

## A Participatory Future of Humanity

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*Well, here's another nice mess you've gotten me into.*

Oliver Hardy to Stan Laurel (*Utopia* [1951])

Like Laurel and Hardy in *Utopia* (their final movie), we are cast adrift on what could remain a beautiful island. In their case, it turns out to be a uranium rich resource. Greed-based madness ensues, in which 'Atoll K' is plundered, and a beautiful existence ruined. Sound familiar? If we're not very careful as humans, this might also be our final performance...

What can be done to avoid a seemingly inevitable calamity—our *final century*, as Martin Rees [12] puts it? I fear a terrible end really is inevitable unless immediate drastic action is taken. That such an end is plausible can be seen by simply inspecting past complex societies and their collapse [17], combined with (1) the absence of any alteration in the more damaging human attributes and (2) a far greater aptitude for destruction. These attributes are virtually endemic on the Earth as a whole and are often connected with greed. Even alcohol, drug, food, gambling and other binges and addictions are small, local instances of a larger phenomenon: instantiation of actions now that will lead our (and other) future selves into misery. Procrastination clearly falls within this category: not performing some (less desirable) action *now* can lead a future self into abject misery and poverty. History is rich with examples of humans expecting future generations to deal with their mess (be it debts, environmental impacts, or whatever). The larger problems of humanity are but scaled up versions of this same curious, irrational behaviour. Humanity's steering of the future must involve going beyond humanity.<sup>1</sup>

The solution I outline in this paper involves a modification of the everyday human stance towards future events and selves. It involves a (practical, day-to-day) denial of fate and lack of control over future events along with a greater responsibility towards future selves. It ultimately advocates an intervention indicating how actions *now* are linked to future experiences and events, that *agents* themselves will have and influence by direct creation. This might seem blindingly obvious in reflective mode, yet the vast majority of humans act as if their lives are determined by the whims of the future. If humans fully realised

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<sup>1</sup> I share with David Bohm the belief that (1) most of our lived reality (money, airplanes, class, national boundaries, etc.) is the result of human thought and (2) a kind of 'thought malfunction' is behind many of humanity's ills—see, e.g., [1]. I differ in that I find humanity to be very strongly characterised by such 'malfunctions' (Bohm was less cynical). Stuart Sutherland puts it well: "*Pace* Aristotle, it can be argued that irrational behaviour is the norm not the exception" ([16], p. ix). Hence, I believe that shifts in certain deep structures of human thought are required to resolve the problems we face.

how tightly bound they are to their future conscious life and experiences (and others'), and how that life and experience is a direct extension of their life and experience right now (so that actions can be seen to have direct consequences for their present selves: those that are experiencing right now), then they will be far more careful in choosing their actions.<sup>2</sup>

In other words, presentist thinking is the problem. Thinking that all that matters is what happens now is the problem. Spatiotemporally local thinking is the problem: events that are distant in space<sup>3</sup> or time do not play a strong enough role in human decision making. This (primitive) instinct must be transcended and a habitual eye to future selves somehow enforced.

## 1 The Humean Condition

In his rather remarkable essay, "On the Populousness of Ancient Nations" (1777: reprinted in [4]), David Hume argues that human nature has remained pretty much constant over time, as has a penchant for complaining about one's present times in favour of the past! I wonder, however, whether we are now genuinely justified in complaining about the present state of humanity? While I agree, as mentioned above, that there is a constancy in human nature, there isn't a constancy in the way humans operate in the world. New theories and technologies can radically alter the playing field. What has changed from past problem societies is the number of ways in which we can (or in which we might) conceivably be wiped out—though, curiously, the count it is highly dependent on our current theories and, as such, subject to revision as much as those theories are (e.g. germ theory was not known 200 years ago, and so there was no known risk associated with germ-specific pandemics): as we develop more knowledge about the way the world works, we must revise our assessments about the state of humanity, and the extent to which our predicament is dire. But, in any case, the question 'How should humanity steer the future?' presupposes that the current trajectory is not a good one and that humans can and do play a guiding role. Given this, let's state some facts about humans and the world:

1. The planet is in a dire state: socially, politically, economically, and naturally.<sup>4</sup>
2. To an undeniably large extent, humans are responsible for the dire state of the planet.

