

Earliest Remembered Dreams

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Eighty-five earliest remembered dreams (ERDs) were gathered in personal interviews with adults living in a rural area of northeast America. The dreams were analyzed for content patterns and narrative themes, and the results were compared with the theories of S. Freud (1900/1965), C. G. Jung (1974), D. Foulkes (1999), G. W. Domhoff (1996), and A. Revonsuo (2000). ERDs tended to be nightmares, with a mix of realistic and fantasy elements. The findings largely agreed with Foulkes's and Domhoff's studies of children's dreams. Revonsuo's threat simulation theory received strong support, as did Jung's notion of early childhood as a time of "big dreaming." Freud's wish-fulfillment theory received less support, though some ERDs did include a manifestly wish-fulfilling dimension. Implications for therapy, education, parenting, and theories of human consciousness are discussed.

Keywords: children, dreams, nightmares, emotion, fantasy

The earliest remembered dreams (ERDs) of childhood occupy a unique position in the study of dreams. They are evidence of the psychological processes by which dreaming dawns in human consciousness. By means of such dreams, the waking self is initiated into a new dimension of reality, a reality in which the individual experiences unusual variations of awareness, knowledge, feeling, and volition. ERDs are not synonymous with the beginning of the brain/mind activation patterns underlying the ebb and flow of REM and non-REM sleep. The origin of these patterns stretches back into prenatal development, and it remains a mystery whether fetuses and very young children have genuine dreams prior to their ability to verbalize their experiences. What we do know is that, at a certain point in childhood—as early as ages 3 to 4 years, though usually a couple of years later—most individuals have specific dreams (or a series of

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recurrent dreams) that impress themselves on conscious awareness with unprecedented forcefulness and remain readily accessible in memory for long periods of time.¹ These dreams play a vital role in early child development insofar as they open the gates of consciousness to a broader sense of self-awareness in waking. The child becomes aware of having emotionally and perceptually real experiences in a state of consciousness dramatically different from waking. Considered in these terms, early childhood dreams can be understood as provoking a developmental transformation of consciousness: enriching children's epistemological sophistication, stimulating their capacity for empathy, and expanding (both happily and frighteningly) their sense of existential possibility.

Early childhood dreams have attracted considerable attention from Western psychologists, though the theoretical claims made about their significance have varied a great deal. The two pioneers of early 20th century dream research, Sigmund Freud (1900/1965, 1918/1974) and Carl Jung (1965, 1974), both claimed that early childhood dreams were clear illustrations of their respective theories about dreaming. For Freud (1900/1965), the earliest dreams of childhood are undisguised wish fulfillments, exemplifying in a naive form what occurs with greater subterfuge in adult wish-fulfillment dreams. For Jung (1974), first dreams are archetypal "big dreams," revelations of transpersonal wisdom from the collective unconscious. Three dream researchers of the early 21st century—G. William Domhoff (1996, 2003), David Foulkes (1982, 1999), and Antti Revonsuo (2000)—also used early childhood dreams as the evidentiary foundations for more general speculations about the nature of dreaming and consciousness. Domhoff (1996) and especially Foulkes (1999) have argued that early childhood dreams tend to be static, bland, and passive, reflecting an immature developmental stage of consciousness, whereas Revonsuo (2000) pointed to the prevalence of early childhood chasing nightmares as strong support for his "threat simulation theory" of dreaming.

Each of these theories makes a good case for a certain interpretation of early childhood dreams, yet each one is vulnerable to the criticism that it overgeneralizes in trying to impose a single explanatory framework on *all* such dreams. Everyone agrees, however, that early childhood dreams are crucial for understanding not only the general processes of dreaming but also the broader development of human consciousness.

This article offers a new view of the developmental significance of the most intensely memorable of early childhood dreams by means of a multifaceted analysis of a set of 85 responses to the question, "What is the earliest dream you can remember, whether it was last month, last year, or many years ago?" The responses were gathered as part of a longer sleep and dream interview, conducted in person with participants ranging from 15 to 88 years of age. These subjective reports, though influenced by memory, cultural expectation, and the interpersonal context of the interview, are nevertheless a rich source of new information about the phenomenology of ERDs. When analyzed in relation to the theories of Freud (1900/1965, 1918/1974), Jung (1965, 1974), Foulkes (1982, 1999), Domhoff (1996,

¹ In an unpublished 1993 study, Domhoff found that the average age of the first remembered dream was 6.5 years, compared with 3.5 years for the earliest remembered waking experience. The first dreams were frequently recurrent, with more negative content than in the first memories. Our study confirms those findings.

2003), and Revonsuo (2000), this material enables the formulation of a more integrated approach to early childhood dreaming. As we discuss in the conclusion, our approach has implications not only for dream theory but also for the practical role of dreams in therapy, education, and parenting.

METHOD

The dream reports used in this study were gathered in the course of a lengthy personal interview on sleep and dream patterns.² One of the 38 questions asked during the interview was "Can you describe the very first dream you ever remember having?" The participants in this study ($N = 109$) were interviewed in person for periods of 1–5 hr. All of them live in a rural, economically depressed area outside a large city in the northeastern United States, close to the Canadian border.

