

7.1 Interpreting Dreams:

What Causes Dreams and Methods for Controlling Them

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Have you ever had recurrent dreams and wondered what caused them? Or nightmarish dreams that you wish you could get rid of? Are there ways to control dreams? What do dreams tell us? I seem to have found some answers to all these questions and in the process discovered some insight into how the brain works while we are asleep.

Most dream interpreters today are like palm readers. They strive to tell your future and ascribe magical powers or messages to dreams that would be wonderful if true but are unfortunately as realistic as séances or reading tea leaves. I have found that an interpretation of dreams based on physical evidence can tell us a lot about how our brains work. Here, I discuss four types of dreams that I have had and for which I have found physical explanations. In discussions with friends, I discovered that many others have similar dreams and, almost certainly, similar causes. In the final section, I discuss what these dreams tell us about how our brain works. I have come to the conclusion that this approach to dreams is a lot more rewarding than that of soothsayers and similar dream interpreters. The four dreams discussed below are: (1) falling, (2) inability to run, (3) being late to meetings, exams, or inability to find your destination, and (4) a long, complex dream specific to me, as described below. The first three, I believe, are fairly general dreams that many people have.

(1)The Falling Dream

In this dream, I am falling, not from any specific place or down to any specific location, but definitely falling and scary. And I am totally powerless to stop the fall. Invariably, when I land, I am not injured. There is no pain. In fact, although I have hit bottom, it feels like a soft landing, and the dream always ends as soon as I land. The soft landing is especially curious because in any fall onto almost any surface you generally end up with some kind of disaster. What would explain all these details of this dream?

I discovered the physical cause of this dream when, one day, I woke up immediately after the dream and realized that my knees had fallen down. I was sleeping on my back with both of my knees tucked up and, as I straightened my legs, the weight of the bed cover and my legs caused my feet to slip out and the knees to fall. This falling knee caused my brain to create the falling dream! At first, this was just a hypothetical explanation, and a patently silly one at that. Why couldn't my brain figure out that my knees are falling? But once the hypothesis was made, I was able to test it every time I had the dream (over a span of several years), and I succeeded in verifying it several times. Upon awakening, I could distinctly remember that my knees had just fallen down. The fact that the knees fall onto the soft bed explains the soft landing and since nothing happens after that, the dream ends.

Why am I powerless to stop the knees from falling? As shown repeatedly below, when asleep, we sometimes have very little control over our muscles. Not only that, the sleeping brain can't even figure out the simple fact that the knee is falling. In addition, it concocts what should normally be an unbelievable scenario of a fall, and I actually end up believing it. This last part is the most preposterous, because I am effectively fooling myself! The fact that I can fool myself during a dream is a major discovery that will be discussed at the end.

(2)Inability-to-Run Dream

This is a very frustrating dream. I want to run, but can't. It doesn't matter if someone is chasing me or I just want to go somewhere fast, I can't run. When you run, you need to lean forwards. Therefore, in the dream, I try to lean forwards, but can't. Something is almost pushing me backwards. In the dream, I have even reasoned that if I can't run forwards or lean forwards,

then why not lean backwards and run backwards? That way, at least, I can get moving. What happens is that I can't lean backwards either, and my feet are immobilized and I don't make much progress forwards or backwards. When running, you need to first bring your knees forward and up so that you can kick backwards, but I can't do that either. What would cause such a sensation while I am sleeping?

I discovered the cause of this dream after I had solved the falling dream, so the explanation was easier to find. Again, the explanation came to me when I awoke immediately after the dream and found myself sleeping face down, on my stomach. Eureka! When lying on your stomach, you cannot change the angle of your body with respect to the bed; you can't lean forwards. Can't bring the knees up either, because the bed is in the way. Can't lean backwards because gravity is pushing you down. Can't walk backwards because the bed is in the way. This demonstrates again that you don't have much control over your muscles while asleep because, if you were awake, pulling the knees up wouldn't be that difficult even when lying face down. After finding the explanation, I was again able to verify it several times; i.e., when I awoke, I was sleeping face down.

At this point, I began to realize that maybe, most of my dreams had a physical explanation. However, the whole thing didn't quite make sense, because -- why would my brain not know that my knees are dropping or that I am sleeping face down? How can my brain dream such a complex dream and yet not be able to figure out such simple things? And my brain has concocted a false situation and succeeded in fooling me while dreaming (again!).

(3) Late-to-Exams or Getting-Lost Dream

This is another frustrating dream. Can you see a pattern emerging? I will speculate below why dreams tend to be negative or nightmarish. This is not one specific dream, but a class of dreams in which I am trying to get to an exam or go somewhere, but am late, and can't get there or find it. I might have to negotiate a steep slope or walk around buildings. Or if I am in a building, I am going through a maze of ramps, stairways, doors, elevators, etc., but I can't even get back to where I started. In fact, it gets worse and worse and more complex. After a while, I can get quite exhausted. This dream might occur when I am sleeping in an awkward or uncomfortable position from which I can't easily get out, like sleeping on my hand, or getting tangled up in the sheets or bedding. Any type of sleeping position that is uncomfortable, that I would like to get out of, but cannot do so easily while asleep. If I am tangled up in the sheets, I can't extricate myself easily while asleep, and the more I struggle, the more I get tangled up, and it can become exhausting. I have not been able to uniquely tie this family of dreams, or any of its members, directly to any specific cause, as for the other 3 dreams. However, I have a moderate case of sleep apnea, and the first onset of this type of dream coincides with what I estimate was the first onset of my sleep apnea. Thus the dream might be caused by my inability to breathe because of sleep apnea.