<sup>2</sup> Take the simple act of drinking too much alcohol. Everyone 'knows' that a hangover will result in the future. Yet they proceed anyway, passing the bad experiences onto their future selves. They wouldn't choose to give their present self a hangover, of course. But the difference between this 'present self' (what is being experienced right now) and a future self (what their present self *will* experience) is hardly anything at all. There *will be* a present self that will have the hangover, and this self is (philosophical conundrums aside) no different from the one that is now throwing back the alcohol: one's future selves *will be* present selves soon enough! Why think it is OK to pass bad experiences onto a future self, given that you are essentially the same self (in the sense that you will be the one experiencing it)? There is no rational reason, and yet many of us do it, over and over again, passing the buck to our poor, suffering future selves. Whatever one makes of this scenario, I think it points to the fact that struggling with problems of the future of humanity (and local versions thereof, such as procrastination) demands that we think deeply about such philosophical issues as the nature of selves over time and our responsibilities to selves at other times.

<sup>3</sup> That is, in general, somebody in need of help within my personal space will command more urgent attention than one that is spatially distant, despite the fact that there exist spatially distant persons more in need. The issue boils down, in part, to what one feels able to influence. If one felt able to influence the spatially distant needy, one would be more likely to do so. Likewise with temporal distance (though, of course, only in a preferred direction in this case, due to the asymmetry of influence, in the absence of time machines!)—in fact, I think we should (and often do) have moral empathy in a temporally neutral way, as when we mourn the victims of Auschwitz or those killed in the eruption of Mount Vesuvius in AD79, for example. Hence, one needs some way of linking people up more robustly with their future selves so that their feelings of responsibility towards them is increased. Of course, this temporal myopia is not true of all actions (savings, pensions, quitting smoking, and diets are straightforward counterexamples), but I think it is true of the majority, and even for those able to delay gratification it is hard to maintain a consistent standpoint according to which one's future selves are equally as important as a (current) present self—I might add that the widespread prevalence of *financial credit systems* in human society is a strong indication that a temporal myopia (passing responsibility to future persons) is at our core.

<sup>4</sup> It isn't all bad, of course. In, say, the last century: mortality rates have declined; education rates have increased; social justice and equality appear to have improved enormously; and overall quality of life appears to be much improved. However, even these silver linings still envelop dark clouds thanks to population calamities and financial/resource/environment decimation and pollution.

Human thought and action has caused much of the damage. These actions were caused by their psychological profiles. Psychological profiles can be modified and behaviour patterns can be modified. This has a ring of something horrifying, but the alternative (extinction) is more horrifying.

Many of the problems are rooted in the fact that people believe that the way things are at any time are how they *have* to be. They find it difficult to question the (or their particular) status quo. Conflict arises when there is difference of opinion or belief, given this rigidity in thinking.<sup>5</sup> Such differences are of course rife. An obvious strategy is to push for greater uniformity of opinions and beliefs. I think this will be part of a solution to humanity's problems (cooperation is of course easier within a shared framework of beliefs), but the problem is: whose opinions and beliefs? Consensus is difficult in the simplest of scenarios. However, it would be nice to think that one day people will be guided by the best available evidence, and nothing else... Unfortunately, I think a uniform, evidence-based world is too hard to engineer (ethically as well as practically). So how else might we tackle the issues?

