

# Attitudes towards dreaming: Effects of socio-demographic and religious variables in an American sample

Kelly Bulkeley<sup>1</sup>, and Michael Schredl<sup>2</sup>

<sup>1</sup>The Sleep and Dream Database, Portland, Oregon, USA

<sup>2</sup>Central Institute of Mental Health, Medical Faculty Mannheim/Heidelberg University, Germany

*Summary.* This paper reports the findings of an analysis of an online survey of a large, demographically diverse group of American adults answering questions about their attitudes towards dreaming (N=5,255), with the goal of exploring factors like dream recall, age, gender, ethnicity, education, and religious orientation in relation to people's positive and negative attitudes towards dreaming. In addition to confirming or disconfirming previous research regarding the effects of dream recall, age, and gender, this study examines three demographic variables that have not been previously considered in detail—ethnicity, education, and religious orientation—for possible connections with people's attitudes towards dreaming. The results of the analysis confirm earlier findings that people with high dream recall tend to have more positive attitudes towards dreaming than people with low dream recall; women tend to have more positive attitudes towards dreaming than men; and younger people tend to have more positive attitudes towards dreaming than older people. Regarding ethnicity, blacks had more positive attitudes towards dreaming than whites, with Hispanics having aspects of both. People who are most opposed to religion (atheists) had the most negative attitudes towards dreaming, and people who follow an alternative religious path had the most positive attitudes towards dreaming, with Protestants and Roman Catholics in between. Education seemed to have less of an effect, with slightly more negative attitudes towards dreaming associated with higher levels of education.

*Keywords:* Dreams, attitudes, gender, ethnicity, religious affiliation

## 1. Introduction

Dreaming is a universal human phenomenon. Everyone dreams, although people vary greatly in how often they remember their dreams each morning (Schredl, 2018). Everyone also has some kind of attitude towards dreaming, even though the specific ideas and beliefs people have about dreams can vary widely (Von Grunebaum and Callois 1965, Tedlock 1987, Bulkeley 2001). Previous studies have explored these attitudes using surveys with questions about positive dream beliefs (e.g., “I like dreaming” (Schredl, Brenner, and Faul, 2002) or “I think that dreaming is in general a very interesting phenomenon” (Schredl et al., 2014)), negative dream beliefs (e.g., “Dreams are random products of the brain” (Beaulieu-Prevost, Simard, and Zadra, 2009) or “Dreams have no meaning” (Hill et al., 1999)), and beliefs about the usefulness of dreams (e.g. “Thinking about one's dreams will enhance knowledge about him/herself” (Selterman, 2016)). Although these studies have used different questions and rating scales, their findings have a high degree of internal consistency (Cronbach's alpha) and high

retest reliability (Beaulieu-Prevost, Simard, and Zadra, 2009; Schredl et al., 2002; 2014).

Many researchers have used these scales to study factors that might help explain inter-individual differences in dream recall frequency (Beaulieu-Prevost, Simard, and Zadra, 2005, 2009; Morewedge and Norton, 2009; Schredl, 2013; Schredl, Brenner, and Faul, 2002; Schredl, Ciric, Götz, and Wittmann, 2003; Schredl and Goritz, 2017; Selterman, 2016). Typically, people with positive attitudes towards dreaming tend to have higher dream recall (Beaulieu-Prevost, Simard, and Zadra, 2009; Hill et al., 1999; Schredl et al., 2014). This seems plausible as people who view dreams favorably are more inclined to remember them, and previous research has shown that people who are interested in their dreams can increase their dream recall frequency quite easily (Schredl, 2018).

Large-scale studies have found that attitudes towards dreaming become more negative with age (Schredl, 2013; Schredl et al., 2014; Schredl & Görizt, 2017). As these were cross-sectional studies, it seems plausible that this increasing negativity is explained by cohort effects, i.e., the attitudes in modern times are more positive than they were fifty years ago (Schredl, 2013). In several studies (Domino, 1982; Schredl, 2013; Schredl et al., 2014; Schredl, Nürnberg & Weiler, 1996), women tend to report more positive attitudes towards dreaming than men. This might be explained by a gender-specific process of dream socialization, as girls talk much more about dreams than boys do (Schredl et al., 2015). Regarding personality traits, neuroticism and openness to experience (two of the Big Five personality factors) were related to a more positive attitude towards dreams

