

Dreams and Creativity: Can we measure how "weird" dreams are?

Introduction

At first sight, there doesn't seem to be much in common with dreams and creativity. However, when met with a dream, it is often clear that some are much stranger than others, which puts forward the question – can we measure how “weird” dreams are, and what affects this? This essay will explore multiple areas about dreams and creativity, before linking the two together into a conclusion.

Creativity

What is creativity?

Creativity is defined as the ability to “produce original and unusual ideas” in the Cambridge English dictionary. It can be referred to as being an “act, idea, or product that changes or transforms an existing domain of human endeavour”¹. Creativity can also be associated with the ability to solve problems in creative ways. It has links to the word “create”, which is connected to the idea of making things. This all suggests that creativity is most evident in aspects where something new is involved and that testing creativity is like testing your ability to make things with merely your mind. What creativity *is* seems to be a topic which we all have some understanding of – but is there more to it than simply the ability to produce these ideas?

Are there “kinds” of creativity?

The psychologists Joy Paul Guilford and E. Paul Torrance suggest two different ways of thinking when confronted with a problem – divergent and convergent². Convergent thinking has close relationships with intelligence and rationality, and questions which only have one right answer. Divergent thinking is almost the opposite of this – it touches on the ability to produce more than one solution to a problem, for questions which don't necessarily have a single right answer. It is seen quite clearly that the kind of thinking needed for a prominent level of creativity is divergent thinking – and this is further supported by all the definitions of creativity discussed above.

The cognitive neuroscience of creativity³ is a paper which discusses four possible types of creativity. They are deliberate and cognitive, deliberate and emotional, spontaneous and cognitive, and spontaneous and emotional. The first of these requires existing knowledge across a topic and repeated, disciplined, endeavours. Dietrich states that this comes from the prefrontal cortex – which allows you to pay full attention. Deliberate and emotional creativity is slightly different in the sense that it is more to do with emotions and feelings – the people who engage in this tend to get ideas involving these. Dietrich suggests that this needs much more quiet time. Spontaneous and cognitive thinking, similarly to the first discussed type, requires a former knowledge bank. It occurs when the brain stops working and instead shifts this work to the unconscious mind during which the prefrontal cortex is able to connect information in new ways and when triggered will produce a creative result. Finally, spontaneous and emotional creativity occurs when the conscious brain and prefrontal cortex are at rest with creations then being made. It tends to need some sort of skill but is not required. Dietrich's suggestions are more based on a brain and neuroscience point of view, unlike the divergent and convergent perspective on creativity. This leads to the belief that there are many interpretations of whether there are types of creativity.

Can we measure creativity?

This question is answered to many tests that have been produced to solve this problem. An example of one of these is the Divergent Association Task⁴, which asks for ten words as different as possible. Based on these words, the test compares the frequency in which each word is used in a similar

environment and produces a score based upon this. This test focuses on verbal creativity, unlike other tests which have used a format in which they ask the user to answer a series of questions which focus on their problem-solving ability, habits, and lifestyles, which is a very different approach.

There have been three proposed ways of measuring creativity⁵ – a creativity quotient, much like IQ or EQ, which can be tested. The second of her proposals is psychometrics, which is defined as the measurement of mental traits, abilities, and processes. Her last suggestion is a social-personality approach, which is defined as an “approach that focuses on personality variables, motivational variables and the sociocultural environment as sources of creativity”. It is an approach mainly based on emotions, thoughts, and motivation.

Dreams

Is there a meaning to dreams?

The Merriam-Webster dictionary defines a dream as a “a series of thoughts, images, or emotions occurring during sleep”. Dreams are quite a widely accepted idea, but the meaning behind them is much more mysterious. Freud suggests that dreams are imagery of a wish from childhood that has since been repressed, and that dreams can be stimulated by external sources⁶. This means that dreams may be important to the reader. Freud’s proposal adds up to the idea that yes, there is an explanation for dreams and that this is based predominantly on the dreamer’s personality and environment.

Lucid Dreaming

Lucid dreaming is stated as an occurrence where the person who is dreaming becomes aware that it is merely a dream. Krippner⁷ writes about three examples where lucid dreaming is mentioned - Tibetan Buddhist practices, Hindu yogic dream tradition and Aristotle’s writing, all of which note on this idea of being conscious of the fact that one is dreaming. Typically, people lack awareness of when they are dreaming, so lucid dreaming does not occur extremely often. Findings suggest that the dreamer can also be able to change certain aspects of the dream⁸ – which includes creative problem-solving. The article suggests that there are many methods of inducing these dreams, which include repeating a certain phrase reminding oneself to remember dreams, creating a habit of checking surroundings to check whether one is dreaming, and drugs and supplements that induce these rare occurrences. Links between lucid dreaming and creativity have also been found⁹ - which leads on to the next section of this essay.

The Link

Dreams and Creative Problem-Solving

Deirdre Barrett states multiple ways in the past where creative solutions to problems have been found in dreams¹⁰, ranging from writing to music in her paper. Barrett speaks of studies which have incubated dreams to attempt to solve selected problems, as well as ones that ask to work on a problem for a set amount of time before going to sleep, so that they would fall asleep with the problem on their mind. She states that almost all of the dreams involved the problem, and that some even solved them. This shows that there appears to be some sort of relationship between them, although seemingly different. Barrett has also published a study focusing on incubating dreams for problem-solving¹¹, which were related to a homework assignment in a class during the dream. They were instructed to select a problem based on this, and results showed that about half of the subjects were able to recall a dream that was based on their chosen problem. This shows that

there is a significant relationship between dreams and creative problem-solving. The question is – is it possible to measure this level of creativity? Can we measure how “weird” dreams are?

Can we measure how “weird” dreams are?

A study which woke participants every two hours and asked them to recall dreams was performed¹² with results showing that in the later hours of the night, participants recorded that their dreams were stranger and less related to their own lives. An article about this study suggests that the differences between the content of these dreams could be related to sleep processes. The study suggests that the best way of measuring the “bizarreness” of dreams is probably self-evaluation, as researchers suggest that “external raters underestimate the amount of bizarreness in a dream in comparison to dreamers’ own ratings”. Interestingly, the authors of the study also suggest that perhaps people with stranger dreams may have higher creativity levels.

Another study¹³ proposes that people who can recall dreams tend to be more creative. The authors asked questions concerning the participants’ absorption, imaginativeness, daydreaming, and fantasizing, and it is suggested that the people who were more prone to these habits were more likely to be able to recall their dreams. The study also suggests that if the dreams were stranger, it was more possible to remember them. This ties in, perhaps suggesting that the more creative the dreams were, the stranger the dreams would be.

Conclusion

In summary, there are many different aspects of dreams and creativity, and there are numerous ways in which the peculiarity of dreams and creativity are combined. Researchers suggest that the best way to measure this queerness is through self-evaluation, as the dream is most vivid to oneself. However, there are many other ways in which creativity and dreams are related, which include problem-solving appearing in dreams quite often in multiple scenarios. There is clearly a significant relationship between the two, and in the future, I believe more research will be carried out to explore this.

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