

## Subjective dream experiences index students' waking affect, individual concerns, conflict, and unconscious thoughts

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### **Abstract**

Dreams are the subjective experiences that occur during sleep, and their subject matter differs as a function of sleep stage or time of night. Dream content is reflective of the activity of brain structures concerned with information processing and memory consolidation [1]. Sigmund Freud, the founder of the psychoanalytic approach and author of *The Interpretation of Dreams*, described dreams as the “royal road to the unconscious.” He believed that the dreaming and the waking mind were continuous and that dreams were reflections of conflicts between unconscious desires and the conscious mind [2]. Freud proposed that the symbolic language of reported, or manifest dreams could be decoded to reveal the hidden latent dream—the result of a forbidden wish. His work inspired further research on the meaning and imagery contained within dreams that corroborated some of his views but not others, so that we now believe that dreams are the product of more than just unconscious desires [3]. This project seeks to comprehend the local understandings of dreams and their meanings—implicit and explicit—among young people in the United States today.

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## Introduction

Dreams are the subjective experiences that occur during sleep, and their subject matter differs as a function of sleep stage or time of night. Dream content is reflective of the activity of brain structures concerned with information processing and memory consolidation [1]. Sigmund Freud, the founder of the psychoanalytic approach and author of *The Interpretation of Dreams*, described dreams as the “royal road to the unconscious.” He believed that the dreaming and the waking mind were continuous and that dreams were reflections of conflicts between unconscious desires and the conscious mind [2]. Freud proposed that the symbolic language of reported, or manifest dreams could be decoded to reveal the hidden latent dream—the result of a forbidden wish. His work inspired further research on the meaning and imagery contained within dreams that corroborated some of his views but not others, so that we now believe that dreams are the product of more than just unconscious desires [3]. This project seeks to comprehend the local understandings of dreams and their meanings—implicit and explicit—among young people in the United States today.

The dream theories produced by modern, empirical research most relevant to this study are the psychodynamic approach and the continuity hypothesis. Psychodynamic dream theory propounds that dream imagery not only reflects impulses and conflicts but also past and recent experiences, individual emotions, problems and attempts at their resolution, and perceptions of the self, others, and one's environment [4]. The continuity hypothesis posits that the dreaming and waking minds are continuous in their cognitive functioning so that dreams are denotative of thoughts and events that occur in everyday life [2]. Other contemporary research-based conceptualizations of dreaming argue that the dream is largely focused on experiences in waking life, which are emotionally significant to the dreamer [5]. In a study on subjective dream theories concerning certain demographic characteristics, Olsen et al. (2016) reported that the highest agreement ratings among participants were for noncognitive psychological dream theories, which argue that dreams are reflections of that which occupies our minds and handles distress or emotional conflicts [2].

In his study on the repression of dream experiences, Calvin Kai-Ching Yu suggested that dream formation is driven by emotional turmoil [6]. Other studies have proposed that dream reports be considered indicators of mental health, as individuals with more symptoms of anxiety disclose dreams with more negative affect [7]. The present study examined dreams as an index of waking

affect and stress in addition to folk theories, analogies, and metaphors utilized in dream recall and reporting. “Folk theories” as used in this study are the implicit or explicit understandings individuals have about what is happening in their dreams. They become cognitive frames and a means of interpreting dreams and can be classified using content analysis.

The purpose of this interview-based anthropological research was to assess commonalities and differences in individual university students' dream experiences in order to understand if and how these dream experiences shape and reflect everyday life in our society. This study is anthropological in nature because this field has made significant contributions to our understanding of dreams. For example, in her study of Fijian dream and nightmare experiences, medical and psychological anthropologist Barbara Herr Harthorn suggested that nightmares and the affectivity of dreams, although not well studied cross-culturally, could be a promising avenue of research for studies on “individual and shared stress and conflicts” [8]. In my literature review of dream interpretation in American Indian groups, I learned that twentieth-century anthropologists documented how dreams affected every aspect of everyday life in California and Southwest Indian groups, as dreams were associated with doctoring and illness, songs, myths, hunting, ritual, and ceremonies. A paradigm has since developed in anthropological literature that demonstrates the importance of dream interpretation to individual identity in non-Western cultures. This model postulates that dreams are an alternative means through which people make sense of reality and that the study of attitudes toward dreams held by certain groups can contribute to the anthropological understanding of their world view. These perspectives, or the ethnography of dreams, can be viewed through a different lens, a culturally consistent one which examines how the convictions of a people fashion and reflect the affective dream experience or the parts of dreaming related to one's feelings and beliefs [8]. One of the objectives of this research is to draw on the approaches used in studies of other societies to look at the dream experiences of undergraduate students at UC Santa Barbara through that lens.