Using dream reports gathered in such interviews is, in itself, a questionable method in the eyes of Foulkes (1982). He insisted that the only reliable source of dream reports is the sleep laboratory, where the participants' sleep state can be precisely monitored and where researchers can awaken the participants and get immediate verbal reports of their dreams. All dreams gathered outside the lab are tainted by the corrupting influence of memory, secondary revision, and confabulation and thus cannot be included in the "reasonable" study of dreaming (Foulkes, 1982). We reject that argument because it assumes the sleep laboratory setting is a pure environment in which the true nature of dreaming will become clearly observable, free from all influences. Such an idealized image of "the laboratory" fails to account adequately for the influence of the experimental setting itself on the participants. Lab dreams are not necessarily more pristine or representative than other dreams. They are just one more source of information about dream experience, gathered under certain influencing conditions and circumstances. For some research projects, lab dreams provide adequate data; for other research projects, lab dreams are less helpful, and other sources of dream reporting are required. The study of earliest childhood dreams falls into the latter category.

More attention needs to be given to this issue, but for the practical purposes of this article we affirm a methodological pluralism in which multiple sources of information about dreaming are gathered, compared, and evaluated. The dream reports in this article come from a new source, one very different from Foulkes's (1982) sleep laboratory and also, for that matter, from the sources of Freud (1900/1965, 1918/1974), Jung (1965, 1974), Domhoff (1996, 2003), and Revonsuo (2000). As we show, this new source of information provides valuable evidence for a fuller understanding of early childhood dreaming.

Our approach is guided, in many of its details, by Phil King's recent reflections at the 2004 International Association for the Study of Dreams conference in Copenhagen, Denmark, on the use of content analysis and narrative interpretation in the study of dreams. King said that these two methods have usually been seen as opposites of each

² More specifically, each dream was gathered in the course of a standardized in-person interview with one of the coauthors. The same basic series of questions was asked of each participant, and his or her answers were transcribed immediately. For each dream report, the participants were asked for details about the characters, settings, colors, and emotions in the dream.

other; there has long been a “gap between the scientific analyses of dream content and understanding dreams as experiences. The former builds knowledge but renders the experienced dream irrelevant; the latter embodies meanings but does not create knowledge” (p. 1). King said that this gap between different methods of dream research can and should be overcome, and to that end he advocated the use of content analysis in combination with narrative inquiry. For content analysis, he endorsed the use (with some variations) of the Hall and Van de Castle (1966) system. For narrative investigation, King (2004) advocated a cooperative approach centering on the identification and exploration of special *motifs* and *themes*:

A dream motif is defined as a recurring setting and initial situation. “Motif” has connotations of template, form, domain, context, realm, arena. Examples of motifs include a family at home, people at work, players on a stage, the dreamer playing sports, an artist painting a picture. . . . The themes are understood as likely representations of the dreamer’s existential concerns. They may be symbolic, or direct and undisguised. . . . They can include the basic existential givens: concerns about death, freedom, isolation and meaninglessness. . . . They can include other categories such as pessimism, optimism, hopefulness, despair, awkwardness, depth of feeling, various specific emotions, interpersonal contact and support, and so forth. (pp. 7–8)

In the present article, we follow King (2004) in identifying a set of motifs and themes that can be studied in conjunction with content analysis. We believe that this kind of approach is especially helpful in the study of first dreams because there is so much good research already on both sides—Freud (1900/1965, 1918/1974), Jung (1965, 1974), and other depth psychologists have explored the experiential richness of early childhood dreams, and Hall and Van de Castle (1966), Foulkes (1982, 1999), and Domhoff (1996, 2003) have identified content patterns in the development of children’s dreaming.

RESULTS

Of the 109 participants in the interview project, 85 (78% of the total) answered “yes” to the ERD question, reporting a dream they recalled from some time between the ages of 3 and 12 years. Nine of the participants reported a dream from some time between the ages of 13 and 20 years, and 15 participants either reported a dream from over age 21 or did not give an answer at all. Those dreams from ages 13 and older are not included in this study (though it would be interesting to analyze those reports in relation to research on patterns in adolescent dreams; Domhoff, 1996, pp. 86–88). Of the 85 participants who described a first dream from ages 3 to 12, 51 were girls and 34 were boys, making for an overall 3:2 gender ratio in the reports. Of the 85 positive responses, 22 of them (about a quarter of the total) described the ERD as a recurrent one.

The dreams were coded via the Hall and Van de Castle (1966) categories for characters, social interactions, misfortunes and good fortunes, emotions, and settings.³ Using DreamSAT (Domhoff, 1996), the statistical program available at www.dreamresearch.net, we determined the frequencies that appear in Table 1 for

³ All the dreams were coded by a single coder, and a subset of the dreams were recoded by two additional coders (none of whom was the interviewer). Intercoder reliability on all categories was calculated at 84%.

Table 1. Content Analysis Frequencies for Earliest Remembered Dreams Compared With Hall and Van de Castle (1966) Norm Dreams

Dream element	Female			Male		
	ERD	Norm	<i>p</i>	ERD	Norm	<i>p</i>
Character						
Male/female percentage	48	48	.996	67	67	.963
Familiarity percentage	77	58	.014	74	45	.002
Friends percentage	15	37	.002	22	31	.290
Family percentage	51	19	.000	37	12	.002
Dead/imaginary percentage	7	1	.012	10	0	.001
Animal percentage	22	4	.000	10	6	.358
Social interaction						
Aggression/friendliness	67	51	.133	73	59	.238
Befriender percentage	0	47	.000	75	50	.304
Aggressor percentage	6	33	.006	9	40	.015
Physical aggression percentage	90	34	.000	80	50	.014
Setting						
Indoor setting percentage	63	61	.875	50	48	.874
Familiar setting percentage	45	79	.000	40	62	.015
Self-concept percentage						
Bodily misfortune	48	35	.260	20	29	.505
Negative emotions	97	80	.003	81	80	.941
Dreams with at least one:						
Aggression	31	44	.062	39	47	.342
Friendliness	13	42	.000	11	38	.000
Sexuality	0	4	.008	3	12	.037
Misfortune	35	33	.793	28	36	.294
Good fortune ^a	20	10		22	14	

Note. ERD = earliest remembered dream.