Corresponding address:

Kelly Bulkeley, 4636 SW Humphrey Court, Portland, OR 97221, USA

Email: bulkeleyk@gmail.com

Submitted for publication: November 2018

Accepted for publication: March 2019

(Aumann et al., 2012; Schredl & Göritz, 2017). Whereas the relationship between openness to experience and attitudes towards dreaming is very plausible, the relationship between attitudes towards dreaming and neuroticism might be mediated by the frequency of negative dreams, i.e., persons with high neuroticism have more negatively toned dreams and develop interest to understand those dreams in order to cope with them (Schredl & Göritz, 2017).

Interestingly, dreams play a role in all of the major world religions, and religious attitudes are closely intertwined with attitudes towards dreaming (Bulkeley, 2008). For example, many Native American cultures regard dreams as a primary source of connection with ancestral spirits and the powers of nature. In Judaism, dreams have traditionally been viewed as messages from God, while many Christian groups have seen dreams as evil deceptions from the Devil. Martin Luther, the founder of the Protestant Reformation, prayed to God to send him no dreams at all, good or evil, because of his religious belief that the Bible was all the guidance he needed in life (Bulkeley 1995; Bulkeley, Adams, Davis, 2009). In each instance, a particular religious or theological perspective shapes a corresponding attitude towards dreaming. As suggestive as these examples may be, the relationship between religious orientation and attitude towards dreams has not yet been studied in a systematic way.

The aim of the present study is to explore how factors like dream recall, age, gender, ethnicity, education, and religious orientation are related to positive and negative attitudes towards dreaming in a demographically diverse American sample. Three hypotheses have been formed by drawing on existing theories and research: positive attitudes towards dreaming are more likely among people who 1) have high dream recall, 2) are young, and 3) are female. Beyond confirming or disconfirming previous research on these topics, we are also interested in exploring the three new areas of ethnicity, education, and religious orientation for possible connections with people’s attitudes towards dreaming. Because these three demographic variables have not been studied previously in relation to attitudes towards dreaming, we do not offer any hypotheses about them at the beginning of the analysis.

## 2. Method

### 2.1. Participants

Overall, 5,255 persons (2,879 women, 2,376 men) completed the online survey. The mean age of the sample was 46.92 ± 17.56 years (range: 18 to 97 years). The ethnic-

ity of the sample was as follows: White (N = 3,429), Black (N = 695), Hispanic (N = 742), Asian (N = 151), Native American (N = 44), Mixed (N = 130), Other (N = 56), Middle Eastern (N = 8). Educational background was elicited in six categories: No high school (N = 351), High school graduate (N = 1,695), Some college (N = 1,124), 2-year college (N = 570), 4-year college (N = 951), and Post-graduate (N = 564). The distribution of the religious orientation was: Protestant (N = 1,736), Roman Catholic (N = 1,014), Atheist (N = 315), Agnostic (N = 297), Nothing in particular (N = 1,223), and Something else (N = 333). Smaller numbers of participants identified as members of other religious groups (Mormon (N = 76), Eastern or Greek Orthodox (N = 29), Jewish (N = 112), Muslim (N = 57), Buddhist (N = 46), Hindu (N = 17)). To avoid statistical distortions and faulty interpretations based on small sample sizes, these groups were not included in the present analysis.

The religious orientation categories require some further explanation. “Protestant” covers a wide range of Christian denominations (e.g., Lutheran, Episcopalian, Methodist, Baptist) whose faith branched away from the Roman Catholic Church during the Protestant Reformation. “Atheist” refers to someone who does not believe that God exists. An “Agnostic” is someone who does not know for sure whether God exists or not. “Nothing in particular” refers to someone who disavows any connection to, or interest in, religion. The category of “Something else” might be rephrased as people who are “Spiritual but not religious.” This category includes anyone who is not conventionally religious but still does have real interests in spiritual and existential questions, more than those in the “Atheist,” “Agnostic,” or “Nothing in particular” categories.

### 2.2. Research Instruments

In addition to general demographics, several specific questions were asked about dreams. For eliciting dream recall frequency, a 6-point scale “How often, if ever, do you usually wake up remembering a dream?” (coded as 0 = never, 1 = less than once a month, 2 = 1 to 3 times a month, 3 = once a week, 4 = several times a week, 5 = almost every morning or more often) was presented. This is a well-established way of assessing dream recall frequency (Schredl 2007).

