

# Dreaming of God and the Role of Faith in Everyday Life: An Empirical Study

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## Abstract

In Christian faith, dreams – at least some – have been seen as messages from God; very powerful examples can be found in the Bible. However, empirical research regarding dreams of God is relatively scarce. Four hundred and fifty-two persons participated in the present survey, including a group from theology-related professions (theology students, priests, etc.). The findings indicate that the belief that dreams can be messages from God is related to the importance of faith in the everyday life of the dreamer and a positive attitude towards dreams. About 20% of the participants reported having dreams about encountering God, which was related to their waking life religiosity. On the one hand, the findings support the continuity hypothesis of dreaming, that is, that dreaming reflects waking life, while, on the other hand, these special dreams might help the dreamer to deepen their faith. Longitudinal studies are necessary to study this bidirectional relationship between waking life faith and religious dreams.

**Keywords** Christian faith · Dreams as messages from God · Dreams of encountering God · Continuity hypothesis

# Introduction

Several passages in the Bible include dreams as a major element, e.g., the Pharaoh's dreams about the seven fat and seven lean cows and the seven healthy and seven thin heads of grain (Genesis 41) or Jacob's dream of the stairway to heaven (Genesis 28). These examples illustrate that at least some dreams were seen as a message from God to help human beings (Koet, 2009). From an empirical viewpoint, an interesting question is whether Christians today still think that dreams can be messages from God. Analyzing the data of a large-scale

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survey carried out in the United States, Bulkeley and Schredl (2019) were able to show that Protestants were more likely to agree with the statement "Some dreams are caused by powers outside the human" than atheists, and Roman Catholics agreed more often with this statement than Protestants. This indicates that the belief that God can send messages in dreams is part of contemporary Christian faith.

The original formulation of the continuity hypothesis included statements such as "There is considerable congruence between what a person dreams about at night and what he does or thinks about when he is awake" (Hall & Nordby, 1972, pp. 125–126). Although the basic idea of continuity is widely accepted, there is an ongoing discussion of whether personal concerns and interests shape central aspects of dream content (Domhoff, 2017) or whether waking life experiences (including thoughts), especially emotionally salient ones, are the key element in the continuity between waking and dreaming (Schredl, 2017). For a full discussion of different concepts within the continuity framework, see also Domhoff (2018), (Erdelyi (2017), Jenkins, 2018), and Schredl (2012).

Based on the continuity hypothesis of dreaming, one would expect that persons who are religious in everyday life also dream more often about topics that relate to religion, similar to studies showing that sports students dream more often about sports than psychology students (Erlacher & Schredl, 2004; Schredl & Erlacher, 2008), music students more often about music (Vogelsang et al., 2016), and pet owners more often about their cats and/or dogs than persons who do not have pets (Schredl et al., 2020, 2021). Adams (2001) interviewed 66 children aged 9 to 11 years and found that 21.2% had dreams about God, e.g., "Laura found herself in the clouds with her relations and pets who had died. God was in the bath" and "Jenny described climbing steps made of clouds which led towards God. Her deceased rabbit was there which indicated to her that she was in heaven" (p. 103). Religious dream content was much more prominent in female United Arab Emirates students than in female Canadian students (Salem et al., 2013). This finding supports the continuity hypothesis as 98.2% of the United Arab Emirates students considered themselves spiritual/ religious, whereas only 15% of the Canadian students did so. For example, the topic of God was present in more than 20% of the dreams in the Arabic students and in less than 5% in the Canadian students (Salem et al., 2013). Overall, this study indicates that religiosity in waking life is reflected in dreams. However, the database is small; in particular, studies explicitly addressing the direct relationship between the role Christian faith plays in everyday life and religious dream content are lacking.

The present study was designed to investigate the link between the role of faith in everyday life and the belief that dreams can be messages from God. Second, we hypothesized that persons for whom Christian faith plays a crucial role in their everyday life dream more often about religious content, in this case about encountering God in their dreams.