Ten undergraduate students participated in semi-structured ethnographic interviews (i.e., interviews with a structured interview protocol but the flexibility to pursue particular aspects of the interviewee's interest) focused on topics such as dream frequency, awareness, content, characteristics, effects, continuity with daytime experiences, and intersections with sleep behavior. The majority of participants reported that their dream experiences were always from their own perspective and commented on their unusual content, but this content varied descriptively. Most partic-

Participants produced folk theories about dreams and their meanings in line with psychodynamic theories related to individual affect and theories of cognitive process and continuity, but a few claimed that their dream content and waking concerns were highly discontinuous. Surprisingly, all participants reported getting sufficient sleep, with most reporting getting between six and eight hours per night. The findings suggest that dream reports can be an indirect means of measuring sleep hygiene, stress, and other waking emotions, and might reveal conceptions of the self, others, and the world. Despite the fact that dreams are a part of healthy cognitive functioning, the majority of participants admitted to rarely discussing or thinking about their dreams. This is not surprising, as our society seems to devalue dream experiences, and the subjective aspects of experience reflected in dreams tend to be subordinated in everyday life by our material and biological conditions. The study results serve as a reminder of the importance of subjectivities to anthropological research as reflections not only of individual experiences but also of shared meanings.

## Methods

The interview protocol was developed in accordance with Institutional Review Board (IRB) guidelines so that interviews were recorded with the consent of the participants and following the signage of the consent form. The questions were organized into topics so that interviews began with the researcher asking about the everyday lives of the respondents, and then later about what typically happens in their dreams, recent dream experiences, and dreams they had as a child, in addition to their sleep habits and opinions on what affects sleep and why dreaming happens. The interview process was piloted to determine which questions might be modified and made more understandable, and once the study received IRB approval, participants were recruited by word of mouth and using GroupMe. Interviews were conducted in a location of the participant's choosing, either on the UCSB campus or in Isla Vista, and incentives in the form of \$20 gift cards were given for participating. The interviews were recorded and transcribed verbatim, and interview duration ranged from thirteen to thirty-one minutes. The present analysis is based on content analysis of interview transcriptions, and the key themes of folk theories, analogies and metaphors, and perceived stress were determined by compiling responses into a spreadsheet matrix and comparing them.

Six of the participants recruited were female and four were male. Seven of the participants were in their second year of university and the rest were fourth years. There were three Communication majors, two Communication and Economics double majors, one

Anthropology and Theater double major, one Computer Science major, one Earth Science major, one Geography major, and one Psychological and Brain Sciences major. All participants were California residents who came from Arcadia, Bakersfield, Chico, Cupertino, Irvine, Mill Valley, Oakland, Redlands, San Ramon, and Whittier.

## Results

### Descriptive data on reported dream experiences

All respondents reported relatively similar sleep duration, between five and nine hours of sleep per night and seven hours on average, and seven participants said they manage to get as much sleep as they need. All participants except for one reported going to bed between 12:00 a.m. and 2:00 a.m., and one participant reported a bedtime of 10:00 p.m. Wake up times ranged between 7:00 a.m. and 12:00 p.m. All participants reported their bedtime pre-sleep activities as being on their phone, with the majority using social media. In response to the questions: "Do you usually have dreams? If so, what are they like? Are they stories or disconnected events, and what happens," four participants said that their dreams are stories, four others believed that they are disconnected events, and one reported their dreams as connected events. Nine participants stated that they encounter someone in a dream that they already know in the majority of their dreams, and one participant said they encounter someone familiar every two or three dreams. All respondents except for one who did not answer the question claimed that they usually appear as themselves in their dreams and not as someone or something else.