Six questions about the participants’ attitudes towards dreaming were also included in the survey. These questions drew in part on previous studies (e.g., Schredl, Ciric, Götz, & Wittmann, 2003; Schredl 2013). The goal was to give participants the opportunity to respond to a variety of assertions about dreams, both positive claims and negative claims. The statements were as follows:

Table 1. Attitude towards dreams (Frequencies for all six items)

Category	Dreams can be caused by outside powers	Learning about true feelings	Dreams are random nonsense	Dreams can anticipate the future	Too busy to pay attention to dreams	Getting bored listening to others talk about dreams
Strongly agree	18.73%	12.84%	8.75%	11.47%	8.72%	8.11%
Somewhat agree	11.95%	31.87%	21.56%	25.56%	14.86%	17.05%
Neither agree nor disagree	35.34%	35.74%	29.67%	31.57%	36.21%	31.46%
Somewhat disagree	23.03%	11.36%	22.89%	14.37%	24.15%	24.17%
Strongly disagree	10.96%	8.18%	17.13%	17.03%	16.06%	19.22%

Table 2. Means and standard deviations of the six attitude items and effect sizes (Cohen's d) for the differences between the item means

Attitude item	Mean ± SD	Dreams can anticipate the future	Dreams can be caused by outside powers	Dreams are random non-sense	Getting bored listening to others talk about dreams	Too busy to pay attention to dreams
Learning about true feelings	2.30 ± 1.09	0.244***	0.251***	0.263***	0.311***	0.331***
Dream can anticipate the future	2.00 ± 1.24		0.039**	0.094***	0.131***	0.158***
Dreams can be caused by outside powers	1.96 ± 1.24			0.074***	0.110***	0.139***
Dreams are random nonsense	1.82 ± 1.20				0.045**	0.088***
Getting bored listening to others talk about dreams	1.76 ± 1.15					0.045**
Too busy to pay attention to dreams	1.71 ± 1.19					

\*\* p < .01, \*\*\* p < .001 (Sign-Rank tests)

1. Some dreams are caused by powers outside the human mind.
2. Dreams are a good way of learning about my true feelings.
3. Dreams are random nonsense from the brain.
4. Dream can anticipate things that happen in the future.
5. I am too busy in waking life to pay attention to my dreams.
6. I get bored listening to other people talk about their dreams.

For each statement, the participants were asked if they strongly agreed, somewhat agreed, neither agreed nor disagreed, somewhat disagreed, or strongly disagreed. In the following analysis and discussion, the six questions were divided into two groups: the positive statements (1, 2, 4) and the negative statements (3, 5, 6).

### 2.3. Procedure

The survey was conducted using an online interview administered by YouGov, a public opinion and data company, to members of its panel of 1.2 million individuals who have agreed to take part in surveys. Email messages were sent to panelists selected at random from the base sample of American adults. The message invited them to take part in a survey and provided a generic survey link. Once a panel member clicked on the link they were sent to the survey that they were most required for, according to the sample definition and quotas. The responses for this survey were gathered between August 21 and August 27, 2018.

Statistical procedures were carried out with the SAS 9.4 software package for windows, using the raw, unweighted responses from the survey. Ordinal regressions (cumulative

Table 3. Ordinal regression analyses for positive attitude items

Genre	Learning about true feelings (R <sup>2</sup> = .0797)			Dreams can anticipate the future (R <sup>2</sup> = .1365)			Dreams can be caused by outside powers (R <sup>2</sup> = .1192)		
	β	χ <sup>2</sup>	p	β	χ <sup>2</sup>	p	β	χ <sup>2</sup>	p
Age	-.1530	106.6	<.0001	-.1454	98.4	<.0001	-.0460	9.9	.0017
Gender (1 = m, 2 = f)	.1042	55.1	<.0001	.1009	52.8	<.0001	.0430	9.5	.0020
Education	.0142	1.0	.3159	-.1009	51.2	<.0001	-.0866	37.3	<.0001
Dream recall frequency	.2015	199.8	<.0001	.1315	88.5	<.0001	.1126	64.6	<.0001
Ethnicity: Black vs. White	.0743	9.4	.0022	.1827	57.5	<.0001	.1595	43.9	<.0001
Religion: Roman Catholic vs. Protestant							.1192	13.7	.0002
Religion: Mormon vs. Protestant				.1701	9.8	.0018			
Religion: Muslim vs. Protestant				.2251	13.1	.0003	.2049	11.0	.0009
Religion: Atheist vs. Protestant	-.2021	33.1	<.0001	-.4684	170.1	<.0001	-.5691	233.3	<.0001
Religion: Agnostic vs. Protestant				-.1444	17.0	<.0001	-.2650	56.0	<.0001
Religion: Something else vs. Protestant				.0887	6.7	.0099			

