

**PH1141**

**Project Report**

**COULD WE BE DREAMING?**

**Group Members**

<b>Shantanu Chopra</b>	<b>Y9537</b>
<b>Shashank Sinha</b>	<b>Y9539</b>
<b>Shashank Sonkar</b>	<b>Y9545</b>
<b>Shivam Kumar</b>	<b>Y9552</b>
<b>Shouvik Ganguly</b>	<b>Y9558</b>

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## Are we in a dream?

First of all, we ask ourselves, "What is a dream, what is its purpose?" Dream is just a 3-D simulation of the real world when we are in sleep.

First one was easy, but what about the second one?

Earlier it was thought that dreams and sleep help to vent our feelings, calm our emotions; but recently a lot of the biologists don't agree to it. They find dreams to be redundant, without any purpose. And also, this concept of dreams doesn't fit well into our evolutionary cycle. Thus, the purpose is still yet a mystery.

Now I would like to ask how you would distinguish between reality and dreams.

Suppose I look at the blackboard right behind us. How do we see it? It gives out rays, which form an image in our retina, which gets transformed into electrical signals, which are then interpreted by our optic centre in brain. Now, if we see this blackboard in our dreams, the electrical signals that were generated earlier by light are self simulated, and by brain scans, we know that these are identically similar to ones generated by light, which is then interpreted again by our optic centre as a blackboard. But what in reference to the person in dreams, he still thinks it's the light rays that are triggering it. And that is exactly what we think now. All the senses that we use to communicate with outer world are

thus easily deceived, and sadly these are the only ways by which we can communicate. People often think that real world is rational, non-absurd, we are conscious, self aware, but what about the person in dreams? He also thinks the same. There are many theories about simulated reality.

## **Simulated Reality**

It is a proposition that our reality could be simulated – perhaps by computer simulation – to a degree indistinguishable from ‘true reality’. It could contain conscious minds that may or may not be aware that they are inside a simulation.

The simulation hypothesis is a subject of serious academic debate starring Nick Bostrom, Descartes, Tipler and many other physicists and philosophers who postulate that there are empirical reasons as to why ‘Simulation Hypothesis’ must be true.

Bostrom in his arguments attempts to prove the trichotomy that

1. Intelligent races will never reach a level a technology when they can run stimulations of reality so detailed that it could be mistaken for reality.
2. Races that do reach such a level of technology do not tend to run such simulations.
3. We are almost certainly living in such a simulation.

The argument says that only one of the above points is true.

Bostrom argument is based on the premise that given sufficiently advanced technology, it is possible to simulate entire inhabited planets. Hence one can deny the first hypothesis. When one reaches such a level, we would be still be interested in history, our past, ancestors and there would be no legal or moral strictures on running such simulations. Hence what are we left with the third hypothesis – we are almost certainly living in one such simulation.

Tipler envisages a similar scenario to Bostrom's arguments when he talks about The Omega Point. The implication of this theory is that an ultimate cosmic computer will be able to resurrect everyone who has ever lived by recreating all possible quantum brain states; thus a simulation running on this universe computer can thus continue forever even though time lasts only for a finite duration between the Big Bang and the Big Crunch.

Hence if Omega point will simulate an infinite number of virtual worlds then it would be infinitely more likely that our 'reality' is one of those 'simulated worlds' rather than the original world that created the Omega Point.

Now if someone doesn't buy this futuristic stuff one can present 'Dream argument' - all that is required is the human brain. More specifically, the mind's ability to create simulated realities during REM sleep also affects the statistical likelihood of our own 'reality' being simulated.

As to the question we are living in a simulated reality or a real one, the answer is indistinguishable in principle. Just like one cannot tell the state of being rest or in motion without a reference frame, a similar property has been suggested for reality meaning without a reference world, one cannot tell the world one is living is real or simulated. Therefore there is no absolute meaning of reality.

Whether we live in a computer simulation or not doesn't really affect how should we live our lives. The world is still going to be the same - the same things will make us happy and the same problems will have to be solved.

Even if we are not real we perceive our world to be real. If real is something you can feel, smell, taste and see then real is simply signals interpreted by your brain. This is similar to 'Brain in a Vat' experiment.

## **Evil Daemon:**

It is a concept in Cartesian philosophy. It talks about a personification who is extremely deceitful and powerful and who has directed his entire efforts at misleading me. The Daemon presents a complete illusion of an external world, including other people, to one's senses, when in fact there's no such external world in existence. As I don't know whether or not I'm being duped by the Daemon, I cannot be sure whether I'm in reality or inside a dream.

## **Brain in a vat:**

The brain-in-a-vat is a contemporary version of the 'Evil Daemon'. The basic setup of this thought experiment is as follows. Suppose a mad scientist removes a person's brain from his body, keeps it in a jar of life-sustaining fluid and wires its neurones to a supercomputer. The computer sends signals to the brain that make it appear as if the brain were inside the skull of a normal person with a body. From the perspective of the brain, it is impossible to tell whether it is in a jar or a skull. So, 'reality' as perceived by a brain can just as well have been simulated by a supercomputer. I cannot tell whether I'm a real person, alive, walking, talking, interacting with others or whether I'm just a brain in a vat and the things around me are mere illusions created by a supercomputer. This argument provides support for the possibility that we are all actually in a dream.

A brain in a jar will never be able to know whether it is a brain in a jar or a human being leading a normal human life. As far as simulated reality is concerned, many pc games have been developed such as 'The Sims' (in which you control each and every action of the characters of the game) and 'Age of Empires' (in which you control the actions of several people). So, analogously, it can be possible that this whole world can be a big, gigantic game being played by a superior and intelligent being, and as the philosopher Nick Bostrom says in his theory, we may be a part of a big stimulation being run by a superior being.