^a Based on a recent revision of the Good Fortune Scale (Bulkeley, in press).

the boys' and girls' dreams. These frequencies are presented in comparison with those from the Hall and Van de Castle "norm dreams," gathered from 500 male and 500 female college students in Ohio in the early 1950s.

When we used content analysis to categorize and evaluate the first dreams, several intriguing patterns stood out. Regarding characters, the ERDs had a ratio of male to female characters that was identical to that of the norm dreams, with the girls dreaming about equally of men and women and the boys dreaming about men twice as often as about women. This finding replicates a great deal of research (summarized in Domhoff, 1996, 2003) pointing to a consistent, broadly cross-cultural frequency of male and female characters in dreams. In the present study, the "ubiquitous sex difference" originally identified by Calvin Hall (1984) comes into play immediately, with the earliest remembered expressions of the dreaming imagination.

The ERDs had fewer friends and more family members than the norm dreams and more animals and dead and imaginary characters, all of which is consistent with other studies on content patterns in children's dreams (Domhoff, 1996; Foulkes, 1999). With regard to social interactions, the most striking feature of the ERDs is the frequency of physical aggression, almost all of it directed against the dreamer, particularly against the girls. There was almost no sexual interaction, which is consistent with the preadolescent age of these dreamers. The boys more often

befriended other characters in their dreams, whereas the girls were more likely to suffer bodily misfortunes. It is interesting that, although the ERDs were filled with terrifying nightmares, the percentage of dreams with at least one aggressive act was somewhat lower than the percentage of the norm dreams with at least one aggressive act. The difference is that in ERDs (and in children's dreams generally) the aggression tended to be physical and directed against the dreamer, whereas in adult dreams more of the aggression was verbal and directed by the dreamer against other characters. Children, in other words, felt more physically vulnerable in their dreams than did adults. This seems an accurate reflection of most children's emotional experience in the waking world.

The settings in the ERDs and the norm dreams were about the same in terms of being indoors and outdoors, but the ERD settings tended to be less familiar and more fantastic, farther removed from ordinary daily reality. This was especially apparent in the large number of "titanic dreams," which we discuss below. Negative emotions dominated in the norm dreams, and the same was true for the ERDs (though some researchers have raised important questions about the relative frequency of positive and negative emotions in dreams; Kahn, Pace-Schott, & Hobson, 2002; Schredl & Doll, 1998; Strauch & Meier, 1996). The number of misfortunes was about the same, and the ERDs had more good fortunes, which is consistent with the other features (e.g., animals, dead and imaginary characters, unfamiliar settings) that generate a vivid sense of the bizarre and the fantastic in these dreams.

Following the advice of King (2004), we combined the content analysis approach with a narrative interpretation focusing on motifs and themes. We chose a total of seven motifs and two themes for use in this study. The motifs reflect both theoretical constructs (e.g., Freud's, 1900/1965, 1918/1974, wish fulfillment; Revonsuo's, 2000, threat simulation) and manifest content features (e.g., family members, flying). Each motif is briefly defined below, with an ideal typical example:⁴

1. Threat simulation: The dreamer is threatened by a person, animal, or creature (Ideal Type: "I was being chased by something. It reminded me of a cartoon scene like a dog chasing mice or some other animal. I was tripping while I was running and just as I was about to get eaten, I'd wake up.").
2. Misfortune: The dreamer has an accident, injury, or unexpected problem (Ideal Type: "I dreamed I was in a dentist's chair. I can see everything going on clearly but all the sounds are distorted. Everything sounds like the school teacher on a Charlie Brown cartoon . . . wawawawa. I feel helpless and out of control.").
3. Family: The dreamer is part of, or witness to, a threat to a family member (Ideal Type: "I dreamed my father was caught in a fire at work and died. I would see him trying to run down a hallway with smoke billowing, etc.").

⁴ Our use of "ideal types" comes by way of Max Weber (1946/1958) and Peter Homans (1989):

By *ideal*, in the concept ideal-typical, I wish to convey the presence of a formal pattern of structure but not the idea of perfection, whereas *typical* suggests that the pattern is really a type that is shared by others, although it is not necessarily average. (p. 123)

4. Titanic: The dreamer is alone in a strange, limitless environment and confronts elemental forces (Ideal Type: "In the dream I was in an abyss, a void, me and a large object. Sometimes it is a ball, sometimes a boulder. It is always dull in color and bigger than me. It would move slowly but it would try to mow me down. There was a light in the abyss but not a concentrated one.>").
5. Wish fulfillment: The dreamer envisions something pleasing and desirable (Ideal Type: "I had a dream when white go-go boots were really en vogue. I wanted them so bad but my mother said, 'No way!' I dreamed that there was a pair of white go-go boots in my closet.>").
6. Mystical: The dreamer has a positive encounter with a supernatural being or power (Ideal Type: "Jesus walked into the room and smiled at me.>").
7. Flying: The dreamer and/or another character flies, floats, or otherwise defies gravity (Ideal Type: "There were no visual aspects of the dream . . . simply a lucid sensation of flying.>").

Each dream was then sorted (by consensus among the three main coders) into one of these seven motif categories, and the resulting frequencies are shown in Table 2. The principal finding here is that threat simulations were the most frequently appearing motifs in ERDs. Even though the selection and definition of motifs is an inherently subjective process, the predominance of fear, danger, and helplessness in these dreams is unmistakable. When the threat simulation dreams were combined with the misfortune dreams, the family dreams (all but one of which are markedly negative), and the titanic dreams, the result was that three quarters of all ERDs were in some way or another distinctly disturbing and unpleasant experiences.

