

A Simple Solution to the Problem of Free Will & Determinism

The problem of Free Will vs. Determinism has puzzled philosophers for thousands of years. It is a profound problem for without free will there can be no morality, no right and wrong, no good and evil. All our behavior would be pre-determined and we would have no creativity or choice.

One important lesson of philosophy is that we must carefully define our words if we are to understand and reason correctly - and that these words must correspond to real things that exist if we wish to talk meaningfully about the real world and thus avoid self deception.

If we examine these words free-will and determinism carefully we find they do not exist in physical reality, they are simply concepts made up by humans, just as we are able to imagine 'dragons' and 'particles' in our mind / imagination. i.e.

Free-Will: Does any person have the freedom to transport their body to the moon, to float above the earth? Obviously we can build machines to do this, but in every case our freedom is limited by physical reality and the **laws of Nature** - and we observe this in everything we do - driving cars, walking, using lights at night.

The important distinction is to say that we have **Limited Free Will**, the reason for this distinction will become apparent very shortly when we solve this problem.

Determinism: Likewise, is anything in reality fully deterministic? It is true that we can determine things in small regions of space over short periods of time. So for example we can determine the future position of the earth around the sun. But this is also a **Limited Determinism** - in 10 billion years we have no idea what will have become of the matter of the earth (our sun only has around 5 billion years of fuel left before it collapses then explodes).

Reality is Necessarily Connected (Limited Determinism, Limited Freedom)

The only absolute way to solve this problem of free will vs. determinism is to know what exists and how it is interconnected. This requires a correct understanding of the interconnected relationship between **mind**, matter and space. Here we work from the most simple foundation, the wave structure of matter in space (for the latest summary of WSM see [Truth Statements on Physical Reality](#)).

From this foundation we find that matter is necessarily connected in space (by the spherical in and out waves that form the wave center 'particle') but this is within infinite space, and continually has waves flowing in from infinity that can never be pre-determined. See [Cosmology](#).

This also explains the uncertainty of [Quantum Theory](#) and that we can never exactly know where each successive in-wave will meet at its wave-center 'particle', thus we can never exactly know both the future motion (momentum) and position of the 'particle' (see: [Heisenberg's Uncertainty Principle](#)).

For a system to be absolutely deterministic it must be both;

- i) Necessarily connected (thus logical)
- ii) You must know the initial position and motion of its parts.

For the wave structure of matter the first part is correct, reality is logically interconnected due to wave interactions in space. However, **an Infinite system of waves in infinite space can never be pre-**

determined.

Thus we live in a necessarily connected universe that has limited determinism and limited freedom.

On Chance and Certainty in a Necessarily Connected Universe

Let us take a normal pack of playing cards (52 cards - 13 Hearts, 13 Diamonds, 13 Spades, and 13 Clubs) and place the Ace of Hearts face down on the top of the pack.

Thus I am both necessarily connected to the Ace of Hearts (as I am to all matter in the universe) and I have pre-determined knowledge of the exact card (stored as repeating motions in my brain), thus I can be certain that if I turn the card over it will be the Ace of Hearts.

Thus when I have complete knowledge of the system then there is no chance involved - the system is necessarily connected and pre-determined.

Now let me place this pack of cards in front of someone else who has no knowledge of the fact that the Ace of Hearts is the top card. So while they are still necessarily connected to the top card they do not have pre-determined knowledge of this card. Thus they only have a one in fifty two chance of guessing the card correctly (chance).

Thus when I have incomplete knowledge of the system then there is chance involved - the system is necessarily connected and non-determined.

On Repeating and Non-Repeating Interconnected Motion

Another example of how chance and certainty can both exist in an interconnected universe is found when we consider that interconnected motion occurs in two different ways;

i) Non Repeating Interconnected Motion. e.g. Watching clouds moving in the sky. This motion cannot be predicted and gives rise to uncertainty in the future (chance).

ii) Repeating Interconnected Motion. e.g. Watching a pendulum (any clock). This motion can be determined and gives rise to certainty in the near future (this is the source of all logic).

From these above two examples we can conclude that;

Certainty exists when we do have pre-determined knowledge - either stored in repeating motions in our brain (memory / knowledge of the top card) or in repeating motions of the object we are observing (the pendulum).

Chance exists when we do not have pre-determined knowledge, either due to ignorance (our mind lacks knowledge of repeating motions, e.g. the top card) or the object we are observing does not have repeating motions (clouds).

Importantly, both examples (chance and certainty) exist and occur within a necessarily connected universe that has limited determinism, limited freedom.