## 2 Trans<sup>2</sup>humanism: Why Technology Just Isn't Enough

Stephen Hawking recently argued that spreading to other parts of the Universe constitutes the only plausible survival strategy of humans.<sup>6</sup> This is entirely wrong headed. It runs away from a central problem: what good is it spreading humanity across the universe, if in the process we spread the same destructive traits? In fact, I'd consider this to be an immoral act: the survival of humanity (the end) in its present condition does not justify Hawking's proposal (the means). Neither technological solutions, nor advanced technology, are enough for this reason. What we have here is a basic problem of human nature: it tends to think in terms of 'now,' with an improper sense of how actions now create future nows (which include future experiences). This can be seen in the patterns of self-destructive behaviour (both individual and societal) repeated again and again, resulting in the repeated collapse of complex societies. The way we view ourselves as situated in space and time is, I shall argue, in large part responsible for the pattern: collapses are viewed as things that happen to past civilisations. Yet they were formed by an aggregation of (avoidable) once present actions.

Am I then simply proposing transhumanism? Not quite. Transhumanism generally involves *transcending* the human body.<sup>7</sup> But, again, what good is this if the same human *nature* (in the wider sense) lies behind it? Transhumanism ought to involve a transcendence of human nature since that is the problem: trans<sup>2</sup>humanism. Human nature is possession and greed. Possession and greed often stem from an overly local mode of thinking: to want some item right now, regardless of the future implications, and regardless of how similar occurrences have gone in the past. Human nature is the tragedy of the commons, taking everything for oneself and leaving others to deal with the implications. These are attributes worth transcending.

## 3 Qbism and the Participatory Universe

Personal experience (the stuff that matters most to humans) has been eroded from science. Humans have been made to feel small and insignificant—this is plain to see in the 'principle of mediocrity,' *viz* humanity does not occupy a special place in the Universe. As in physics, human decision making, especially

<sup>5</sup> Religious beliefs are certainly amongst the most rigid (since they are not evidence-based and therefore harder to update). I can't help thinking that a belief system that preaches entitlement to the Earth and all its contents can't be a good thing—as others have noted, religious belief appears to be correlated with a general neglect of the Earth and it's non-human animals. Even more dangerous is the notion that this Earth might be little more than a 'staging area' for an afterlife: why would one care about its future state if one truly believed this?

<sup>6</sup> <http://bigthink.com/big-think-tv/stephen-hawking-look-up-at-the-stars-not-down-at-your-feet>.

<sup>7</sup> It is, after all, often expressed as a transcending of "human nature"; but this latter expression, to my mind, denotes a moral aspect to that is missing from the majority of accounts of transhumanism which tend to focus on morphological freedom alone.

towards events in the far future, seems to eliminate the subjective point of view to a remarkable degree. It matches the scientific objectivism in which the scientist, as Schrödinger put it, “simplifies his problem of understanding Nature by disregarding or cutting out of the picture to be constructed himself, his own personality, the subject of cognizance” ([14], p. 92). This is a problem, for it is *us* that will be faced with the stages of any ‘action sequences.’ A transformation is needed in which present experience is also viewed as encoding a blueprint of the future. Enter Qbism.

Qbism has its roots in a personalist, subjective Bayesian account of quantum probability along the lines of de Finetti. What really matters is that this probability forms a ‘coherent’ (consistent) framework. Strictly speaking, however, probability is not something that exists ‘out there,’ in the world: it is something assigned by an *agent*. This quite naturally affects the interpretation of the quantum mechanical wave-function,  $\Psi$ , since that is usually taken to represent probabilities for outcomes of measurements. Indeed, quantum mechanics is usually seen to be a *theory of probabilities of outcomes*. If probability does not have any objective existence, then, according to Qbism, neither do quantum states. Rather, as with probabilities, they too reflect something subjective.

