Creating a New Future

by Lorraine Ford

Introduction

This essay contest asks "how should humanity steer the future?", but the physics community seem to believe that we live in a universe where such a question is a nonsense. Physicists believe that, despite quantum behaviour at the sub-micro level, at the macro level inexorable mechanism rules, and human notions of "steer[ing] the future" are a type of self-deception.

I argue in this essay that people can and do "steer the future" and that physics is wrong about the nature of fundamental reality. Indeed, physics' perverse and unenlightened ideas about the nature of reality are a major contributor to the attitudes that are destroying our planet.

Physics' perverse assumptions

Surely, humanity's most pressing problem is that we are, slowly but surely, poisoning, destroying and overwhelming our planet, our only home. But it is useless to attempt to prescribe any sort of action master plan for the future for billions of human beings to follow – no one is listening, and no one would agree anyway. Actually, it is ideas and attitudes that are destroying the planet, ideas and attitudes that lead to actions. What is required is a change of human attitudes to the rest of reality on this planet, and I would argue that these days, apart from religious ideas, most attitudes to reality are ultimately founded upon the ideas of physics and science.

But fundamentalist physics has a perverse mindset, and its ideas have seemingly been uncritically accepted and absorbed by a large portion of humanity. This physics mindset includes at least 3 hoary and entrenched, invalid assumptions:

Firstly physics has assumed that information at the foundations of reality (like mass, charge, spin etc.) is somehow, automatically and mindlessly, apprehended by the universe: physics has wrongly assumed that experience of information is not necessary to the operation of the universe. But I contend that actually, at all levels, information about physical reality is the same as experience/consciousness, and that this information is indistinguishable from physical reality itself [1].

Secondly, physics has wrongly assumed that law-of-nature rules produce somehow smooth and seamless universes or multiverses. But I contend that the universe has a topology of separate interacting interrelated parts: these are subjects (from particles to plant cells to people) that experience information [1]. Information in the universe has a subjective topology.

And thirdly, physics has wrongly assumed that we live in a "set & forget" universe where nothing new ever happens after the initial setup of its newly-created law-of-nature rules (including any meta-laws). Physicists believe that rules were created once only, and that there is no continuing creativity in the essential nature of the system itself, a type of creativity which would allow subjects to "steer the future". But I contend that subjects, from particles to plant cells to people,

continually create new unpredictable-to-observers rules/paradigms/physical outcomes, and that law-of-nature rules are similar to physical outcomes in that they are both information category relationships [1].

The problem with physics perverse ideas is that no matter how you try to dress the ideas up, NO ONE in their right mind will EVER respect a machine or a reality that is completely zombielike, machinelike or mechanistic. The view of nature as a non-experiential, non-subjective, non-creative mechanism is the SOURCE of the problem we face – the source of the disregard and disrespect towards our planet and its non-human inhabitants. So despite human nature being generally benign, physics' invalid fundamental assumptions are a major underlying contributor to humanity's anthropocentric disregard and disrespect for the planet and its non-human inhabitants.

Physics has got it VERY wrong, and therefore they have got a lot to answer for, and a lot of urgent repair work to do. But don't hold your breath: the perverse physics mindset is pretty rusted on, and it continues to inspire in its followers and apologists further anthropocentric and machine centred, toxic, visions of the future (one only needs to look at some of the entries in this essay competition).

Physicists proclaim humanity's impotence

A subject could be anything from a particle to a plant cell to a person. For a subject to "steer the future" is to choose/create a physical outcome out of the materials at hand, an outcome that is genuinely new and unpredictable to an observer. I am referring to an inherent unpredictability (perhaps due to the subjective topology of information), NOT unpredictability due to complexity in a deterministic system (i.e. unpredictability due to the difficulty involved if an observer were to measure an observed subject, represent the subject with parameters and numeric values, and then attempt to estimate the subject's future physical outcome). In the case of a human subject, this unpredictable physical outcome merely consists of the observed person saying or doing something.

But to physics, the suggestion that a human subject might "steer the future" is an ironic description of what really happens. Subjects and non-random choice are radical concepts that don't exist in the physics lexicon of ideas: they have no place in physics' mechanistic, purportedly objectively true models of reality.

In physicists' "set & forget" model of the universe, there is no possibility for a living thing to "steer the future" because every future, whether one minute ahead or one hundred years ahead, is already pre-specified and determined by the law-of-nature mechanism. Any sense of steering experienced by living things is a type of self-deception, an illusion: actually in the "set & forget" universe, living things are STEERED BY the mechanism, they are NOT doing any steering themselves.

So, in some recent science videos on the subject of free will, prominent physicist Brian Greene couldn't conceal his smirk as he distained the suggestion that free will exists i.e. that living things could "steer" their own future:

> "When we look at the laws of physics, and we try to find free will, we don't see it. When we look at the laws of physics, we see laws that are deterministic. Laws whereby if you specify how thing are now, the laws unambiguously tell you how you will evolve into the future. In the Newtonian picture we could definitively say where you'd be and what you'd be doing, using the laws of Newton. Quantum mechanics came along and changed that a little bit , and the best we can do is predict the probability that you or an electron would

> be doing one thing or another, but the laws have no opening for free will to take over and guide how things evolve…free will is probably illusory" [2]
>
> "the way you should think about free will is not in the traditional sense that you can volitionally change the future based upon your own internal decisions. Rather, I like to think about free will as a certain sensation of the laws of physics acting themselves out. And, that is a particularly useful way of living your life to imagine that you have control. But that sense of control to me is just a by-product of the laws of physics" [3]

Greene's "the laws unambiguously tell you how you will evolve into the future" might perhaps be rephrased as: "law-of-nature equations determine only one possible physical outcome for each next moment in time". E.g. if I veered the car to the left and later bought a red shirt, then these outcomes would have been fully determined by "the laws".