# Method

#### Participants

Overall, 452 persons (263 woman, 175 men, 6 diverse, 8 missing values) with a mean age of  $35.49 \pm 18.33$  years (range: 12 to 92 years, 40 missing values) participated in the study. The majority of the participants (n=419) were Christian, three were Moslem, and two were Jewish. Six participants reported other religions, and 23 persons provided no data. Within the Christian group, 348 participants were Catholic, 64 Protestant, 3 Orthodox

(with additional missing values). Sixty participants were theology students, 46 participants had studied theology and worked in the field (priests, pastoral referees, religion teachers), 121 participants were students in other fields, 164 participants were working in fields not related to theology, and 54 persons were not working (e.g., were retired). For this question, seven participants did not supply their profession.

#### **Research instruments**

For eliciting dream frequency, the 7-point scale (coded as 0=never, 1=less than once a month, 2=about once a month, 3=about 2 to 3 times a month, 4=about once a week, 5=several times a week,  $6=almost \ every \ morning$ ) was taken from the German version of the Mannheim Dream Questionnaire (Schredl et al., 2014). The test–retest reliability over a mean interval of about 8 weeks is high, r=0.85 (Schredl, 2004).

Attitudes towards dreams were measured by six items with a 5-point format (0=not at all, 1=not that much, 2=partly, 3=somewhat, 4=totally), e. g., "I think that dreaming is in general a very interesting phenomenon." The internal consistency (r=0.910, Cronbach's alpha) and the test-retest reliability (r=0.842, two-week interval) were high (Schredl et al., 2014). For the purpose of this study, a new item with the same 5-point format was devised: "What is the meaning of dreams from your point of view? Dreams can carry messages from God (or other supernatural forces)" (translated from the German).

The last dream section addressed 20 different dream themes with the question: "In what percentage of the dreams you can remember did the following situations occur?" The possible range was 0% to 100%. Examples for dream situations were being locked up, unable to find something, being late, eating delicious food, being on the verge of falling, being chased, and being ill. For the present study, the topic "encountering God" was included in the analysis.

Lastly, several questions were presented that related to the faith of the participant in waking life: "Do you believe in the existence of God?" (2 = yes, 1 = I am not sure, 0 = no), "What role does your faith in God play in your everyday life? (0 = doesn't play a role at all, 1 = doesn't quite play a role, 2 = does play a role sometimes, 3 = often plays a role, and 4 = does play an important role), and "How do you estimate your religiosity?"  $(0 = not \text{ religious at all}, 1 = rarely \text{ religious } (e.g., in special life situations}), 2 = religious, and 3 = very religious).$ 

#### Procedure

Most participants (n=396) completed the online version of the questionnaire between November 2019 and March 2022, and 56 participants completed the paper version within this time period. The second author, who is a doctoral student in Catholic theology (University of Münster, Germany), approached persons from his university and different religious communities that he is in contact with as well as friends and acquaintances. As the distribution of the percentage estimates of encountering God dreams was not normally distributed, the variable was categorized into three group: persons with no such dreams, persons who gave estimates between zero and 10%, and persons with 10% or more dreams that included the topic of encountering God. Furthermore, the professions of the participants were categorized into professions related to theology (theology student, priest, etc.) and other professions.

Table 1Dream Recall FrequencyDistribution (n=451)	Category	Frequency	Percentage
	Almost every morning	50	11.01%
	Several times a week	130	28.82%
	About once a week	106	23.50%
	About 2 to 3 times a month	80	17.74%
	About once a month	39	8.65%
	Less than once a month	38	8.43%
	Never	8	1.77%

For carrying out statistical procedures, we used the SAS 9.4 software package for Windows (Cary, North Carolina, USA). Ordinal regressions were computed for analyzing the effect of different predictors (profession, parameter of engagement in faith in waking life) on dream-related variables controlled for age and gender. As the number of participants with diverse gender was small (n=6), these participants were not included in the analyses. All variables were entered simultaneously. Effect sizes were determined according to the formula given by Cohen (1988).