Regarding themes, two polar relations were chosen for this study. The first, bad versus good, reflects what is reported to be the child's own gut-level feeling about the experience—whether it was a bad dream or a good dream. (An adult might rephrase the contrast as negative vs. positive, weak vs. strong, or vulnerable vs. safe.) As just noted, three quarters of the reports in our study fell on the "bad dream" side of the spectrum. The second theme we chose, real versus fantasy,

Table 2. Motif Frequencies for Earliest Remembered Dreams

Dream motif	Girls (<i>n</i> = 51)	Boys (<i>n</i> = 33)	Total (<i>n</i> = 84)	% of total
TS	18	11	29	34.5
MIS	6	2	8	9.5
FAM	11	3	14	16.7
T	6	10	16	19.0
WF	4	4	8	9.5
MYS	4	0	4	4.8
FLY	2	3	5	6.0

Note. One dream, Dream 20, was too brief to be assigned to any motif cluster. TS = threat simulation; MIS = misfortune; FAM = family; T = titanic; WF = wish fulfillment; MYS = mystical; FLY = flying.

reflects our research team's interest in the relationship between dreams that more or less accurately simulate waking reality and dreams that fantasize about "unrealistic" places, people, activities, and experiences. This is obviously a difficult quality to measure with much precision, but some general features are nevertheless apparent. At least 15 of the ERDs were entirely realistic in their portrayal of known people, familiar places, and ordinary activities. If one did not know these were dreams, one would think they were reports of actual waking experiences. At least 11 of the dreams were entirely fantastic in their portrayal of bizarre settings, impossible activities, and imaginary characters (e.g., the bogeyman, Frankenstein's monster, cartoon characters). Another 5 dreams involved ghosts and/or haunted houses, and a further 3 dreams included religious figures (Mary and Jesus), all of which are considered total fantasy by some people but possibly realistic by others. In sum, the ERDs ranged all across the real versus fantasy spectrum, with slightly more falling toward the realistic end.

To push this narrative inquiry a step further, we used the themes as coordinates in a two-dimensional mapping of the motifs, which enabled a more precise characterization of their ideal types (see Figure 1). A few dreams varied from their ideal types in one detail or another (e.g., threat simulation dreams that tended more toward the fantasy end of the spectrum), but, for the most part, Figure 1 shows where the motifs lie in relation to the themes of bad versus good and real versus fantasy.

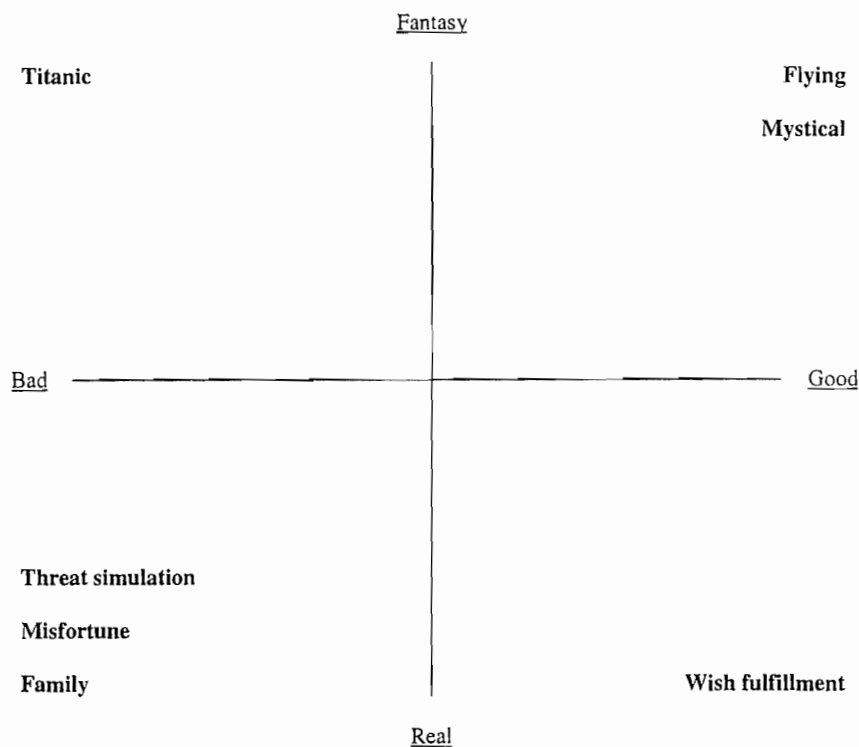


Figure 1. Mapping of motifs for earliest remembered dreams.

DISCUSSION

Memorability

One cannot read through these dream reports without being struck by their vivid intensity, which frequently took the form of powerful physical and emotional carry-over effects. Content differences aside for the moment, what the ERDs shared is a tremendous experiential power, and this seems to be the key to their unique memorability. A few of the reports indicate that the individual told the dream to other people the next morning, something that probably enhanced the memorability of the dream apart from its content. However, in other reports, it is clear the individual had never talked about this dream before being asked about it in the interview. It appears that the memorability of these dreams does not depend on any special social interaction or contemporaneous response; it derives more fundamentally from the unprecedented power of the dream itself. From this perspective, ERDs represent a spontaneous eruption of imaginal energy within the child's sleeping mind.