β = Standardized estimates

Table 4. Ordinal regression analyses for negative attitude items

Genre	Dreams are random nonsense (R <sup>2</sup> = .0417)			Getting bored listening to others talk about dreams (R <sup>2</sup> = .0467)			Too busy to pay attention to dreams (R <sup>2</sup> = .1192)		
	β	χ <sup>2</sup>	p	β	χ <sup>2</sup>	p	β	χ <sup>2</sup>	p
Age	-.0702	23.7	<.0001	.0719	24.4	<.0001	.0156	1.2	.2814
Gender (1 = m, 2 = f)	-.0925	45.1	<.0001	-.1316	89.1	<.0001	-.1166	71.0	<.0001
Education	-.0419	9.0	.0026	.0136	1.0	.3314	-.0285	4.1	.0417
Dream recall frequency	-.0429	9.7	.0018	-.0816	34.4	<.0001	-.1768	160.0	<.0001
Ethnicity: Black vs. White	-.1476	38.4	<.0001	-.1013	17.9	<.0001	-.1314	30.2	<.0001
Ethnicity: Hispanic vs. White	.0743	9.6	.0019	.1827	57.5	<.0001	.1595	43.9	<.0001
Religion: Orthodox vs. Protestant							.2514	9.4	.0022
Religion: Atheist vs. Protestant	.1323	14.7	<.0001						
Religion: Something else vs. Protestant	-.1720	25.3	<.0001	-.1274	13.7	.0002	-.1543	20.2	<.0001

β = Standardized estimates

logit analyses) were used for analyzing the effect of different predictors on dream variables.

### 3. Results

The distributions for the dream recall frequency scale were as follows: almost every morning or more often (9%), several times a week (26%), once a week (15%), 1 to 3 times a month (19%), less than once a month (24%), and never (6%).

The frequencies for all six attitude items are depicted in Table 1. Comparing the means of these items showed that the “Learning about true feelings” item was the highest rated attitude of all, slightly above the scale midpoint of 2 = Neither agree nor disagree (see Table 2). The other two positive items followed, whereas the means of the negative items were lower than the scale’s midpoint.

Comparing the attitudes with each other (see effect sizes presented in Table 2), the “Learning about true feelings” item showed a medium effect size in relation to the other items, whereas the differences between the other items are of small effect size but still significant. That is, “Learning about true feelings” received the overall highest positive ratings, whereas the negative attitudes like “Dreams are random nonsense”, “Getting bored listening to others talk about dreams”, and “Too busy to pay attention to dreams” showed lower overall agreement means. The internal consistency (Cronbach’s alpha) with inverting the three negative attitude scales reversed was  $r = .701$ .

In Table 3, the ordinal regressions for the three positive attitude items are depicted. For all three variables, age was negatively related with the positive attitude, whereas dream recall frequency was positively correlated. Furthermore, women reported higher values for these three items than men did. Interestingly, lower education was related positively to the “Dreams can anticipate the future” and “Powers outside the human mind” items.

Ethnicity (white, black, Hispanic, other) was entered as a categorical variable and showed a significant effect for all three variables (“Learning about true feelings”:  $\chi^2 = 11.0$ ,  $p = .0117$ ; “Dreams can anticipate the future”:  $\chi^2 = 94.9$ ,  $p < .0001$ ; “Powers outside the human mind”  $\chi^2 = 68.1$ ,  $p < .0001$ ). The group comparisons indicated that people who

identified as black generally were more likely to report positive attitudes than were people who identified themselves as white.