## Results

The distribution of the dream recall frequency within the sample is depicted in Table 1. More than 60% of the participants recalled dreams at least once a week, and only a small proportion of the participants (about 2%) claimed that they never recalled dreams. The mean of the Attitude Towards Dreams Scale was  $2.81 \pm 0.82$  (n=446). As the value can range from 0 to 4 (midpoint: 2), the sample showed overall a positive attitude towards dreams. The distribution for the statement about dreams carrying messages from God is depicted in Table 2. About one-third of the participants stated that they did not agree with this statement, while about one-third did think that – at least partly – dreams carry messages from God. The group with theological professions showed higher scores than the group with nontheological professions (see Table 2).

The mean percentage of dreams about encounters with God was  $1.99\% \pm 7.73\%$  (n=356); that is, on average 2% of the remembered dreams included this topic. However, the distribution was skewed towards the left as many participants did not report having

	Total sample $(n = 448)$	Total sample $(n = 448)$		ofessions	Non-theology professions $(n=336)$	
Category	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Totally	7	1.56%	2	1.89%	5	1.49%
Somewhat	50	11.14%	16	15.09%	32	9.52%
Partly	101	22.49%	33	31.13%	65	19.35%
Not that often	152	33.85%	38	35.85%	113	33.63%
Not at all	139	30.96%	17	16.04%	121	36.01%

 Table 2
 Agreement With the Statement That Dreams Can Carry Messages From God

any dreams with encounters with God (see Table 3). About 20% of the participants did report such dreams. The group with theological professions showed higher percentages of persons who reported having such dreams than the group with nontheological professions (see Table 3).

The distribution for the statement "Do you believe in the existence of God?" was as follows: Yes (n=310), I am not sure (n=92), No (n=48), with 2 missing values. For the question concerning what role does faith in God play in their everyday life, 48 participants stated that it doesn't play a role at all, 49 that it doesn't quite play a role, 84 that it does play a role sometimes, 97 that it often plays a role, and 173 that it plays an important role (with one missing value). The answers regarding religiosity were: 55 were not religious at all, 99 were rarely religious (e.g., in special life situations), 169 were religious, and 127 were very religious (with two missing values). The results indicate that there was a high number of persons (see professions) that were very immersed in their faith in waking life. As these items were highly intercorrelated (Existence of God – Role of faith in everyday life: r=0.722, Existence of God - Religiosity: r=713, Role of faith in everyday life - Religiosity: r=0.869, all Spearman rank correlations with p < 0.0001), the item of the role of faith in everyday life was selected as the predictor for the regression analyses. A regression analysis for this variable indicated that older persons (standardized estimate: 0.4026,  $\chi^2 = 45.7$ , p < 0.0001, effect size = 0.716) and persons in theology-related professions (standardized estimate: 0.5621,  $\chi^2 = 76.6$ , p < 0.0001, effect size = 0.970) had higher scores regarding the role of faith in God played in their everyday life, whereas gender was not associated (standardized estimate: 0.0118,  $\chi^2 = 0.1$ , p=0.8240, effect size=0.022). The explained variance was  $R^2 = 0.3034$  (n=402) with all variables entered simultaneously. The Spearman rank correlation between dream recall frequency and the role faith played in everyday life was nonsignificant (r = -0.040, p = 0.3995, n = 444).

The first regression analysis (analysis 1 in Table 4) indicated a strong association between the role faith plays in everyday life and the belief that dreams can carry messages from God. All other variables (age, gender, and profession) were not related. However, adding the attitude towards dream score showed that an additional part of the variance is explained (analysis 2 in Table 4) without changing the magnitude of the association with the role of faith in everyday life. That is, believing that dreams can carry messages from God is related to daytime faith and an overall positive attitude towards dreams.

As expected, participants who reported that their faith in God played an important role in their everyday life also more often reported having a dream about an encounter with God (see Table 5). Age, gender, profession, and dream recall frequency were not associated with dreaming about encounters with God.