Whatever the precise cause, whether an uncomfortable position or sleep apnea, it is clear that if I had been awake, I would have easily figured out a solution. Thus the pattern that is emerging is that my ability to reason and solve problems is greatly impaired; very simple problems can stymie me while I am asleep.

(4) Solving My Long and Complex Dream

After solving the above three dreams, I was convinced that another recurrent dream I had also had a physical cause. This dream was long and complex, but always the same. It starts out pleasantly. I am going out for a hike, and in front of me is a gentle hill or rolling meadow leading, in the distance, to a mountain. The first indication that something was amiss came from that mountain. It went up in sheer vertical cliffs and the top was so high that I could barely see it. Nevertheless, I would embark on my hike, but immediately a scary situation arises: I am at the edge of a vertical cliff, and I can't even see the bottom! Getting afraid, I immediately turn around and try to go back, but the ledge that I am traveling on becomes

narrower, like I am walking on a gymnast's balancing beam. Finally, I am sensing that I am near the end, but must cross a final hurdle: a river! Before hopping over rocks to cross the river, I test it with my hand, and the water is cold and deep. At about this stage, the dream ends. How would I explain such a complex dream?

I solved it again after I awoke immediately after the dream. I was sleeping at the edge of the bed, with one hand dangling down, out from under the blanket. Now I could explain every detail of my dream! My dream apparently starts with me sleeping on my stomach, my chin on the bed, and I am looking at the pillow in front of me (the rolling meadow). Beyond the pillow is the vertical wooden headboard made of blocks of Canadian walnut that look like a sheer cliff, which is the mountain. With my chin on the bed, I can barely see the top of the headboard. So far, it is interesting that I am apparently looking at things in my sleep. Since I am sleeping on the edge of the bed, one hand falls off the edge, and that is the edge of the cliff that I am standing on. About seven inches from my bed is my night table with a narrow stepped edge like the top of a balancing beam (hard to describe). So my hand is apparently probing around. Since my hand is now out from under the blankets, it feels cold (the cold river). That's it! These explanations account for every detail of my dream! These explanations have convinced me that dreams CAN be interpreted, and that most of them may have physical causes. If this is all true, then we should be able to use the causes and explanations to deduce what the brain is doing during sleep. That's an exciting prospect even the soothsayer dream interpreters couldn't even dream of accomplishing.

(5)Controlling the Dreams

The most amazing thing about explaining these dreams was that I developed some control over them. After I was completely convinced that each explanation was correct, these dreams disappeared! I couldn't fool myself anymore! Thinking that falling knees is the same as falling off a roof or cliff is clearly fooling myself. But once the mechanism is understood, the brain doesn't get fooled. Thus although the brain is sufficiently shut off to be easily fooled during sleep, it still has sufficient capacity to recognize the truth once the mechanism is solved.

Still, fooling myself appeared to me somewhat farfetched. In order to convince myself that this type of fooling is possible, I had to find a real life example. Luckily, I found one. It is what magicians do. When you watch a magic trick, you know that it is not magic, but you fall for it every time, in the sense that it is totally mystifying and very exciting. Now the story changes completely if someone were to explain to you how the magic was done. Then, all of a sudden, the mystery and excitement disappears, and you end up concentrating on how the magician is executing the trick. You can't be fooled into thinking that it is magic. Thus, in a dream, our brain can be fooled as long as it doesn't know how it is being fooled. Since most people don't know the explanation for the dream, they obviously are unaware of the foolery going on, and the dreams keep recurring. Once you know the cause of the dream, you know that the brain was being fooled; therefore, it is now much easier for the brain to figure out the truth and the dream disappears. Before you figured out the truth, the brain did not even know that it was being fooled, so it had no reason to even attempt to look for the truth. Now it all seems to make sense.

(6)What these Dreams Teach Us about our Brain

These four examples suggest that most dreams have some concrete physical origin. I have never seen this type of explanation presented before, yet it all seems reasonable. As far as I know, the falling dream is quite universal -- many have this dream. For me, it was the falling knee; for someone else, it might be an arm or leg slipping off the edge of the bed.

The above results provide a plethora of possibilities for speculating about how the brain works. Here are some ideas. During sleep, most of the brain is turned off, so it is no surprise that the brain is easily fooled. It appears that the higher functions are more completely turned off, so that the reasoning ability is impaired the most. It may be that fear is the emotion that is

turned off last as you fall asleep and turned on first as you awake, perhaps for survival purposes. If an enemy attacks during sleep, fear is the first emotion that needs to be awakened. This may explain why the majority of dreams tend to be nightmarish. But of course, it may be different from person to person and some people may have mostly pleasant dreams, depending on the person's disposition. In my case, the evidence suggests that the dreams that I have solved occur just before I wake up. This suggests that most dreams occur during that brief period of time between deep sleep and awakening.

While there are sleep walkers who can control strong muscles during sleep, the above indicates that the effort to move muscles during a dream does not translate well into actual motion. Yet example (4) above indicates that there is plenty of motion during sleep, in addition to the normal motions needed to reposition the body periodically in order to prevent extended blood loss from pressure points, etc. Thus body movement during sleep is a perfectly normal process, in response to pain that develops after staying in one position for too long. Some people appear to be able to sleep all night in essentially one position; such people must have some method for supplying oxygen, etc., to pressure points so that sores do not develop (perhaps they shift imperceptibly to one side or the other to temporarily relieve the pressure).

I believe that I have given here some convincing examples of how dreams can be interpreted concretely based on reality rather than the false supernatural powers historically associated with dream interpretation. This approach seems to provide insight into how the brain works during sleep. One possible use of dreams that can be tied to reality is that they might become useful diagnostic tools for disorders such as sleep apnea. They might tell you a lot about your movements during sleep, and how you might change things so that you can get better sleep. You can also gain some control over dreams if you know their precise causes.