The central feature of Qbism that I wish to draw upon is the notion that measurements are ‘experience-eliciting’ procedures by agents: they refer to the subject’s point of view, just like the probabilities. An agent assigns wave-functions to physical systems based on past experience and any other relevant facts. Quantum mechanics is then the tool used to make inferences about the agent’s future experiences. Such experience (once realised, whatever it might be) is then fed back into the agent’s store of experience, which might lead to an updated wave-function assignment, which would lead to a revision in the experiences one can expect to have in future interactions with the system. And so on... There is a sense in which agency is at the root of measurement outcomes: it is a creative process. This subjectivity—putting agents at the heart of world-building—can play a vital role in linking us to our shared future. As Chris Fuchs so nicely expresses it: “our actions matter indelibly for the rest of the universe,” for quantum mechanics “signals the world’s plasticity ... [w]ith every quantum measurement set by an experimenter’s free will, the world is shaped just a little as it participates in a kind of moment of birth” ([13], p. 172). This strikes me as the kind of mindset that could evade the presentist, fatalist thinking that is damaging our world.

#### 4 Time, Selves, and Humanity

Ironically, what often isn’t discussed in these ‘future of humanity’ contexts is the ontological status of the future, and its human occupants. We get so bogged down in details of how to avoid calamities that we forget that here are deep philosophical issues involved. But depending on the nature of the future, there will be very different outcomes and very different strategies that ought to be recommended. For example, there is an unavoidable conscious sense that the present moment contains all that exists, and therefore that present selves should be given complete attention. A similar problem affects spatial distances: if we aren’t in direct contact with some problem (say, famine in Africa), then we are not so disturbed by it as if it were right in front of us, in our conscious experiences. But why should spatial proximity matter in such cases? Though it is often supposed that the folk concepts of space and time are quite distinct, here we see a similarity: the mind relegates any problem that is not nearby (in space or time) to ‘unreality.’

To a certain extent, global news and internet have closed the spatial gap, but the temporal gap (the greater problem when considering the future of humanity) seems surely unbridgeable? However, I think the temporal case is an example of a more direct connection, and the above discussion of the Qbist interpretation reveals in a small way how that might make sense. After all, the spatially distant selves are genuinely distinct individuals, while our future selves are *us*.<sup>8</sup>

<sup>8</sup> Derek Parfit [10] has famously discussed the irrationality of this ‘near-future bias’ (which he describes by means of a character ‘Proximus,’ who has a lot in common with most humans), in favour of temporal *neutrality*, whereby location in time is irrelevant

It is interesting to note that the default position for far-future events of optimists (don't have to do anything about it now) is similar in outcome to pessimists (*can't* do anything about it now).<sup>9</sup> Which relegates action to future others: *they'll* get us out of this mess later on. But without some reconfiguration of minds, the future persons will be in the same situation as us: pointing to yet more future persons, who are by then going to be in an even greater mess, and so on! Of course, I can't append *ad infinitum* here because there is a terminus to this passing on of responsibility: annihilation! Despite all of the dangers we are told about, humans get pulled into to one of two positions:

1. The future simply isn't real (so what can I do about it).
2. The future is already real (so what can I do about it)

Quantum mechanics gives some creativity to humans, as we have seen. They can carve reality. If humans had the belief that they were involved in the creation of reality, they would be more committed to their future and forge a third way. If one is aware that each action is creating the future, and creating a future self and a habitat for that future self, then one is liable to be more committed to making that future the best possible. In this case, the direct link between now and the future is bridged: a world of humans that are constantly aware of carving out their future selves and experiences.

Interestingly, in a different context David Mermin [8] has also drawn attention to links between philosophy of time and Qbist thinking. He points out that the 'obvious' existence (to a subject) of a Now (a local present) has been viewed as opaque to physics. Mermin, as with other Qbists, argues that the present moment can be incorporated into a physical description by invoking Qbist thinking: subjective experience, (usually excluded from physical science), is the fundamental thing, and, as he argues, space-time is an inference (an abstraction) from this. If we do not think of future experiences as given *sub specie aeternitatis* then we are more closely involved with them: we have some control over them.<sup>10</sup>