	Total sampl $(n=356)$	e	Theology professions $(n=88)$		Non-theology professions (n=269)	
Category	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
10% or more dreams about encountering God	29	8.15%	10	11.49%	19	7.14%
Between 0 and 10%	41	11.52%	11	12.64%	30	11.28%
No such dreams	286	80.34%	66	75.86%	217	81.58%

 Table 3
 Dreams About Encountering God

Table 4         Ordinal Regression Analyses for the Statement "Dreams can carry messages from God"	tatement "Drean	ns can carry 1	nessages from G	od"				
Variable	Analysis 1				Analysis 2			
	SE	$\chi^2$	b	Effect size	SE	$\chi^2$	b	Effect size
Age	0769	2.0	.1554	0.142	.0083	0.0	.8844	0.014
Gender $(2 = \text{female}, 1 = \text{male})$	0340	0.4	.5123	0.063	0823	2.4	.1236	0.155
Profession (theology vs. other professions)	.0108	0.0	.8463	0.020	0499	0.8	.3810	060.0
Role of faith in everyday life	.4724	53.0	<.0001 <sup>a</sup>	0.783	.4991	56.5	<.0001 <sup>1</sup>	0.816
Attitude towards dreams					.3695	37.9	<.0001	0.651
	$n = 399, R^2 = .1767$	=.1767			$n = 396, R^2 = .2602$	=.2602		
SE Standardized estimates. All four variables in analysis 1 and all five variables in analysis 2 were entered simultaneously <sup>a</sup> One-tailed	n analysis 1 and	all five variat	oles in analysis 2	were entered simul	taneously			

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Variable	SE	$\chi^2$	р	Effect size	
Age	.0013	0.0	.9862	0.006	
Gender $(2 = \text{female}, 1 = \text{male})$	1623	3.8	.0506	0.219	
Profession (theology vs. other professions)	0718	0.8	.3747	0.100	
Dream recall frequency	.0918	1.2	.2713	0.122	
Role of faith in everyday life	.4581	16.3	<.0001 <sup>1</sup>	0.462	
$n = 322, R^2 = .1131$					

Table 5 Ordinal Regression Analyses for the Categorized Variable of Dreams About Encounters With God

SE Standardized estimates. All four variables in analysis 1 and all five variables in analysis 2 were entered simultaneously

# Discussion

Regarding the belief that dreams can be messages from God, the findings indicate a continuity between biblical times and modern times. In other words, Christians whose faith plays an important role in their everyday lives think that dreams can carry messages from God. Although dreams about encountering God were relatively rare, religious persons more often reported these dreams – supporting the continuity hypothesis of dreaming.

The first methodological topic that must be addressed are the sample characteristics. The percentage of persons never recalling dreams in the present sample (about 2%) was much smaller compared to representatives samples with about 30% who were non-recallers (Schredl, 2008, 2013). Therefore, the percentage of about 20% of persons reporting dreams about encounters with God would be much lower in the general population. However, the correlations found in the present study should not be affected by this. As the second author recruited the participants for the study, there is a relatively large number of persons who are deeply involved in religion (theology students, priests etc.). This is – to our knowledge – the first study systematically addressing this specific group in an empirical study. This can be seen as an advantage as the range of the time spent with religion during waking life is large, which can be seen in the distributions of the variables indicating faith in God, the importance of faith in everyday life, and religiosity, and thus is beneficial for computing regression analysis between these variables and dream-related variables. The second methodological issue that should be addressed is the retrospective measurement of the percentage of dreams with God encounters. On the one hand, this is an advantage as it facilitates eliciting topics that occur quite rarely; this would be much more difficult if only one dream (cf. Salem et al., 2013) per participant was included. A previous study on sports dreams (Schredl & Erlacher, 2008) showed that retrospective estimates about the frequency of sports dreams were comparable with figures obtained from content analysis of diary dreams (Erlacher & Schredl, 2004), indicating that such retrospective estimates about frequencies of specific topics are valid.