Divorce

Prior studies on children's dreams have found that children from divorced families periodically have dreams reflecting their emotional reactions to the intrafamily conflict (summarized in Siegel & Bulkeley, 1998). We identified 20 participants whose parents had been divorced, using additional data gleaned from the sleep and dream interview. Of those 20, 17 had ERDs that came after the divorce and/or had no obvious connection to it. Three of our participants reported ERDs that did refer to the divorce. Two of the dreams occurred during and/or after the divorce they represented and reflected appropriate emotions of anger at a parent (during the divorce) and longing for the parents to reunite (from the dream after the divorce). But it is interesting that the third dream occurred several years prior to the child being told of the impending divorce. This dream (recounted below) not only expressed the child's unconscious awareness of the approaching danger but also predicted the setting as it actually unfolded.

(I had this dream when I was between 7 and 9 years old. It was recurring.) Dad, Mom, and my sister and I are sitting next to a window in a restaurant. I looked out the window and wolves started coming toward it. It was dusk out. There was no food on the table. (I continued to have this dream till my parents divorced when I was 10. After I had the dream, my parents sat us down in a restaurant to ask us who we wanted to live with. My sister chose my dad so even though I wanted to live with him, I chose my mom because I felt bad for her. I woke up scared.)

The appearance of wolves marks an element of fantasy that could be seen as a classic evolutionary threat (being eaten by a wild animal) and also as a metaphorical expression of the dreamer's well-grounded fear that her family was in danger of being destroyed.

Titanic Dreams

"Titanic dreams" are named in reference to the Titans of Greek mythology, the primordial deities who reigned over the cosmos for untold ages before the appearance of Zeus and the Olympians. Classicist Edith Hamilton (1969) described the Titans in the following way:

They had the shattering, overwhelming strength of earthquake and hurricane and volcano. In the tales about them they do not seem really alive, but rather to belong to a world where as yet there was no life, only tremendous movements of irresistible forces lifting up the mountains and scooping out the seas. The Greeks evidently had some such feeling because in their stories, although they represent these creatures as living beings, they make them unlike any form of life known to man. (pp. 64–65)

As one coauthor of this article has discussed earlier (Bulkeley, 2000), a small but memorable number of dreams involve feelings very similar to those the Greeks felt toward the Titans. These dreams are unusually abstract and disembodied, filled with tremendous force, power, and magnitude. The dreamer is usually the only character present, and the setting tends to be limitless, fantastic, and devoid of organic life. The primary impression of the dream is the perception of strange forces and movements that have a mysterious intentionality to them. The 16 reports with this motif (a fifth of the total) suggest that titanic dreams may be especially frequent in early childhood in comparison with later life. Nine of the 16 dreams were described as recurrent, which is the highest proportion for any of the motifs.

Titanic dreams involve a high degree of fantasy and an unsettling sense of existential solitude. For example, Dream 18 from a 5-year-old boy, was as follows:

I am in the fields like the poppy fields in *The Wizard of Oz*. It is light out. I hear booms from a canon or something. I do not recall anyone else being there but I remember being alone in the field. That was the scary part . . . the aloneness.

This dream is interesting because it paradoxically places the dreamer in a space that is at once familiar (from a popular movie) and extremely far removed from ordinary waking reality. The poppy field scene in *The Wizard of Oz* is the one in which Dorothy succumbs to an enchanted sleep that threatens to steal her away from her friends in Oz, a place that is itself a dream reality created in Dorothy's imagination while she sleeps in a tornado-tossed farmhouse in Kansas. The poppy fields are, in terms of her state of consciousness, the farthest from Kansas that Dorothy has ever journeyed. In this boy's first remembered dream, he found himself in that otherworldly place, a solitary figure surrounded by ominous echoes of booming explosions.

Another dream, a recurrent one a boy started having at age 5, portrays an apocalyptic vision of the end of the world, caused by a nuclear war:

In the dream, there's a nuclear war going on. I'm in the middle of a desolate field. It is very dark out. There are lots of dead trees spread out. They are all knotted and gnarly looking but they are still standing. There is a very large Russian bomber jet flying overhead. Bombs with parachutes attached to them start slowly falling from the plane. None of them hit the ground. I'm standing there realizing this is the end of the universe. No one else is around. Everyone else is dead . . . and there I stand.

These dreams, which came to the boy in the late 1950s, during the chilliest days of the Cold War between the United States and the Soviet Union, reflect a

precocious awareness of the newfound ability of the human species to destroy itself. Humankind gains the power to wield the cosmic forces of the Titans at the cost of its' own destruction. It is not surprising that this was also the dream given by the participant to the question, "Can you describe the worst nightmare you ever had?"

Indeed, almost all of the titanic dreams in this set have negative feelings associated with them. They are, for the most part, intense nightmares, with a fearful sense of vulnerability and helplessness, sometimes involving powerful sensations of movement and sometimes having an eerie sense of calm. However, a couple of the dreams are not overwhelmingly frightening but rather evoke a more humbling sensation of existential self-awareness. Following is Dream 27, which the dreamer said began when she was 8:

I can only remember a huge dark sky filled with lots of stars. This dream recurred many times and what I remember most was the feeling it left me with every time. I felt very small and insignificant in relation to the sky and stars.

Birth Dreams

Beginning with Freud (1900/1965, 1918/1974) and continuing up to the present, there has been an ongoing argument surrounding the existence and validity of birth memories (see, e.g., Geza Roheim's, 1952, *The Gates of the Dream*, in which all dreaming is conceived as an imaginal return to the uterine conditions of prebirth existence). Recent developments in our understanding of how memories are formed and recalled help to explain these reports. Unlike explicit memories, in which children recall actual events that occurred during their gestation and delivery, implicit memories can appear when an emotion or physical sensation resembles that experienced at the time the memory was first formed. When memories originate in preverbal children, the children later may translate those memories through language or, unconsciously, through movement.