The Solution

So how can we have any freedom at all if reality is necessarily connected? As Spinoza writes;

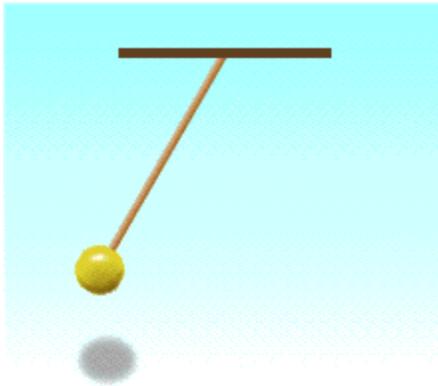


There is no mind absolute or free will, but the mind is determined for willing this or that by a cause which is determined in its turn by another cause, and this one again by another, and so on to infinity. ... A body in motion or at rest must be determined for motion or rest by some other body, which, likewise, was determined for motion or rest by some other body, and this by a third and so on to infinity. (Spinoza, 1673)

The problem here is that science and philosophy became dominated by Newtonian concepts, most notably the idea that matter was made of particles. Reality is not made of discrete inert particles that are acted on by external forces. Reality is continuously connected and dynamic. The wave structure of matter explains this.

One important consequence of this is that matter interactions are a continual two way communication of knowledge due to the spherical in and out waves. This means that every wave center 'particle' is vibrating (communicating) with all other matter in the observable universe, with a continual feedback occurring. It is this interconnected feedback that is important.

Let us now combine this knowledge from above to solve this problem of determinism vs. free will. To do this consider the following example of a pendulum.



Imagine a pendulum swinging from left to right in front of you - and you have a button to push. If you push the button when the pendulum is on the left, you get an electric shock, if you push the button when the pendulum is on the right, you get some dark chocolate (and red wine perhaps).

Immediately we see that both futures are possible - it simply depends upon the time we push the button in the repeating cycle. It is this use of timing in repeating motions that allows us to know the future and select different possible futures - to have limited freedom in a necessarily connected universe.

For humans, and many life forms, they can memorize their senses using interconnected repeating wave motions in their body / brain to store knowledge. Thus they can learn through experimentation to push the button for reward, to avoid pain. Further, to begin we can use chance as the source of our experimentation, and because of the two way interconnection of matter, we can learn from the effects these chance decisions have upon us, to ultimately learn enough knowledge to make certain decisions, to choose from many possible futures.

Hence evolution of our brain and mind can use this mix of chance and certainty to allow us to creatively think of new and novel ideas and relationships (chance) that we can then remember (certainty). And we can use either chance or certainty (probably a mix of both) to select from many possible futures. Obviously this is a very simplified explanation of how our mind works, and there may be millions of

'layers' to these chance / certain selections, each with various degrees of probabilities for selecting different outcomes.

Karl Popper also intuitively understood that there had to be some 'balance' between complete determinism (clocks) and complete disorder and chance (clouds) when he wrote;



What we need for understanding rational human behavior - and indeed, animal behavior - is something intermediate in character between perfect chance and perfect determinism - something intermediate between perfect clouds and perfects clocks. (Popper, 1975)

He was absolutely right, for a necessarily connected, but infinite and non-determined universe allows us to have limited free will. We can act morally, create a better future for ourselves and our children, for life on earth as is necessary to ensure the survival of our species. But it is limited freedom, and it requires our minds to be correctly programmed - to understand the truth about our existence in the universe as the source of wisdom and freedom.

Summary

Physical reality is infinite and necessarily connected - it has limited determinism, limited freedom. In this necessarily connected but non determined universe, there are many possible futures.

The 'we' that selects from these possible futures is **our mind which is also a programmed machine**. The mind makes decisions based upon its programming which is determined by an interplay between our genes and our physical and cultural environment. It is limited / programmed freedom - but we can program ourselves - this is the source of our freedom.

The selection of possible futures occurs either from;

- i) Chance due to lack of knowledge of an interconnected system.
- ii) Certainty due to timing of decisions relating to repeated interconnected motions (logic).

This limited freedom is in harmony with both WSM and Darwinian evolution, that we learn / memorize different behaviors based upon our interaction with environment and our resultant survival. This limited freedom explains the evolution of intelligence and morality.

It is how we educate our minds, where we choose to live, that ultimately determines the interplay between chance and certainty that decides on the things we will choose to do.

In ending, I wish to emphasize that I am answering the question of determinism vs. free will not from mere philosophical speculation, but deduced from metaphysical foundations - of how waves behave in space. I have no moral or religious bias, my interest is truth and reality - the source of wisdom.