As expected, persons for whom their Christian faith (almost all participants were Christians) played an important role in their waking life were more likely to agree with the statement that dreams can carry messages of God, confirming the previous findings of Bulkeley and Schredl (2019). Interestingly, it was not the profession, such as being a theology student or priest, per se that was related to this belief but the importance of faith in waking life (which was, of course, higher in those in theology-related professions). An unexpected finding was that an overall positive attitude towards dreams was an additional factor associated with the belief that dreams can carry messages from God. Based on findings that some dreams can have a strong impact on

one's own spirituality (Bulkeley, 2016; Hoss & Gongloff, 2017; Kuiken et al., 2006), this finding might be explained by an effect of dreams on waking life; that is, dreams with a profound encounter with God might alter the person's attitude towards dreams in a positive way. Thus, it would be very interesting to study the long-term effects of religious/spiritual dreams.

In line with the previous findings of Salem et al. (2013), persons who were very religious were more likely to report dreams in which they encountered God. Again, this is not simply due to the profession itself but to the role faith plays in everyday life. Thus, this finding supports the continuity hypothesis of dreaming (Schredl, 2018). However, this association between faith and dreaming can be bidirectional. Kuiken et al. (2006) studied so-called impactful dreams and found that transcendental dreams (experiencing intense bliss, profound feelings of oneness, etc.) can have "aftereffects" and stimulate spiritual transformations such as realizing one own's spiritual potential or even having enlightening insights. There are many anecdotal reports (Bulkeley, 2016; Hoss & Gongloff, 2017) that specific dreams can deepen the faith of the dreamer and might even affect their career choice. Unfortunately, no information on the impact of dreams about encountering God was elicited in the present study. It would be very interesting, to study this topic in a longitudinal design, especially in persons with theology-related professions.

In our view, the findings of the present study also have possible practical implications for pastoral care and counseling and psychotherapy. The close relationship between dream content, especially dreams with encounters with God found in the present study, and the role that Christian faith plays in one's waking life suggests that in practical pastoral work it could be very helpful to ask for faith-related dreams and then, if the person reported having an important spiritual dream, apply simple methods to work with those dreams (cf. Bulkeley, 2000) in order to deepen the person's understanding of their own spirituality.

To summarize, the present study indicated that God plays a role in the dreams of contemporary Christians, reflecting the role faith plays in their everyday lives. Studying the question of how helpful dreams can be in deepening faith, especially in phases with doubts, is a very interesting topic for future research. This would elucidate both sides of the interaction between waking life and dreaming (cf. Schredl & Reinhard, 2009–2010), or the extent to which waking life affects dreams, and, conversely, how dreams affect subsequent waking life.

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#### Declarations

Conflict of interest The authors declare that they have no conflict of interest.

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#### References

- Adams, K. (2001). God Talks to me in my dreams: The occurrence and significance of children's dreams about God. International Journal of Children's Spirituality, 6(1), 99–111. https://doi.org/10.1080/ 13644360120047478
- Bulkeley, K. (2000). Dream interpretation: Practical methods for pastoral care and counseling. Pastoral Psychology, 49(2), 95–104. https://doi.org/10.1023/A:1004621909255
- Bulkeley, K. (2016). Big dreams: The science of dreaming and the origins of religion. Oxford University Press.
- Bulkeley, K., & Schredl, M. (2019). Attitudes towards dreaming: Effects of socio-demographic and religious variables in an American sample. *International Journal of Dream Research*, 12(1), 75–81. https://doi.org/10.11588/ijodr.2019.1.54314

Cohen, J. (1988). Statistical power analysis for the behavioral sciences. Lawrence Erlbaum.