Religious orientation (Protestants, Roman Catholics, Agnostic, Atheist, Nothing in particular, Something else) was also entered as a categorical variable and showed a significant effect for all three variables (“Learning about true feelings”:  $\chi^2 = 61.3$ ,  $p < .000$ ; “Dreams can anticipate the future”:  $\chi^2 = 246.7$ ,  $p < .0001$ ; “Powers outside the human mind”  $\chi^2 = 382.3$ ,  $p < .0001$ ). Although all groups were tested against the largest reference group (Protestants), only the significant differences are displayed in Table 3. Overall, the Atheists reported a less positive attitude than the Protestants, and the Agnostics did not strongly believe in the statements that dreams can anticipate the future and that dreams can be caused by outside powers. People with another religious orientation (“Something else”) indicated a more positive attitude towards the idea that dreams can predict the future. Interestingly, more Roman Catholics indicated a strong belief in the statement that some dreams are caused by powers outside the human mind than Protestants did.

In Table 4, the ordinal regressions for the three negative attitude items are depicted. Whereas gender and dream recall frequency were negatively associated with these items (symmetrically to the positive items), the effect of age differed between the items: Age was negatively associated with the “Dreams are random nonsense” item, positively with the “Getting bored listening to others talk about dreams” statement, and neither positively nor negatively to the “Too busy to pay attention to dreams” item. Education showed a small negative effect for two of the three items.

Again, ethnicity (white, black, Hispanic) was entered as a categorical variable and showed a significant effect for all three negative statements (“Dreams are random nonsense”:  $\chi^2 = 46.1$ ,  $p < .0001$ ; “Getting bored listening to others talk about dreams”:  $\chi^2 = 24.0$ ,  $p < .0001$ ; “Too busy to pay attention to dreams”  $\chi^2 = 34.1$ ,  $p < .0001$ ). The group comparisons indicated that blacks generally reported less negative attitudes than whites did. On the other hand, Hispanics reported more often negative attitudes towards dreams than whites did.

Religious orientation was also entered as categorical variable and showed a significant effect for all three statements

“Dreams are random nonsense”:  $\chi^2 = 58.8$ ,  $p < .0001$ ; “Getting bored listening to others talk about dreams”:  $\chi^2 = 28.6$ ,  $p = .0026$ ; “Too busy to pay attention to dreams”  $\chi^2 = 41.6$ ,  $p < .0001$ ). Although all groups were tested against the reference group (Protestant), only the significant differences are displayed in Table 4. Overall, people with an alternative religious orientation (“Something else”) agreed with the positive statements and disagreed with the negative statements more often than the Protestants and Roman Catholics (see Table 4). Atheists disagreed with the positive statements about dreams and disagreed with the negative statements more often than the Protestants and Roman Catholics.

#### 4. Discussion

Overall, the findings of the present study replicated previous findings regarding the gender and age effects: women tend to have more positive attitudes towards dreaming than men, and younger people tend to have more positive attitudes towards dreaming than older people. Similarly, dream recall frequency correlated with a positive and less negative attitude towards dreaming. Interestingly, ethnicity and religious orientation showed a marked effect on attitudes towards dreams, e.g., blacks reported an overall more positive attitude towards dreaming compared to whites, and people who are religiously “something else” have more positive attitudes towards dreaming compared to atheists.

From a methodological viewpoint, we acknowledge that the sample does not represent a perfect demographic mirror of the US population. However, the variability in socio-demographic variables in the sample is very large, and this constitutes a clear benefit compared to previous studies that included mostly student samples (Beaulieu-Prevost, Simard, and Zadra, 2005, 2009; Morewedge and Norton, 2009; Schredl, Brenner, and Faul, 2002; Schredl, Ciric, Götz, and Wittmann, 2003; Schredl and Goritz, 2017; Selterman, 2016). The replication of the positive relationship between dream recall frequency and positive attitudes towards dreams (Beaulieu-Prevost, Simard, and Zadra, 2009; Hill et al., 1999; Schredl et al., 2014) supports the validity of the present findings. Similarly, the decline of positive attitudes towards dreams with age is in line with previous findings (Schredl, 2013; Schredl et al., 2014; Schredl & Göriz, 2017). Due to the large age range in these samples (18 to 93 years) and in the present sample (18 to 97 years) it is highly plausible that cohort effects might have caused this decline, e.g., people of previous generations tend to value dreams less than the current generations. Longitudinal studies will be required to test the hypothesis that attitudes towards dreaming change over an individual’s lifetime.