## 5 Out with the Amygdala!

It's all very well saying that these curious quantum mechanical and high-falutin' philosophical ideas can have profound applications: but how do they fit the real world? To get some idea of how they might be realised, let's consider the Stanford Marshmallow experiment, led by Walter Mischel [9].<sup>11</sup> Here children were offered two options:

1. Take one marshmallow right now.
2. Wait 15 minutes and get two marshmallows.

Not surprisingly, there were differences partitioning the experimental population into two groups. There's controversy over just what the differences reveal—some children might be fine with one; some children might be adapted to an unreliable environment (leading them not to expect the second marshmallow). However, it seems that in some cases *delayed gratification* is playing a role. This concept clearly involves *time* in a fundamental way. One is delaying some immediate pleasurable outcome so that one's future

from a moral standpoint (using a similar comparison with spatial relations)—though I have framed things in terms of one's personal future experience (which runs counter to Parfit's principle of a more impersonal, outward-looking moral stance).

<sup>9</sup> Studies suggest a temporal bias whereby optimism about the future grows with the temporal distance from the present [7]. Economists model this phenomenon by the method of 'hyperbolic discounting' (which is known to be an inconsistent scheme, yet models human behaviour far better than any consistent model [18]).

<sup>10</sup> Whether there 'really is' a block universe or not does not matter from this point of view: all that matters is our *stance*. Even in a block view there is a role for local creation of one's future experiences. Note that I am not seeking to defend Qbism here either, but only using it as an example of how sense can be made of a participatory scheme in which we play a co-creative role in making the Universe what it will become.

<sup>11</sup> See Joachim de Posada, "Don't Eat the Marshmallow!", for a review of this classic experiment: [http://www.ted.com/talks/joachim\\_de\\_posada\\_says\\_don\\_t\\_eat\\_the\\_marshmallow\\_yet](http://www.ted.com/talks/joachim_de_posada_says_don_t_eat_the_marshmallow_yet).

self is even better off. One is actively engaged in *constructing* a happier future self. There has to be some underlying mechanism binding the delay group's present selves more closely to their future selves.<sup>12</sup>

I have been suggesting that human motivation and decision-making is at the root of humanity's problems. Humanity has an impulse control disorder. It plays the short game ('hyperbolic discounting'). It's the same lack of self-control that is responsible for impulse buying, bingeing, etc., and is an emergent manifestation of the biology of addiction. Understanding these can point to way out of these problems. The title of this section is not meant to be taken too seriously: the amygdala is part and parcel of the learning mechanism (since it is implicated in the [negative and positive] reward system: [6]) and needs to be *used* rather than removed! It is not unlikely that the same mechanisms lying behind addictive behaviours is also behind the irrational behaviours associated with procrastination: the immediate (counterproductive) response (*not* doing the work one is supposed to be doing), triggers the same kind of reward that smoking a cigarette does for an addict. If this neurocircuitry could be intervened in (by therapy, teaching, or even biomedical intervention as [11] argue), then one might isolate the mechanism responsible for human self-destructiveness.<sup>13</sup>

There is a relatively simple neurobiological basis for such apparently aberrant behaviour. The brain rewards pleasurable actions, which increases the likelihood of *repeating* the action—and procrastination is more pleasurable than hard work! Repeating the action also decreases the pleasure provided (i.e. reduces dopamine production), which demands more of the action, and so on. Linking this back to our theme, the idea is that the more one procrastinates, the more one procrastinates. Since global problems (such as repeated collapse of societies) emerge from these small local events, an intervention at this level could have dramatic emergent consequences. Our reward circuitry needs to be reconfigured in the light of changes in human existence. It is adapted to a very different (more primitive) kind of existence.<sup>14</sup> The good thing is, the reward system is highly persistent once some pathway has been established. If one can set up positive pathways for future-based thinking, then they are likely to be fixed in the hippocampus and become habitual.

