http://dx.doi.org/10.1037/a0039242>
- Valli, K., & Revonsuo, A. (2009). The threat simulation theory in light of recent empirical evidence: A review. *American Journal of Psychology*, 122, 17–38.
- Voss, U., Schermelleh-Engel, K., Windt, J., Frenzel, C., & Hobson, A. (2013). Measuring consciousness in dreams: The Lucidity and Consciousness in Dreams Scale. *Consciousness and Cognition*, 22, 8–21. <http://dx.doi.org/10.1016/j.concog.2012.11.001>
- Waggoner, R. (2009). *Lucid dreaming: Gateway to the inner self*. Needham, MA: Moment Point Press.
- Windt, J. M., Harkness, D. L., & Lenggenhager, B. (2014). Tickle me, I think I might be dreaming! Sensory attenuation, self-other distinction, and predictive processing in lucid dreams. *Frontiers in Human Neuroscience*, 8, 717. <http://dx.doi.org/10.3389/fnhum.2014.00717>