One surprising result in the present study had to do with the statement, “dreams are random nonsense from the brain.” Younger people agreed with this statement more often than the older people did. This may reflect the higher familiarity among the young with modern trends in neuroscience that promote a skeptical view towards dreaming (one of the first articles that promoted this idea and that received considerable media attention was published by Hobson and McCarley (1977)). Another possibility is that older people are more familiar than younger people with the depth psychological theories of Freud, Jung, and others from the early 20th century, theories which took a more favorable view towards dreaming.

The gender effect found in the present study was also reported previously (Domino, 1982; Schredl, 2013; Schredl et

al., 2014; Schredl, Nürnberg & Weiler, 1996). Thus, the present findings support the idea that there might be a gender-specific dream socialization process in the U.S. similar to what has been reported in Germany (Schredl et al., 2015). It would be very interesting to carry out large-scale surveys in multiple countries with different cultural backgrounds.

All six items were measured on a scale ranging from 0 to 4 with the midpoint of 2. The statement “Dreams are a good way of learning about my true feelings” was the highest rated item with a mean of above 2, whereas the negative items like “Dreams are random nonsense from the brain” and “I am too busy in waking life to pay attention to my dreams” were rated below the midpoint of 2. This indicates that the overall attitude towards dreams in this sample is more positive than negative. The internal consistency of the 6 items was somewhat lower ( $r = .701$ ) compared to other studies, e.g.,  $r = .910$  of the six-item scale of Schredl et al. (2014), clearly indicating that a mixture of positive and negative items measuring different aspects of attitudes towards dreams are not as homogenous as a scale only measuring positive attitude towards dreams as in Schredl et al. (2014). This diversity is also evident in the differing patterns of significant predictors in the regression analyses. Constructing a homogenous attitude towards dreams scale was not the aim of the present study. As the present findings indicate, it would be very interesting to analyze larger studies using even more statements about dreams (more than 6), to explore these attitudes more deeply and, if possible, to identify stable constructs of attitudes towards dreaming and correlate them with specific demographic groups.

Blacks had significantly higher frequencies of agreement with the positive statements about dreams, and lower frequencies of agreement with the negative statements, compared to whites. There has been very little research on this topic before, so any interpretation must be considered tentative and liable to change in the face of new evidence. One possibility is that blacks have a more dynamic connection to indigenous dream traditions from Africa than whites do with their ancestral dream traditions (Shafon, 2012). Another possibility is that dreams become less important for people with power at the upper end of a social hierarchy (whites in U.S. society), and more important for people in lower positions on the hierarchy, with relatively fewer sources of power (such as blacks in U.S. society) (Bulkeley 2012). Again, this is quite speculative, and requires much more study before anything definitive can be said. It would be interesting to study the cultural effect on attitudes towards dreams in a more-detailed way (e.g., Chinkwita, 1993) and carry out large-scaled dream studies in many different countries and parts of the world, with populations of varying ethnic groups.

The ethnic dynamics seemed less straightforward with Hispanics, who were more likely to agree with the positive statements than whites, but less so than blacks. The Hispanics were also more likely to agree with the negative statements than both blacks and whites. So it would be very interesting to study – in addition to differences in dream content (Kane, 1994) – the history of indigenous dream theories throughout the Americas and how they continue to influence the attitudes of contemporary people with Hispanic background.

Interestingly, educational background does not make a major difference in attitudes towards dreams compared to the effects of ethnicity, gender, and religious orientation. The

strongest effects were that people with less education were more likely to agree with two of the positive statements: "Some dreams are caused by powers outside the human mind" and "Dreams can anticipate things that happen in the future." People with more education were somewhat more likely to agree with the negative statement, "I get bored listening to other people talk about their dreams." As no effect of education on dream recall frequency has been identified (Schredl, 2007; 2008; 2009), it would be helpful to study the education effect on attitudes towards dreams in more detail. One possibility is that a rising level of educational achievement leads to more clarity of thought, less acceptance of superstitious beliefs about dreams, and less patience with others who over-share their dreams. Another possibility is that the current educational system favors conventional thought and rationality, which generates a bias against dreams and dreamers, a bias that grows stronger the higher one rises in the system. Again, both of these factors may be at play, and several others besides.