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To finish, I might throw in a wild hypothesis: Individuals with Asperger's syndrome (or a certain form of autism spectrum disorder, according to DSM-V) seem to have 'amygdala deficits' that match remarkably closely what I have been viewing as *positive* characteristics, in terms of enhancing our chances of survival. They have an ability to intensely focus on tasks and engage in goal-directed (i.e. future-pointing) behaviours. They often seem better at regulating their impulses and not being pulled into crowd scenarios. Their social brain 'deficits' confer a humanity-level advantage. Perhaps they are better adapted for the

<sup>12</sup> Mischel argued that increased capacity for delaying correlated with decreased behavioural problems and increased intelligence in later years—this seems entirely unsurprising to me, but still highly relevant from the point of view of this essay competition.

<sup>13</sup> These connections are clearly testable by fMRI techniques which would reveal a similar pattern of oxygen utilisation in specific areas (e.g. activation in the orbitofrontal cortex, prefrontal cortex, anterior cingulate, extended amygdala, and the ventral striatum). It is possible to locate (initially by gene knockout) specific genetic markers for susceptibility to instant-gratification type thinking, just as one might locate genetic markers responsible for addictive behaviours [3]. In addition, certain experiments performed on mice to knock out specific receptors believed to be implicated in addiction have led to a reduction in addictive, self-destructive behaviours.

<sup>14</sup> The existence of temporal biases are well known in psychology, and in most cases a good evolutionary reason can be found that would have benefitted our ancestors, but can backfire on us. We need to be transhuman in the sense of transcending these kinds of primitive instant reward (where's the next meal coming from?) type processes. So much of the stupid behaviour in the world is caused by the same kinds of reactions that our distant ancestors employed which were useful for them, but are leading us to ruin. Merely explaining that and why we have these various mechanisms leading to such temporal biases does not *justify* them, and if we have the power to eliminate them to insure survival of the species, and hopefully make us better beings in the process, then we ought to do so.

kind of world that requires more rational thinking? Rather than acting on fast-system information (such as facial expressions), so crucial to our ancestors, they operate on slower inferential systems.<sup>15</sup>

This is slightly tongue in cheek, of course. But it is clearly true that there are fairly large individual differences in impulse control and goal-directed behaviours, and these translate into an ability or inability to plan rationally and choose actions that do not necessarily generate immediate pleasure but serve to either generate beneficial future outcomes, or an avoidance of negative future outcomes. By focusing on these individuals (on where the differences lie), I feel we could go a long way to resolve some of humanity's worst excesses. Moreover, it needn't lead to a world in which humanity has been totally eradicated.<sup>16</sup> Combined with a perspective shift loosely informed by Qbist-type stances, and non-presentist thinking, we can allow humanity to steer itself out of danger—though ultimately, this viewpoint suggests that 'steering' is the wrong metaphor, since that implies a fixed, ready-made terrain *through which one steers*: I prefer the metaphor of *improvising* the future.

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<sup>15</sup> Whereas neurotypical subjects will have activation in the amygdala when, e.g., making inferences on the basis of facial expressions, someone with ASD will instead have activation in the frontotemporal regions. Similarly, one finds a failure to imitate, especially where imitation is not goal-oriented [5]. These are usually labeled 'deficits'. However, again there is a sense in which an advantage is conferred. In a standard test, a therapist will perform an irrelevant ritual (say, tapping three times on a box) before removing an item from the box, before asking the subject to do the same. Neurotypicals perform the irrelevant moves, while those with ASD do not, instead completing the task in the most efficient way. It is true that such behaviours often lead to dysfunction in society (given the neurotypical dominance), however, it is also clear that the hyper-rationality such cases display could bestow advantages. The propensity for neurotypical humans to imitate also points towards a strategy for implementing new modes of living via a concerted shift in social norms, that will be widely adopted given the mirroring mechanism (*cf* [11], p. 102).

<sup>16</sup> As posthumanists suggest, and as Roger Scruton objects to, for "[w]hy should we be working for a future in which creatures like us won't exist?" ([15], p. 230).

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