In our study, we found that a number of the flying and titanic dreams could easily be seen as references to memories of prenatal life. Two examples are worth mentioning:

I had this dream when I was about 4. My parents were into sea life so in addition to taking us to Marine Land, they'd also frequent the aquarium. In my dream, Dad is towering over me. I was with him at the aquarium with other kids from my preschool. Dad picked me up and put me on his shoulders. I looked into the tank of lion fish. Then I looked at the dolphin tank. I realized in the dream that the air was like water. I felt a weightlessness. I went around swimming up the stairwell and hovering there. It was a very enchanted feeling I woke up with.

In this dream, references to weightlessness, swimming, hovering, and "air that was like water" may correspond to the experiences of a fetus fully mobile within the womb and breathing amniotic fluid, abilities that emerge when the fetus is as young as 4 months old.

Another example is as follows: "This is a recurrent dream. It started when I was a kid. I cannot remember details of the walls or anything just that I am being squeezed between two walls or something." Here the reference to being squeezed may be an echo of the profoundly unpleasant experience of labor contractions and being pushed through the birth canal. To be sure, these are speculative interpre-

tations, and only a small number of ERDs appear to have even a symbolic connection to birth experiences. But the few dreams that do show signs of such a connection are highly suggestive, and we believe researchers should combine the ERD data with other sources of dream research to explore this possibility in greater depth.⁵

Implications for Freud (1900/1965, 1918/1974)

Freud (1900/1965) saw early childhood dreams as ideal illustrations of his theory that all dreams are the hallucinated fulfillment of instinctual wishes. In Chapter 3 of *The Interpretation of Dreams*, right after he analyzed the famous "dream of Irma's injection," he described several children's dreams that ostensibly express simple, undisguised wish fulfillments. In his later case study of "the Wolf Man," Freud (1918/1974) analyzed a dream his 23-year-old patient had when he was 4, a dream in which a pack of white wolves was sitting motionless on the tree outside the boy's bedroom window. The boy woke up screaming, scared of being eaten by the wolves. Freud, in one of his most fanciful interpretations, argued that the Wolf Man's dream was in fact the expression of a frightening but exciting fantasy of watching his parents having sex.

Our set of ERDs provides evidence in support of the idea that some early childhood dreams have a simple wish-fulfilling character. However, Freud's (1900/1965, 1918/1974) stronger claim that all children's dreams are simple wish fulfillments does not find support in our results. Perhaps Freud could argue that the preponderance of negative, frightening ERDs reflects the imperfect and immature functioning of the dream-work system, which, in the course of development, becomes more adept at transforming disturbing fears and desires into sleep-protecting fantasies. But even still, Freud's theory cannot account for the richly varied symbolic and metaphorical imagery in these dreams. Children's imaginations are capable of more complex thought and creative expression than Freud gave them credit for.

Freud (1900/1965, 1918/1974) would undoubtedly be interested in the four dreams in our study involving wolves, in three of which the wolves threatened to eat the dreamer. He would also be interested in the three dreams in which the dreamer was threatened in her bed (all 3 are girls). One dream, from an 11-year-old girl (Dream 11), had both a wolf and a bedroom setting:

In the dream, I was sleeping and had a dream about a wolf standing on the edge of my bed with his forepaws on the brown metal frame. He was just looking at me. He made a noise similar to a low growl but it was not menacing. He climbed onto the bed. I woke up frightened in real life.

Following Freud's (1918/1974) approach with the Wolf Man, it is easy to see this dream as an early expression of sexual fear and/or desire. Unfortunately, we do

⁵ For an excellent overview of the literature and recent developments in the field of prenatal and perinatal psychology as it looks at birth dreams, we recommend Cherionna Menzam's (2002) dissertation, *Dancing Our Birth: Prenatal and Birth Themes and Symbols in Dance, Movement, Art, Dreams, Language, Myth, Ritual, Play and Psychology*.

not have further information from the dreamer to know whether she would agree with such an interpretation. Still, Freud's basic idea that dreams express primal wishes, fears, and desires is amply supported by the data in this study. Though we reject his claim that all dreams are wish fulfillments, we agree with Freud's insight that many children's dreams take the form of imagining the satisfaction of vital desires.

Implications for Jung (1965, 1974)

In his autobiography *Memories, Dreams, Reflections*, Jung (1965) described his own ERD, which came at the age of 4. In the dream, he descended into a strange underground chamber in which he encountered an enormous phallus sitting atop a throne. His mother's voice said, "Yes, just look at him. That is the man-eater!", whereupon young Jung awoke in panic, covered with sweat. He said the dream preoccupied him all his life (he was 85 at the time he wrote *Memories, Dreams, Reflections*), and he said it forever colored his view of God, religion, and the power of human instinct. It is not surprising that when Jung developed his notion of "big dreams," he said early childhood was a time when such dreams were especially likely to occur. "Sometimes it [a big dream] was the first dream they could ever remember, and one that occurred between the ages of three and five" (Jung, 1974, pp. 11–13).

Our findings provide some support for Jung's (1965, 1974) claim that highly significant dreams with intensely memorable imagery and archetypal symbolism occur with special frequency in early childhood. The dreams already mentioned involving explicitly religious imagery of Mary and Jesus may be seen as ideal illustrations of "big dreams" as Jung defined them (the two Mary dreams came around age 5, the Jesus dream at age 12). Likewise, the vivid impact of several of the flying dreams is consistent with Jung's characterization. If the category of big dreams also includes nightmarish elements (as in Jung's own first dream), then several of the titanic and threat simulation dreams in our set could also be classified in this way.