- Domhoff, G. W. (2017). The invasion of the concept snatchers: The origins, distortions, and future of the continuity hypothesis. *Dreaming*, 27(1), 14–39. https://doi.org/10.1037/drm0000047
- Domhoff, G. W. (2018). Can stimulus-incorporation and emotion-assimilation theorists revive the continuity hypothesis they deprived of cognitive meaning? A Reply to Jenkins. Dreaming, 28(4), 356– 359. https://doi.org/10.1037/drm0000091
- Erdelyi, M. H. (2017). The continuity hypothesis. *Dreaming*, 27(4), 334–344. https://doi.org/10.1037/ drm0000063
- Erlacher, D., & Schredl, M. (2004). Dreams reflecting waking sport activities: A comparison of sport and psychology students. *International Journal of Sport Psychology*, 35, 301–308.
- Hall, C. S., & Nordby, V. J. (1972). The individual and his dreams. New American Library.
- Hoss, R. J., & Gongloff, R. P. (2017). Dreams that change our lives. Chiron.
- Jenkins, D. (2018). When is a continuity hypothesis not a continuity hypothesis? Why continuity is now a problematic name for a continuity hypothesis. *Dreaming*, 28(4), 351–355. https://doi.org/10. 1037/drm0000089
- Koet, B. J. (2009). Divine dream dilemmas: Biblical visions and dreams. In K. Bulkeley, K. Adams, & P. M. Davis (Eds.), *Dreaming in Christianity and Islam: Culture, conflict, and creativity* (pp. 17–31). Rutgers University Press.
- Kuiken, D., Lee, M.-N., Eng, T., & Singh, T. (2006). The influence of impactful dreams on self-perceptual depth and spiritual transformation. *Dreaming*, 16, 258–279.
- Salem, M. O., DeCicco, T. L., Ragab, M. A., Yousif, S., Murkar, A. L., & Vaswani, M. (2013). Spiritual and religious imagery in dreams: A cross cultural analysis. *International Journal of Dream Research*, 6, 94–97. http://archiv.ub.uni-heidelberg.de/ojs/index.php/IJoDR/article/view/10333
- Schredl, M. (2004). Reliability and stability of a dream recall frequency scale. Perceptual and Motor Skills, 98, 1422–1426. https://doi.org/10.2466/pms.98.3c.1422-1426
- Schredl, M. (2008). Dream recall frequency in a representative German sample. Perceptual and Motor Skills, 106, 699–702. https://doi.org/10.2466/pms.106.3.699-702
- Schredl, M. (2012). Continuity in studying the continuity hypothesis of dreaming is needed. International Journal of Dream Research, 5, 1–8. http://archiv.ub.uni-heidelberg.de/ojs/index.php/IJoDR/ article/view/9306
- Schredl, M. (2013). Nightmare frequency in a representative German sample. International Journal of Dream Research, 6, 119–122. https://doi.org/10.11588/ijodr.2013.2.11127
- Schredl, M. (2017). Theorizing about the continuity between waking and dreaming: Comment on Domhoff (2017). Dreaming, 27(4), 351–359. https://doi.org/10.1037/drm0000062
- Schredl, M. (2018). Researching dreams: The fundamentals. Palgrave Macmillan.
- Schredl, M., Bailer, C., Weigel, M. S., & Welt, M. S. (2020). Dreaming about dogs: An online survey. Animals, 10(10), Article 1915. https://doi.org/10.3390/ani10101915
- Schredl, M., Bailer, C., Weigel, M. S., & Welt, M. S. (2021). Dreaming about cats: An online survey. Dreaming, 31(3), 279–288. https://doi.org/10.1037/drm0000176
- Schredl, M., Berres, S., Klingauf, A., Schellhaas, S., & Göritz, A. S. (2014). The Mannheim Dream Questionnaire (MADRE): Retest reliability, age and gender effects. *International Journal of Dream Research*, 7, 141–147. https://doi.org/10.11588/ijodr.2014.2.16675
- Schredl, M., & Erlacher, D. (2008). Relationship between waking sport activities, reading and dream content in sport and psychology students. *Journal of Psychology*, 142, 267–275. https://doi.org/10. 3200/JRLP.142.3.267-276
- Schredl, M., & Reinhard, I. (2009–2010). The continuity between waking mood and dream emotions: Direct and second-order effects. *Imagination, Cognition and Personality*, 29, 271–282. https://doi. org/10.2190/IC.29.3.f

Vogelsang, L., Anold, S., Schormann, J., Wübbelmann, S., & Schredl, M. (2016). The continuity between waking-life musical activities and music dreams. *Dreaming*, 26(2), 132–141. https://doi. org/10.1037/drm0000018

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