

Flip of a Coin

a serialised short sci-fi thriller
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Chapter One

A university graduate, Fredic, wants to conduct an experiment with the use of three subjects. He will pick them from Campus, screen and interview them, so that he gets three varied individuals.

Fredic's concept is to see if he can prove that the future already exists. His research has indicated that the past and the future, indeed, all of time is already cast in stone, and so our Destiny awaits no matter what we do. Now, he knows he can't actually prove it, but he believes he can get close to unravelling the structure of time. It is obvious to him that if the future already exists then anything he does in his experiments has a predetermined outcome, so he can't change anything. But the past flows into the future, so he might be able to show that for two similar past events the outcomes are roughly the same.

He believes that the concept of choices to decide our fate is just something human consciousness made up in order to live and evolve, without which we would have no reason to do anything. But in reality, 'time', he says, is an illusory and autonomous progression, receiving no feedback from living entities, as all objects in the Universe are quite literally, inanimate through time.

We do not have a choice, Fredic frequently proclaims on-line at the Uni' phys-forum, because the future is formed from the past, not by us in the present. He is then immediately lambasted by a hoard of forum physicists who explain that the multi-verse hypothesis of quantum mechanics proves that there are an infinite number of parallel universes or futures and we can therefore choose which ever path we wish to take. Of course Fredic argues. He says, he could decide to build a time machine tomorrow, that would be his choice. But if the past has not produced a lineage that can promote such a concept then it will not happen, no matter what he does. He adds a further point: the multi-verse hypothesis they are talking about only discusses future paths, all stemming from the same present moment; so it is a ridiculous supposition that these parallel universes could all have the same past.

Fredic is going to run a week long experiment in two phases. The first day will be a standard baseline, where the subjects will go about their daily lives, just as any day might be. They will be carrying some discrete electronic sensors that will be gathering data on their activities, but that is all. Then the real experiment.

The experiment will involve the use of mobile apps. The apps will see what the subjects see, hear what they hear and feel what they feel. On the first day the apps simply collect data. But on the following days they will control progress, instead of the subjects making rational choices or decisions by themselves. By giving the apps the 'control' in decision making he can remove the erroneous belief that we can change our future. He can analyse the data in real-time, he can watch how his subjects respond, and he expects subjects to believe they are living a normal life of choice even though they are not in control at all.

The subjects will also be wearing the latest contact lenses, being trialled by another department in the University, that put up an on-eye display. Commands being displayed will be controlled by Fredic's apps. His subjects will simply take directions and dictates from the app in the on-eye display. The lenses also have the ability to monitor certain brain activity. Meanwhile, Fredic will have placed physiological sensors in their clothing to follow each subject throughout the day. That information will be networked back to his lab, from where he will be watching his monitors and observing the progress of his subjects.

If the results from the first day match those of the next days, and the subjects end up in customary places at the end of each day, then his theory will gain credence. Fredic understands that he cannot replicate two identical subjects in an identical time and space, so his experiment will not be absolute. He also recognises that his experiments are, in themselves, a part of the unfolding mystery of time, and so, are a precursor to their own destinies. Nevertheless, he feels strongly that he may make a theoretical break-through.

Decisions are a flip of the coin, he argues. We appear to compartmentalise our decision making down to pairs of choices. We end up with yes or no options, start or go options, left or right options. But, actually, this is the solid structure of time and how it works; it is simply the binary code of progression that can be expressed in mathematical terms.

By analysing the difference between actions and emotions of a free thinking subject on one day with the same subject that is being denied the option to make choices on other days, he hopes to show that for any standard situation in time the eventual outcome will always be pretty much the same. The Universe, he likes to state, is all about repetition and cycles; everything has happened before and everything will happen again; and his iterative fractal equations will demonstrate.

The future is fractal. We follow a path through time, he states, on the cusp of a vast and solid, four dimensional fractal that is ever shrinking. We contract through time. He wants to discover the equations that govern that structure. Humans on this planet are mere vibrations or fluctuations on the edge of much larger systems. They are of little consequence, he suggests, but by learning about them he can then draw a bigger picture: that of the entire universe. Because fractals look almost the same anywhere in their form, whether we are looking at a minute part of the structure through a microscope or whether we view the whole thing from a distance.