The difficulty in applying Jung's (1965, 1974) ideas, however, lies in the inherent fluidity of the archetypes. In some dreams the archetypal symbols are plainly evident, but in others the manifestations are much more subtle and elusive. The inevitable ambiguity of the archetypes has led critics to accuse Jung, along with Freud (1900/1965, 1918/1974), of devising theories that can never be disconfirmed (Crews, 1995, 1998; Crews & Bulkeley, 2001). The evidence from our study is not strong enough to overcome that level of criticism, but our findings do affirm the more modest Jungian proposal that (a) a significant percentage of children experience highly memorable and impactful dreams at some point in their youth and (b) these dreams often bear striking symbolic connections to religious and mythological themes from around the world.

Implications for Foulkes (1982, 1999) and Domhoff (1996, 2003)

Foulkes's (1982, 1999) cognitive psychological approach to dreaming is grounded in a long-term study of children's dreams in the sleep laboratory. He has

shown that 3- to 5-year-old children seldom report a dream when awakened from a REM period, and when they do report one, it is usually a passively observed image of something ordinary and mundane, with little emotional content. Older children have more dream recall from REM awakenings, and their dreams include greater activity, variety, and thematic complexity. By the ages of 11 to 13, children's dreams become similar to adult dreams in frequency, length, and narrative structure. The key point of Foulkes's findings for dream theory is that the development of dreaming tracks the more general development of cognitive maturity. The ability to dream depends on the ability to be conscious, and Foulkes (1999) stated that consciousness does not truly develop before the ages of 5 to 7:

The evidence of the late appearance of self-identity in children's dreaming consciousness suggests that . . . conscious self-identity is how the early multiplicity of behavioral selves [in infancy] is integrated developmentally, and that the study of children's dreams might be used to index the course of this development. (p. 153)

Domhoff's (1996, 2003) recent work has connected Foulkes's (1982, 1999) research with Calvin Hall's (1984) studies of children's dreams. Domhoff highlighted two particular points of agreement: (a) Children have more animals in their dreams than adults do and (b) children and adults have the same disparities in the percentage of male and female characters (the "ubiquitous sex difference" mentioned earlier). The biggest difference is that Foulkes's data have less aggression, misfortune, and negativity than do the data in Hall's studies. Domhoff agreed with Foulkes that this difference reflects the fact that Hall's dreams were gathered from children in home settings, which led to a selection bias in favor of dreams with greater dramatic intensity. The truer data, he concluded, belong with Foulkes: "Hall (1953) and Hall and Domhoff (1963) are guilty of exaggeration" (Domhoff, 1996, p. 96).

The results of our study of first dreams replicate the two principal findings on children's dreams cited by Domhoff (1996). Like Foulkes (1982, 1999) and Hall (1984), we have found a high percentage of animals in these dreams and also a sharp difference between boys and girls in the percentages of male and female characters. Like Hall but unlike Foulkes, we found a high percentage of negative and nightmarish dreams, especially dreams with physical aggression directed against the dreamer. Foulkes was surely correct that these differences reflect the difference between home and lab settings. However, as noted earlier in the Method section, we do not automatically privilege the lab as the supreme source of data about dreaming. In fact, there is reason to believe the sleep laboratory has the effect of systematically diminishing the experience and reporting of dreams with negativity and aggression. Hartmann reported back in 1984 that long-time nightmare sufferers experienced fewer nightmares when sleeping in a laboratory setting, and Spoormaker, Bas, Schreuder, Kamphuisen, and Kleijn (2004) recently presented similar findings to the effect that people undergoing polysomnographic recording in a sleep lab experience a marked decrease in nightmare frequency. Domhoff's *mea culpa* might have been premature; it is possible that Foulkes's research contains a selective bias against dreams with (negative) dramatic intensity.

The findings of this study do not provide enough evidence to test Foulkes's (1982, 1999) theory that the development of dreaming depends on the development of other cognitive abilities. Nor can we confirm his observation that children's

dreams are “simpler” than adult dreams. Many of the ERDs are rather brief, with few characters, little description, and plain narratives. However, several dreams are also vividly portrayed, richly emotional, and characterized by highly unrealistic fantasy. Such dreams do not seem “simple.” On the contrary, they reflect an unusually powerful activation of the child’s budding imagination. Perhaps if we follow Foulkes’s idea that children’s dreams provide an index of cognitive maturation, we can see first dreams as developmental leaps in which children’s minds are opened to new dimensions of consciousness and existential self-awareness.

Implications for Revonsuo (2000)

Revonsuo’s (2000) threat simulation theory draws on recent work in evolutionary psychology to argue that the primary adaptive function of dreaming is to prepare humans for real threats in the waking environment. In this view, dreams are simulations of the most serious dangers our species has faced in its evolutionary history: threats from wild animals, male strangers, and natural forces. Unlike Freud (1900/1965, 1918/1974), who saw nightmares as failures of dream function (because the frightening emotions “break through” into consciousness), Revonsuo (2000) asserted that nightmares are valuable contributions to the adaptive fitness of our species:

In the light of the human ancestral environment, it makes great sense to simulate violent encounters with animals, strangers, and natural forces, and how to escape from such situations. Therefore, these simulations are incorporated as default values in the threat simulation system. (p. 1080)

Revonsuo (2000) built on the content analysis data of Hall and Van de Castle (1966), Domhoff (1996, 2003), and Foulkes (1982, 1999) to claim that the threat simulation function is especially active in children’s dreams, with their preponderance of animals, aggression, and physical victimization. As the individual grows up and gains in knowledge and mastery of the world, these primal threat simulation dreams recede in importance, to the point that Revonsuo actually doubted the value of dreaming for contemporary people.