A concept that I would like to introduce here to support my view that we could be dreaming is the concept of relativity of reality. What is reality? In physics, we define all the measurable physical quantities with reference to a particular reference frame. For example, velocity of a body is the velocity of the body with respect to the earth. Similarly, we define reality according to a world that we consider as normal and whose laws we have considered as the laws of life. But whether the world that we have made our real world is actually the real world or not is difficult to find out. In this context of relativity of reality, the Chinese philosopher Zhuangzi recounts one of the dreams that he saw one night. One night he saw that in his dream he had become a butterfly. In the dream, he was living the life of a butterfly and was very much convinced that he was indeed a butterfly. It was only when he woke up that he found out that he was not a butterfly but indeed a human. But since the dream had been so convincing in its reality that Zhuangzi got confused about which of the two lives was his real life. In this context, he thought that whether it was he who was dreaming about the butterfly or was it the butterfly which had now started dreaming about him. So, as we can see from Zhuangzi's example, sometimes it is very difficult to distinguish dream from reality, and so our so called "real lives" may also be a dream.

Another concept that supports the argument that we could be dreaming now is the concept of false awakening. Sometimes it happens that a person has a dream within a dream and when he wakes up from the dream in the dream, he thinks that he has come back to reality even though he would have woken up in the dream. Since such instances exist in which a person, in his subconscious state, mistakes dream for reality, it is very much possible that this "reality" of ours may be a dream which we are mistaking to be a reality. So, it is possible that

after many years one fine day we may wake up to discover that all this was just a long dream.

I think the world we are living in is a dream world and our nightly dream is a dream within this dream. Here mostly I would like to contradict some of the popular notions against this being a dream world. About the presence of absurdity in a dream, I would like to say that a dream doesn't seem absurd while we are in it. It is only after we get up that a dream seems absurd. Similarly what we are doing now might seem perfectly normal, but it could seem absurd once we get up. People also point to the lack of emotions like pain, pleasure etc. in a dream. I would like to reply to that by saying that actually we do have these emotions even in our dreams. But due to the unreliability of our memory, we are unable to recollect it afterwards. This is exactly what happens in a lucid dream. We remember our dreams and the emotions within them. Here I would also like to add that physical pain is something which is never transmitted between dreams as such. It is mostly transmitted as mental trauma, like getting up with a start, feeling of anxiety, sweating etc. . Like even if we are impaired in this life, in our nightly dreams we can be completely fit and healthy.

I would also like to touch upon the topic of sharing of dreams. In our nightly dream we meet a lot of people. Some of whom we have acquaintance with in this world, whereas others who are completely strangers to us. I think the people whom we have acquaintance with and are present in our dreams, are actually the figments of our imagination in our dreams. Whereas the strangers are the ones with whom we are sharing a dream with. By this concept we can explain why our present dream doesn't end with our death.

Finally I would like to say that just as an alarm bell is a stimulus strong enough to wake us up from our nightly sleep, hopefully one day we would have a strong enough stimulus to wake us up from our present dream.

## **QUESTIONS AND ANSWERS:**

**Q. How do we feel? Rephrasing the question, what's the interim between the stimuli and response?**

**Ans: One of the greatest problems in science has been solved using symmetry. Problem of gravity was solved when Newton knew that the force making the apple fall was same as the one moving the earth around the sun. Using this approach, I have compared the feelings of pain, happiness, regret etc. With free will. Free will has many debates behind it. According to determinists its just an illusion. It is caused by the chemical reactions that happens in the brain. To note, the same chemical reactions are the source of our feelings. According to supporters of free will, every moment we exercise our freedom. It's the way we go on with our daily lives, with every activity in our daily life triggering us to exercise this freedom. Same is the case with our sense perceptions. Here stimulus is only different, but the response is identically the same. Science has not been able to give the answers to why human beings have this free will or such an illusion. I, too, could not find the precise answer to my question, but I tried to reduce it to more familiar problem to give a deeper insight to my solution.**

**Q: You talked about simulation games such as 'The Sims'. How can you say that if we have created 'Sims' today, in the future our descendents will become so powerful that they'll develop a system as complex as the world today?**

**Ans: It's not that this world will be created in the future. My point was that if human beings at this point of time can make games in which they can control many virtual people, it is quite possible that a few million years ago a highly intelligent being existed which started the world as a computer simulation.**



**Q: All your arguments have only pointed to a possibility that we could be dreaming. You didn't provide a single point that proves the stand that you are taking.**

**Ans: First of all, my stand is on "Could we be dreaming" which in itself is a question which is asking only to explore the possibilities. Secondly, since we as humans have very limited knowledge of the world, it is not possible to prove both the view points that we are dreaming and we are not dreaming. So that is why in all our arguments we have said that they point to the fact that we may be dreaming.**

**Q. What would happen to the concept of sharing of dreams if we become acquainted with a stranger with whom we were supposedly sharing a dream?**

**Ans: The point is that due to the unreliability of our memory, we are unable to remember the faces or physical features of the strangers in our dreams. So, our chances of meeting them when we get up are very remote. Even if had a lucid dream and somehow met that person in this life, it just means that now we have become acquainted with him and in future we won't be sharing any more dream with him.**

### **Sources:**

- Wikipedia
- <http://www.lucidity.com/LucidDreamingFAQ2.html>
- inspired by the movie 'Inception'