But prominent physicist Max Tegmark has a more complex picture of reality:

> "Is there a copy of you reading this article? A person who is not you but who lives on a planet called Earth, with misty mountains, fertile fields and sprawling cities, in a solar system with eight other planets? The life of this person has been identical to yours in every respect. But perhaps he or she now decides to put down this article without finishing it, while you read on."
>
> "There are infinitely many other inhabited planets, including not just one but infinitely many that have people with the same appearance, name and memories as you, who play out every possible permutation of your life choices." [4]

Max Tegmark is saying that law-of-nature equations result in more than one possible physical outcome for each next moment in time, and that each possible "choice" of outcome that a subject could make ("he or she now decides to..") corresponds to the creation of a new universe. So Tegmark's view would say that I exist in at least four universes corresponding to each possible outcome for each next moment in time e.g. a universe in which I chose to veer the car to the left and buy a red shirt; a universe in which I chose to veer the car to the right and buy a red shirt; a universe in which I chose to veer the car to the left and buy a blue shirt; and a universe in which I chose to veer the car to the right and buy a blue shirt.

But Max Tegmark's "choices" are not really about choosing. According to Oxford Dictionaries, to "choose" is to "pick out (someone or something) as being the best or most appropriate of two or more alternatives" [5]. But for Tegmark, "choice" is a meaningless word: every possible physical outcome is instantiated as a universe, and I randomly end up in one of the possible universes e.g. I randomly end up in the universe where I "chose" to veer the car to the left and "chose" to buy the blue shirt.

These two prominent physicists proudly proclaim humanity's impotence. They are proof that physics is having a toxic influence on ideas in today's world.

Few physicists support the idea of free will

It's difficult these days to find physicists who will admit to believing that free will exists. Perhaps some physicists find difficulty in standing up to the physics' mass mindset on the subject of free will. Two physicists who seem to argue for the possibility of free will/free choice/steering the

future are George Ellis and Lee Smolin, but they will barely admit to it and only say it in a roundabout way.

So when George Ellis was recently asked "What does top-down causation add to metaphysical problems such as free will and consciousness?", he replied: "It is a major component in resolving those issues. It frees us from the illusion that physics by itself controls everything. Context matters all the time." [6]

And Lee Smolin merely asks: "Are our futures determined already? Are our experiences of willing, choosing, imagining, and inventing all illusions because the future is already written? Or are they true and real and in fact deep hints as to the nature of reality? Is it already fixed what kind of life my child will have or how bad global warming will be, or does what we choose to do really matter?" [7]

Smolin's and Ellis' positions are not much to go on, but what is interesting is the inconsistency in Max Tegmark's position. In a recent article in the Huffington Post, Tegmark expressed deep concern that humanity is in danger from the "singularity":

> "On one hand, it could potentially solve most of our problems, even mortality…On the other hand, it could destroy life as we know it and everything we care about…the lives of all children are at stake: not only those living now, but all future generations".
>
> "if there's even a 1 percent chance that there'll be a singularity in our lifetime, I think a reasonable precaution would be to spend at least 1 percent of our GDP studying the issue and deciding what to do about it." [8]

What is puzzling, and inconsistent with his multiverse views, is Tegmark's concern that we must make a choice/decision on what to do about the purportedly impending "singularity". In Tegmark's multiverse scenario, there will automatically be some universes where there is no "singularity", some universes where the "singularity" "destroy[s] life as we know it", and some universes where the "singularity" "solve[s] most of our problems, even mortality". Tegmark seems to contradict himself: in his multiverse, every possible decision/choice will be played out in one universe or another anyway, so his sense that there is an urgent need to make a decision seems totally illogical in the context of his multiverse ideas.

But perhaps deep down, Tegmark and other deterministic physicists don't really believe what they say about the nature of reality when they say that choice is not possible: they don't conduct their lives or act as if what they say about the nature of reality is true.

Conclusion

The flowering of life on our planet is seemingly what the universe does when it has the opportunity, when conditions are right. It is rare and precious because the conditions are not right for this abundance in most of the universe. Yet an abhorrent human self-centredness threatens to move this rare and precious diversity towards a human monoculture.

Physics has underestimated the nature of reality – reality is not as tame or as ultimately tameable as physics might have hoped. The universe, i.e. the subjects that comprise the universe, are not the tame mechanisms envisioned by the multiverse and singularity proponents: the subjects that comprise the universe are wild and free, within the context of a mechanism that gives the necessary structure to the freedom.

One must disregard physics with its perverse and unsound ideas: living things including human beings have always created new outcomes appropriate to the situation they found themselves in, and thereby steered the future. Within reality's dependable, deterministic structure, there are always degrees of freedom, openings and opportunities for subjects to choose/create physical outcomes.

Any program of worthy actions to solve the environmental problems that our planet home faces will fail while self-centred humanity continues to have an attitude of disrespect and disregard for the non-human life on this planet. Here, physics has failed humanity once again when it comes to attitudes to non-human reality: it has given us a poisonous vision of a non-experiential, non-subjective, non-creative mechanism – nothing worthy of respect.

Humanity faces a present and future full of problems, one of them being a recalcitrant physics community who insist that there is nothing creative humanity can do about its problems.

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