Half of the participants claimed that they had experienced sleep paralysis, which is when a person is aware upon waking or falling asleep but cannot move or speak. Three had experienced lucid dreaming, the experience where the dreamer is cognizant of the fact that they are dreaming. When asked if they dream in color, one participant claimed that they always dream in color, another stated that they do dream in color, and one said that they definitely had things in their dreams that they noticed are colors. Two participants said they did not know or couldn't remember but probably dream in color sometimes, and one of these two said that if they did dream in color, the colors would be faint, like black and white. Three participants responded by saying that their dreams looked "normal" or like real life, and one stated that they

see faded colors.

The dreams people reported involved a range of things the dreamer sees in their everyday life. These included the following: typical get-togethers and interactions with people familiar or important to the dreamer, attempts to escape someone or something, a feeling that something bad is about to happen, food or hunger, exploration of the forest or ocean, exam stress, awareness of some truth that others do not believe, a feeling of being uncomfortable and that something is off, fear, and the action of being stuck or in slow motion. Four participants reported having nightmares, and one of these reported having nightmares often. This concludes the descriptive data on reported dream experiences. In the next section, I will discuss the key themes of folk theories, analogies and metaphors, and stress.

## Themes

More detailed content analysis identified three main themes that characterize the individualistic nature of dreaming and how people make sense of their dreams: folk theories, analogies and metaphors, and perceived stress. The folk theories of dreams are diverse and include theories on the continuity of dreams with waking-life, cognitive process theories, stress continuity theories, psychodynamic theories, descriptive-oriented theories, process-oriented theories, and theories on the discontinuities between dream content and waking concerns, dream recall, projection, activation-synthesis, and information processing. Due to space constraints, I will only be discussing folk theories on the continuity of dreams with waking-life, psychodynamic theories, and stress continuity theories, in addition to analogies and metaphors and dreams as an index of stress.

### 1. Continuity of dreams with waking-life

Six participants expressed implicit or explicit folk theories supporting the continuity hypothesis of dreams. Explicit folk theories directly state a belief about dream phenomena, dream causality, or the meaning(s) of dreams; implicit theories take such meanings for granted but can be inferred from the assumed links respondents make between, for example, dreams and their interpretations. For example, when asked why he thought dreaming happens, one participant described how thought processes that often occur during the day might continue during sleep:

[...] My brain likes to think of potential explanations for things that are or like trying to predict the future. [...] I do catch myself day-dreaming, like thinking about like, all the things that could happen. So maybe that's just like a habit of mine that continues while I'm

asleep. So like dreaming would be like predicting the future. But, it would be kind of like, like predicting the likeliest future. [emphasis added]

This theory exemplifies cognitive continuity in suggesting that dreams are a continuation of habitual thought processes. In another example, two participants explicitly expressed the belief that their dreams are sometimes related to what they were doing or thinking about right before going to bed and one of them, in addition to another participant, said that they have a lot of dreams where the setting is familiar but what is happening is really different.

### 2. Psychodynamic theories of dreaming

Eight participants expressed implicit or explicit folk theories in line with psychodynamic theory. In response to the question: "Why do you think dreaming happens," one participant answered with an implicit psychodynamic approach to dreaming:

I guess there's some things that I think about during the day, like unconscious like subconsciously, and then during my or it's like sticking in my head but I don't really talk about it or anything and then usually, when I dream I realize like, the things that have been most important to me throughout that day will have like stuck with me without even knowing sometimes.

This folk theory is psychodynamic because it suggests that dreams are indicative of important thoughts and events existing outside of the dreamer's awareness, and it is an example of cognitive continuity because dreams are described as realizations of thoughts that have stuck with the dreamer that express conceptions of self and one's values. Another participant described an explicit psychodynamic theory of dreams as a way of resolving social conflict:

There's been times where I've had like, disagreements with people I care about in real life and then in my dream, we always make up. And then it's almost like a foreshadow for the future, as I know that it'll run that way anyway. [...] I think, because my mind, in my mind, I'm hoping everything's gonna work out then it happens in my dream and then it basically shows me how to resolve the problem.

This theory is in step with psychodynamic theory because the dream content stems from conflict and the participant's desire to

find a resolution.

### 3. Stress continuity

Half of the participants described folk theories pertaining to either stress continuity or the relationship between dreams and stress-related, waking concerns. One participant explained how periods of prolonged stress cause her to dream more and how the subject matter of her dream experiences relates to what she is experiencing in the wake state:

I noticed that I feel like when I'm stressed for you know, some period of time in a row, days in a row, that I seem to dream more, and then they're there. I don't know. They're not realistic. But if I really think about it, like what I'm experiencing is similar in theme to like what I'm stressed about.