He has written formulas that closely mimic a human's cascade through solid time, flowing much like a CG fractal graphic animation that replicates patterns ever down through reducing scales. It is these formulas that will control his subjects on those days when they are not allowed to choose for themselves.

For Fredic, the key to success will be in how his apps interact on multiple levels, as the subjects on different days will surely find themselves in different sets of circumstances after only a few minutes. If one circumstance splits into two outcomes and then converges back into a single future event, he can assume it was meant to be. Or, if there is an unregulated divergence from his original programming within one of the apps to force a single future event, he can deduce the same.

There are two other interesting results he will be looking out for: First, the question of chance versus probability. What if random was not so random after all? We do not control chance, he adds. And there is a lot of it in our daily lives. Skill does not rule out Mother Nature. A flock of birds can down a plane. A lead shot in your pigeon pie can lose you a tooth. This whole issue of random chaos he hopes to expose during his experiments because the human element will be removed.

Secondly, can he show that humans are duped into believing that they make a difference, on this journey of ours through time? He thinks he can.

His masters study focus is Chaos Theory and the implementation of fractal equations for AI development. However, the professor leading his department is unaware of his branch into human studies; as are most of his colleagues. These experiments, he has secretly been working on, he has kept to himself.

The hypothesis is this: time flows by a simple set of rules, much as a fractal appears to grow from a simple set of equations. As alterations are made to the environment, such as interactions with others or nature's external influences, time flows around these obstacles and continues. It matters not the size or shape of such an obstacle, time will flow around and on, its destination being the same no matter what influences hinder its apparent growth. Likewise, his fractal equations have shown that almost identical illustrations can be produced multiple times regardless of obstacles.

Before starting the experiment, Fredic lays down some ground rules:

1. His subjects did not volunteer for this experiment, Fredrick points out, otherwise that would have been a choice. They know what they have been told to do, but they do not know the key elements of the science behind the experiment; nor do they know that they will be watched, that what they see will be seen on his monitors, nor that he will be observing and listening the whole time. If they knew, he surmises, they would not act normally and the experiment would be flawed.
2. He has rented an apartment where the three subjects will be housed for the night and from where the experiments will commence every morning. They will each be paid \$200 a day and \$1,000 after completion of the full week. His parents are funding the experiment.
3. Certain pre-conditioned or instinctual actions will be allowed by the apps, such as gear changing in a motor vehicle, walking and running, small talk, the act of eating and drinking, etc.. But what is eaten or drunk will not.
4. An alarm clock will raise subjects at 6 a.m. and the apps will automatically load. At 6 p.m. the days' experiment concludes with another alarm and the apps will shut down.
5. The apps will warn subjects of any imminent danger to life and advise the wearer to take immediate responsibility for their own safety.

On a warm May Monday in Riverside, Oklahoma, Fredic assembled the subjects at his rented apartment. It was well stocked with food and beverages. He went over all the components of his experiment with them one final time. He and his assistant, Marga, then installed their wearables and helped them with the contact lenses. They were given time to feel comfortable and interact with their apps to insure everything was working, before being told that the experiment would begin at 6 a.m., the following morning.

His subjects:

Annie, a short, sharp brunette; a no nonsense masters bio-engineer.

Osca, a jolly, bright, curly haired second year medical student from somewhere in Europe.

Cohen, a big fella, a fun sports guy type, for sure.

Fredic thinks he has thought of all the eventualities. He believes his experiment sound, safe and

responsible. But there is something, in the back of his mind, that is nagging him. Marga, a sociology major, had mentioned to him the other day about direction, and he has been thinking about that ever since. Who will be steering? "The Universe," he stoically proclaims.

And then there is the issue of chance. Because we are habitual creatures, Fredic maintains, this is how we have evolved within the framework of time, and to throw a spanner in the works might alter the fractal expression of our destiny. Iterative equations form progression, but an alien input could cause disruption. Perhaps, he mentions, time will mend the errors, fix and make it all right, because time is so much more than just an individual, it is the whole Universe, and a butterfly that flaps its wings can really cause some damage.

Perhaps there is a reason why a coin that is tossed a thousand times, will have probably landed close to 500 times on both sides. Yet, rationale says it could fall forever on just one side - but coins don't... That is: if tossed by a human. However, a robot programmed to toss in precisely the same way every time, could surely land the same coin on the same side every time. And our future, he tells her, is perhaps thus programmed.

"That was a lot of perhapses!" mutters Marga.