

## **DREAMS AND THEIR NATURE**

**Rimarchuk M.A., Panteleev I.V.**

**Scientific supervisor – Associate professor Yurdanova V.N.**

*Siberian Federal University*

Dreams are successions of images, ideas, emotions and sensations occurring involuntarily in the mind during certain stages of sleep. The content and purpose of dreams are not yet understood, though they have been a topic of speculation and interest throughout recorded history. The scientific study of dreams is known as neurology. Throughout history, people have sought meaning in dreams or divination through dreams. Dreams have also been described physiologically as a response to neural processes during sleep; psychologically as reflections of the subconscious; and spiritually as messages from gods, the deceased, predictions of the future, or from the Soul. Many cultures practice dream incubation with the intention of cultivating dreams that are prophetic or contain messages from the divine.

Lucid dreaming is the conscious perception of one's state while dreaming. In this state a person usually has control over characters and the environment of the dream as well as the dreamer's own actions within the dream. The occurrence of lucid dreaming has been scientifically verified.

Dreams of absent-minded transgression (DAMT) are dreams wherein the dreamer absentmindedly performs an action that he or she has been trying to stop (one classic example is of a quitting smoker having dreams of lighting a cigarette). Subjects who have had DAMT have reported waking with intense feelings of guilt. One study found a positive association between having these dreams and successfully stopping the behavior.

During the night there may be many external stimuli bombarding the senses, but the brain often interprets the stimulus and makes it a part of a dream in order to ensure continued sleep. Dream incorporation is a phenomenon whereby an actual sensation, such as environmental sounds, are incorporated into dreams, such as hearing a phone ringing in a dream while it is ringing in reality or dreaming of urination while wetting the bed. The mind can, however, awaken an individual if they are in danger or if trained to respond to certain sounds, such as a baby crying. Except in the case of lucid dreaming, people dream without being aware that they are doing so. Some philosophers have concluded that what we think of as the "real world" could be or is an illusion (an idea is known as the skeptical hypothesis about ontology). There is a famous painting by Salvador Dalí that depicts this concept, titled "Dream Caused by the Flight of a Bee around a Pomegranate a Second before Awakening" (1944). The first recorded mention of the idea was by Zhuangzi, and is also discussed in Hinduism makes extensive use of the argument in its writings. It was formally introduced to Western philosophy by Descartes in the 17th century in his "Meditations on First Philosophy". Stimulus, usually an auditory one, becomes a part of a dream, eventually then awakening the dreamer. The term "dream incorporation" is also used in research examining the degree to which preceding daytime events become elements of dreams. Recent studies suggest that events in the day immediately preceding, and those about a week before, have the most influence.

Dream recall is the ability to remember dreams. Good dream recall is often described as the first step towards lucid dreaming. Better recall increases awareness of dreams in general; with limited dream recall, any lucid dreams one has can be forgotten entirely. To improve dream recall, some people keep a dream journal, writing down or recording dreams.

Some record their dreams upon awakening, some take notes which they work out later. It is important to record the dreams as quickly as possible as there is a strong tendency to forget what one has dreamt. For best recall, the waking dreamer should keep eyes closed while trying to remember the dream and one's dream journal should be recorded in the present tense. Dream recall can also be improved by staying still after waking up, so the principles of state-dependent memory may apply. Similarly, a dreamer who changes positions in the night may be able to recall certain events of the dream by testing different sleeping positions. Autosuggestion may also help improve dream recall, by repeating (in thoughts or out loud) "I shall remember my dreams", before falling asleep. Stephen LaBerge recommends that you remember at least one dream per night before attempting any induction methods. However, Lucid dreamers who are lacking in strong dream recall can assist the process by forcing themselves awake when they feel the Lucid dream coming to a close in order to record the dream while fresh in memory.

Reality testing (or reality checking) is a common method used by people to determine whether or not they are dreaming. It involves performing an action and observing if the results are consistent with results expected when awake. By practicing these tests during waking life, one may eventually decide to perform such a test while dreaming, which fail and let the dreamer may realize they are dreaming.

- The pain test—"Pinch me, I think I'm dreaming!"—is only effective in very few dreams. Stephen LaBerge's book "Exploring the World of Lucid Dreaming" shows that dreamed action produces real effects on the brain and body. Therefore, if the dreamer pinches his or herself, he or she indeed feels pain but it is unlikely to induce lucidity, because the scheme for pain in the dreamer's brain activates and the dreamer feels pain even if there is no real physical stimulus. This same logic applies for other sensations, such as pleasure, heat, cold and a variety of other feelings the dreamer could experience in the waking world.

- Looking at text or one's digital watch (remembering the words or the time), looking away, and looking back. The text or time will probably have changed randomly and radically at the second glance or contain strange letters and characters. (Analog watches do not usually change in dreams, while text and digital watches have a great tendency to do so.) A digital watch or clock may feature strange characters or the numbers all out of order.

- Flipping a light switch. Light levels rarely change as a result of the switch flipping in dreams.

- Looking into a mirror; in dreams, reflections from a mirror often appear to be blurred, distorted, incorrect, or frightening.

- Looking at the ground beneath one's feet or at one's hands. If one does this within a dream the difference in appearance of the ground or one's hands from the normal waking state is often enough to alert the conscious to the dream state.

- Holding one's nose and mouth closed while attempting to inhale. If dreaming, one will find themselves breathing and aware.

A more precise form of reality testing involves examining the properties of dream objects to judge their apparent reality. Some lucid dreamers report that dream objects when examined closely have all the sensory properties, stability, and detail of objects in the physical world. Such detailed observation relates to whether mental objects and environments could effectively act as substitutes for physical environments with the dreamer unable to see significant differences between the two.

One problem faced by people wishing to experience lucid dreams is awakening prematurely. This premature awakening can be frustrating after investing considerable time into achieving lucidity in the first place. Stephen LaBerge proposed two ways to prolong a lucid dream. The first technique is spinning one's dream body. He proposed that when spinning, the dreamer is engaging parts of the brain that may also be involved in REM

activity, helping to prolong REM sleep. The second technique is rubbing one's hands. The intention is to engage the dreamer's brain in producing the sensation of rubbing hands, preventing the dreamer becoming aware of the sensation of lying in bed. LaBerge tested his hypothesis by asking 34 volunteers to either spin, rub their hands, or do nothing. Results showed 90% of dreams were prolonged by hand rubbing and 96% prolonged by spinning. Only 33% of lucid dreams were prolonged with taking no action. Other variations on this theme have been proposed by lucid dream enthusiasts, the common basis for all these techniques is to focus on or increase one's tactile or sensory engagement with the dream world.