Although the dream content is not a re-creation of what the participant is worried about while awake, they note that the themes of their stress dreams are related to the concerns of the stressful period during which the dreams occur. Another participant stated that his dreams usually stem from stress or the last thing he did before bed and recounted a couple of dreams he described as stress-related. In response to the question: "How often would you say that you encounter someone in a dream that you already know? If often, would you say that they act differently than they do in real life? Who controls their behaviors? What motivates them," he described the feelings he experiences in dreams, with one being stress:

I've noticed that dreams that are more like stress-related and where I'm stressed out, people around me act like ruder, but like the dream, so like, I think that's what controls them. So like whether or not how I'm feeling during the dream, if I'm feeling good, and that's like a good and happy dream. They're generally like the people they are. But if it's like, I'm really stressed out and I'm really upset, like, they're mean to me.

This participant expressed an implicit theory of projection and controllability in explaining how his mood influences the affective dream experience and whether or not the behavior of other people in the dream deviates from how they act in real life.

### 4. Analogies and metaphors

One of the things I looked for in dream reports was analogies and metaphors because of their importance as cognitive anchoring devices [9]. Seven participants used analogies and metaphors while describing their dreams, and the following are some exam-

ples:

[...] It's like the best way I can describe it to you is like if you take you know those like there's like fake pimple popping things that you can use. They're satisfying, that feeling. Yeah, like the satisfying like when you like pop like those. I like- They use for packaging and stuff. So yeah, you know when you pop those like that satisfying feeling. That's the type of feeling I would have when I'm dreaming. I don't, I can't remember like exactly how each object feels like but that's like the general feeling of like all of them.

I would say I do have dreams. A lot of the ones I remember, I feel like do a lot of déjà vu like I feel like I've seen things in like my daily life that I've seen in a dream previously. [...] I'd say they're probably kind of more like how a sitcom has like a three to five minute like scene I'd say that's a pretty accurate description of them, very specific things. Somebody doing something, you reacting a certain way.

In response to the question: "so you've never had someone in a dream act like strangely or do something that they wouldn't normally," one participant responded:

I mean, yeah, but like they do that later on. It's not it's not that people act regularly it's that it's it's gonna sound really weird but like, you know, like That's So Raven, it's like that.

### 5. Dreams as an index of stress and waking affect

Two participants explicitly expressed how their dreams are occasionally related to what they had been feeling that day. Seven participants said that they had experienced fear in a dream or had woken up scared because of one, and two of them told me that they had experienced an elevated heart rate upon waking. One participant stated that they are sometimes scared to go to bed because they don't want to have bad dreams. Half of the participants reported having dreams related to midterms and finals and during other stressful periods. One participant stated that she experiences something in a dream that she experienced during the day several times a week, and discussed how the anxiety she is feeling translates into her dream life:

My stress dreams usually come up around finals time. [...] They all just revolve around you like being so anxious and like sitting in a test environment and like failing the test. And then I just like freak out and then I wake up just really anxious.

In relaying how her dreams reflect what she is stressed about and how those experiences augment that anxiety, this participant ex-

pressed a theory of stress continuity. Another participant reported a similar folk theory when explaining how his dreams vary with his mood:

[...] Dreams are indicative of my mood but the content isn't realistic. Like it's not like, oh, me skateboarding[to] classes, me it's me like, jumping around like Spider-Man happy when I'm not stressed out versus like the crazy like, dream about my my friend and the math professor, which isn't very realistic to be like during finals week when I'm stressed out.

Both statements are implicit, psychodynamic theories of emotional regulation that posit that dreams are the result of an individual's actual feelings and demonstrate how dream content might serve as a measure of stress and other waking feelings.

## Discussion

Participants did not report violent or sexual dreams or identify symbols in their dream experiences, so there is no evidence that they are proponents of Freud's ideas about the hidden psychosexual meanings behind symbolic language in dreams. Most folk theories were implicitly or explicitly psychodynamic as they related to individual feelings and concerns, conflict, and unconscious thoughts. All respondents reported encountering someone familiar to them in an overwhelming majority of their dream experiences and this sense of familiarity may be indicative of some continuity between everyday life and dream life, which was the second most popular form of folk theory. Participants generally had a hard time recalling the use of their senses in dream experiences, which is suggestive of their not being attuned to sensory modalities in the way they made sense of their dreams and of a lack of cultivating memories of dreams.