The present findings clearly indicate that religious orientation strongly correlates with attitudes towards dreams. Atheists and agnostics, whose self-definitions set them clearly apart from members of organized religions, were most likely to disagree with the positive statements and agree with the negative statement "Dreams are random nonsense." This might suggest that religious people are more likely than non-religious people to have positive attitudes towards dreaming, but it seems more complex than that. In this survey, 6% of the total group of participants answered "something else" when asked about their religious affiliation. These people do not belong to a formal religious denomination, yet they do affirm some kind of religious or spiritual identity. The "something else" group was much less negative in their attitudes than the Protestants and Catholics, and overall more positive towards dreams. This seems like an especially important avenue for future dream research, looking more carefully at the "something else" population to study how their personal religious/spiritual outlook affects their attitudes towards dreaming. The polarity in attitudes between the atheists and the "something else" group raises fascinating questions about the interplay of religion and dreaming in contemporary Western culture.

Although the total number of Muslim participants was relatively small ( $N = 57$ ), we did find it suggestive that Muslims agreed with the statements "Dreams can anticipate the future" and "Some dreams are caused by powers outside the human mind" much more than did the Protestants and Catholics. This seems to correlate with anthropological claims that Islam values the prophetic and revelatory powers of dreaming more explicitly than Christianity does (Edgar, 2009).

There was also a potentially important difference within the two main Christian religious groups. Roman Catholics were more likely than Protestants to agree with the statement, "Some dreams are caused by powers outside the human mind." To be clear, both Catholics and Protestants were on the high end of agreement with this statement, and that makes sense insofar as the statement could easily be interpreted in theological terms as an endorsement of basic Christian teachings about God's influence on dreams (Bulkeley, Adams, Davis, 2009). However, a difference did appear, with Catholics agreeing at an even higher rate than the Protestants. This may relate to deeper theological differences between the two traditions. Catholics might be

slightly more open to the religious potentials of dreams because their tradition allows for the sacred to manifest in many ways, e.g., shrines, relics, art, rituals, the lives of the saints, etc. Dreams, in this context, could be considered just one more possible means of connecting with the divine. Protestants, however, following the example of Martin Luther cited above, might be slightly less open to the religious potentials of dreams because their tradition concentrates all attention on God's word as revealed in the Bible, which makes it unnecessary to explore any other source of religious experience.

The next step in studying this topic would be to pursue a longitudinal exploration of the dreams of people from different religious groups, to see if the distinctive theological beliefs of their groups have any measurable impact on the frequency and content of their dreams.

## 5. Conclusions

Studying people's attitudes towards dreaming has the potential to shed new light on the dynamic, rapidly changing social landscape of contemporary America and other Western countries. The results of this survey suggest that ethnicity and religious orientation are consistently correlated with people's attitudes towards dreaming, in addition to age and gender effects. Education seems to have a more modest impact.

Overall, a demographic portrait begins to emerge of what may be called "hyper-dreamers" (those who are most intensely engaged with dreaming) and "hypo-dreamers" (those who are most dismissive of dreaming). It seems that in contemporary American society, hyper-dreamers are most likely to be young, female, non-white, slightly less educated, and more spiritual than religious. The hypo-dreamers of the present-day U.S. are most likely to be older, male, white, slightly more educated, and atheist. We hope to explore this portrait in more detail with future studies in different countries with various cultural and religious backgrounds.

## References

- Aumann, C., Lahl, O., & Pietrowsky, R. (2012). Relationship between dream structure, boundary structure and the Big Five personality dimensions. *Dreaming*, 22(2), 124-135.
- Beaulieu-Prevost, D., C.C. Simard, and A. Zadra. (2005). Dream Recall Frequency and Attitude Towards Dreams: A Reinterpretation of the Relation. *Personality and Individual Differences*, 38, 919-927.
- Beaulieu-Prevost, D., C.C. Simard, and A. Zadra. (2009). Making Sense of Dream Experiences: A Multidimensional Approach to Beliefs About Dreams. *Dreaming*, 19, 119-134.
- Bulkeley, K. (1995). *Spiritual Dreaming: A Historical and Cross-Cultural Journey*. Mahwah: Paulist Press.
- Bulkeley, K. (2008a). *Dreaming in the world's religions: A comparative history*. New York, NY US: New York University Press.
- Bulkeley, K. (2008b). *American Dreamers: What Dreams Tell Us about the Political Psychology of Conservatives, Liberals, and Everyone Else*. Boston: Beacon Press.
- Bulkeley, K. (2012). Dream Recall and Political Ideology: Results of a Demographic Survey. *Dreaming* 22(1), 1-9.
- Bulkeley, K., K. Adams, and P.M. Davis (ed.s). (2009). *Dreaming in Christianity and Islam: Culture, Conflict, and Creativity*. New Brunswick, NJ: Rutgers University Press.