The threat simulation theory receives strong support from our study of ERDs, a large number of which involve frightening threats from animals and male strangers. Bad dreams outnumbered good dreams by a three-to-one margin, and almost all the bad dreams centered on a danger to the physical welfare of the dreamer. The ERD data enhance the threat simulation theory all the more because these dreams are so intensely memorable—it follows from Revonsuo’s (2000) thinking that the very first dreams to be remembered should be directly related to a severe environmental threat.

Revonsuo (2000) went farther than the other researchers in accounting for the narrative content of ERDs. His theory does not, however, account for the symbolic and metaphorical features of these dreams (e.g., when a threat comes from a fantastic character and/or in a fantastic setting), nor does it account for dreams that do not involve simulated threats (approximately a quarter of the total). Regarding the latter, Revonsuo has said he is open to the idea that dreaming can serve functions other than threat simulation, but he insisted that such functions must be

shown to have adaptive benefits for human evolution. That is surely a prospect deserving more research attention in the future.

CONCLUSION

This study has shown that most adults are able to remember a particularly vivid dream from early childhood. These dreams tend to be frightening nightmares, with a mix of realistic and fantasy elements. Threat simulations were the most frequent motif, followed by titanic and family dreams. About a quarter of the ERDs were positive experiences in terms of fulfilling wishes, connecting with spiritual beings, or enabling the dreamer to fly. Our findings largely agree with those of Foulkes's (1982, 1999) and Domhoff's (1996, 2003) content analysis studies of children's dreams, though our data show a higher percentage of nightmares and a greater degree of creative imagination. Revonsuo's (2000) threat simulation theory receives strong support from our findings, as does Jung's (1965, 1974) notion of early childhood as a time of "big dreaming." Freud's (1900/1965, 1918/1974) wish-fulfillment theory receives less support, though some ERDs definitely do include a wish-fulfilling dimension.

What this means is that if we want to do justice to the ERDs themselves, we must develop theoretical models that integrate each of these perspectives. ERDs reflect the general development of consciousness in children, as Foulkes (1982, 1999) and Domhoff (1996, 2003) have said; they are evolutionarily biased toward the simulation of real environmental threats, as Revonsuo (2000) has said; they express primal desires, wishful fantasies, and ambivalence toward one's family, as Freud (1900/1965, 1918/1974) has said; and they can be psychologically and spiritually transformative experiences that dramatically expand conscious awareness, as Jung (1965, 1974) has said. Each perspective brings a necessary insight for the full understanding of the phenomenology of ERDs.

When we are exploring children's first dreams, we cannot be sure we are looking at the *beginning* of consciousness as much as the *continuation* of consciousness. Conscious self-awareness evolves over a much greater span of time than a single lifetime. Revonsuo's (2000) theory of threat simulation dreams implies that the knowledge of survival, accumulated by successive generations of our ancestors, is passed forward to us and practiced by us in our dreams. It may exist within our physical matter—or perhaps, as Jung (1965, 1974) would say, within the collective unconscious—and continues to be available outside the boundaries of time. It is when we overlay the stencil of a human lifetime that we believe we are seeing information unique to a single person's life. Likewise, when we try to define the evolution of consciousness as contained within an isolated individual, we see only the repeated "awakenings," or growth stages, being practiced again. We have not begun to approach a definable boundary of consciousness, and this should be further inspiration to continue the study of children's dreams. Perhaps, from a more spiritual perspective, we can see children's dreams as windows looking backward in time, providing evidence of the experience of the soul prior to embodiment. This information may remain fresh and available to young children for only a short time, before it is socialized out of their belief system and no longer recognized or acknowledged.

In closing, let us mention a few practical consequences of closer attention to early childhood dreams. For the parents, who are usually the "first responders" when their children wake up in the middle of the night crying about a nightmare, it is helpful to know that such dreams are a normal part of child development. Indeed, to the extent that many ERDs involve threat simulations, parents can help their children look at the nightmares as opportunities to imagine effective ways of responding to the threat. Children seem to have a greater cognitive flexibility than adults do in this regard (as one of this article's coauthors found with her daughter, who turned a threatening octopus from one dream into a creature that hugged and rocked her in another dream).

For mental health professionals, ERDs represent a valuable resource for the exploration of a client's early emotional life. In some cases, discussing a childhood dream may open up previously unrecognized connections between present-day problems and frightening childhood experiences. In other cases, an ERD may reveal neglected strengths and spiritual yearnings within the client's psyche.

For educators and teachers, ERDs are simply a reality of healthy child development and should be acknowledged as such in the classroom. If teachers truly want to elicit the greatest degree of creative expression, self-awareness, and empathy for others in their students, they should consider different ways of weaving dreams into their lesson plans. The fact is that young children are regularly experiencing very powerful dreams and nightmares, and they are naturally curious about them. It takes little effort to get children excited about sharing their dreams, drawing pictures of them, writing them as poetry, and acting them out. The educational benefit here comes not from interpreting the dreams as a therapist might but rather from giving children the freedom to express their dreams in a playful fashion, without intellectual analysis or moral judgment. Particularly for children who may be frightened by their nightmares, it can be a reassuring experience to learn that other children have bad dreams, too. Likewise, it may be enlightening to discover that other children have wonderfully positive dreams of flying, wish fulfillment, and mystical encounters.

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