The many folk theories related to the affective dream experience further illustrate how dreams can function as indices of stress, fear, and other waking concerns. Dreams that are not explicitly labeled as stress dreams might also be indicative of one's mood. For example, one participant reported a dream experience where members of her family got into a car accident, and she believed that it happened because she went to bed looking at news on the deaths of Kobe and Gianna Bryant. Although in real life a car accident would be labeled as a stressful and traumatic event, it was not described as such. However, she did say that the dream freaked her out, and talked about how she will only really think about dreams if they are bad and involve family. A few participants described the emotional significance of dreams during

which family members were threatened, hurt, or killed, and it may be that when people close to the dreamer are the central focus of a dream, it has more of an impact on waking affect. Future research should examine this, in addition to how dreams regulate emotions and might help the dreamer realize and resolve internal and social conflicts. Two participants, both male, mentioned either having or not having superhero dreams, and this would also be an interesting avenue to explore. Perhaps the presence of themes such as this one is symptomatic of hypermasculinity or other aspects of the dreamer's identity.

Participants appeared to have difficulty remembering dreams and several confessed to not having thought about or discussed dreams before. It was not easy for them to describe the kinds of colors that they saw or for them to remember the dreams they had in childhood, possibly because dreams were viewed as an individualistic experience in our society. This absence of discussion reinforces the increasingly observed lack of dream acknowledgment in the Global North. Another factor contributing to the anti-dream climate in the United States might be that our lives are saturated by entertainment and graphic representation, and dream experiences were reported by some participants in related terms. A few participants used analogies and metaphors concerning television shows, characters, and genres to describe their dreams. I looked for these in reports because of their potential of use as heuristics and insights into the analytical frameworks people use to piece together the disconnected thoughts, images, and feelings that occur in dreams. Future research should explore this further because people who are trying to make sense of something that they don't completely understand might anchor their views in things that they do know about, and these understandings can enrich dream theory.

As a cultural anthropology major, I believe that dreams are a mechanism that helps the dreamer understand the real world and are shaped by cultural beliefs. My convictions on the continuity of dreams with waking life undoubtedly informed the angle of investigation, my consideration of the findings most appropriate to elaborate on, and the framing of conclusions. The questions posed in interviews, for example, tended to frame dreams as stories, which might have led participants to believe that they needed to narrate their dreams in a performative manner. The majority of participants were friends or people that had lived on my floor when I was a Resident Assistant last year. Our shared experiences and identities as UC Santa Barbara students, in addition to their knowledge of my hopes for the study, defined our interactions, responses to questions, and in particular, the dream experiences that partici-

pants were willing to report. This might be why not all participants talked about nightmares, but it could also be because I did not ask about them in order for interviews to pose no more than minimal risk to participants. One of the advantages of knowing the students I interviewed, though, was that I did not need to be concerned with establishing rapport with participants.

The small, convenience sample was one of the limitations of this study. All participants were people familiar to the researcher, from California, and students at UC Santa Barbara. The sample was nonrepresentative and skewed slightly female, as only four of the participants out of the ten were male. The findings of this study are therefore not generalizable but suggestive. Future studies should expand the focus to a larger, more diverse sample with students from other universities and demographic groups.

Dream reports were given under somewhat unstructured conditions and if I were to repeat this experiment, I would formalize the interview process and recruit strangers. Some participants chose to be interviewed in public and noisy places. To have participants be comfortable with disclosing sensitive information, I would conduct interviews in private spaces in the future. I might ask participants to attempt to write down their dreams every morning the week prior to the interview to get people to think about them, as a few participants had difficulty with dream recall and expressed having not thought about them much before. Although interviews could not be in-person, studying affective dream experiences would be an interesting avenue to explore during the current COVID-19 pandemic because people are feeling more anxious than usual, and I have seen people on social media talking about how their dreams have been more vivid. More time at home might mean that people are increasingly attentive to their dream experiences and that they have a better sense of the relationship between dream content and emotions experienced during wake.

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