- Chinkwita, M. (1993). *The usefulness of dreams: An African perspective*. London: Janus Publishing.
- Domino, G. (1982). Attitudes toward dreams, sex differences and creativity. *Journal of Creative Behavior*, 16, 112-122.
- Edgar, I. R. (2009). A comparison of Islamic and Western psychological dream theories. In K. Bulkeley, K. Adams & P. M. Davis (Eds.), *Dreaming in Christianity and Islam: Culture, conflict, and creativity* (pp. 188-199). New Brunswick: Rutgers University Press.
- Hill, C. E., Diemer, R. A., & Heaton, K. J. (1997). Dream interpretation sessions: who volunteers, who benefits, and what volunteer clients view as most and least helpful. *Journal of Counseling Psychology*, 44, 53-62.
- Hobson, J. A., & McCarley, R. W. (1977). The brain as a dream state generator: an activation-synthesis hypothesis of the dream process. *American Journal of Psychiatry*, 134, 1335-1348.
- Kane, C. M. (1994). Differences in the manifest dream content of Anglo-American, Mexican-American, and Africa-American college women. *Journal of Multicultural Counseling and Development*, 22, 203-209.
- Morewedge, C.K. and M.I. Norton. (2009). When Dreaming Is Believing: The (Motivated) Interpretation of Dreams. *Journal of Personality and Social Psychology*, 96, 249-264.
- Schredl, M. (2007). Dream recall frequency by socioeconomic status of Chinese students. *Perceptual and Motor Skills*, 105, 636-638.
- Schredl, M. (2008). Dream recall frequency in a representative German sample. *Perceptual and Motor Skills*, 106, 699-702.
- Schredl, M. (2009). Recall frequency of positive and negative dreams in a representative German sample. *Perceptual and Motor Skills*, 108, 677-680.
- Schredl, M. (2013). Positive and Negative Attitudes Towards Dreaming: A Representative Study. *Dreaming*, 23, 194-201.
- Schredl, M. (2018). *Researching Dreams: The Fundamentals*. Cham: Palgrave Macmillan.
- Schredl, M., Berres, S., Klingauf, A., Schellhaas, S., & Göritz, A. S. (2014). The Mannheim Dream questionnaire (MA-DRE): Retest reliability, age and gender effects. *International Journal of Dream Research*, 7, 141-147.
- Schredl, M., C. Brenner, and C. Faul. (2002). Positive Attitude Toward Dreams: Reliability and Stability of a Ten-item Scale. *North American Journal of Psychology*, 4, 343-346.
- Schredl, M., Buscher, A., Haaß, C., Scheuermann, M., & Uhrig, K. (2015). Gender differences in dream socialisation in children and adolescents. *International Journal of Adolescence and Youth*, 20, 61-68
- Schredl, M., Ciric, P., Götz, S., & Wittmann, L. (2003). Dream recall frequency, attitude towards dreams and openness to experience. *Dreaming*, 13, 145-153.
- Schredl, M. and A.S. Göritz. (2017). Dream Recall Frequency, Attitude Toward Dreams, and the Big Five Personality Factors. *Dreaming*, 27, 49-58.
- Seltermann, D. (2016). Attitudes Toward Dreaming Predict Subjective Well-Being Outcomes Mediated Through Emotional Positivity Bias. *International Journal of Dream Research*, 9, 34-39.
- Shafton, A. (2012). African American dream beliefs and practices. In D. Barrett & P. McNamara (Eds.), *Encyclopedia of sleep and dreams: The evolution, function, nature, and mysteries of slumber* (pp. 19-20). Santa Barbara: Greenwood.
- Van de Castle, R. L. (1994). *Our dreaming mind*. New York: Ballantine.