A Vision for the Future

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Abstract

In this paper I present the case in favor of a physical merging of the human species as a potential future for humanity.

1 Introduction

When discussing the medium-term future, (eighty to a few thousand years out) one topic has become a dominant theme: Mind Uploading. As the theory goes, at some point in this century our species will undergo an "uploading transition" and, as it is put, "merge with machines" and exist in VR. Any life still existing outside of VR at that point is deemed to be either worthless or extinct. The exact proposals for mind uploading do not bear further repetition.

I find every aspect of mind uploading, as it is proposed, completely repulsive. I consider any future in which all non-uploaded forms of existence are extincted in favor of more uploads and more VR simulations equivalent to the worst conceivable outcome. Therefore, I offer this proposal which may be considered either as a replacement for uploading or as an alternative choice which some members of the population may be able to choose.

Here, I will outline, as much as possible within the space, a completely different and probably equally radical proposal, but along different dimensions. Specifically, I propose that the human race evolve by physically merging into a single entity that will hybridize both organic and inorganic mind substrates. To that end, I propose a program for accomplishing that goal at roughly seventy five years in the future.

This article will briefly cover some of the motives and methods for accomplishing this. While this article is intended to be taken seriously, on face value, it may also be interpreted as a constructive argument as to why no single vision should ever be allowed to gain enough influence as to effect such a radical change. It may also be interpreted in the abstract as a thought experiment to shed light on the various philosophies by re-adjusting the scale of what can be imagined.

2 Why Would We Consider This?

Whether you consider the last twenty years, the last century, or the last ten thousand years, the conclusion is the same. We are in the middle of the most incredible and unstable time in the history of the world. The one certainty is that the world we know now will change. But it is during these times of instability that it becomes much easier to influence the shape of the world that will come later.

When one considers the social, economic, and even environmental problems that we face, one quickly realizes that one of the key enabling factors is that people who exploit or abuse other people do so because they don't have to experience the negative consequences of their actions. If we were part of the same being, then any attempted bad action would necessarily affect the one doing them, therefore it would stop. When one considers all the resources one uses on a daily basis, and why, it shouldn't only require a mention that the proposed collective being that would live in a highly self-contained facility, would hardly require any additional resources from the environment.

While it is almost too easy to list problems that are solved by this proposal, the important question is what good things are lost and what other good things might be gained. There are indeed a number of things that would be lost. One of which is privacy. People should care about privacy because they can be harmed by what other people know about them. However, in a situation where everyone is so closely bound together, any attempt to harm another is experienced by the person attempting to do the harm. So the need to preserve privacy is nullified. Other concepts such as autonomy and the like can be successfully transitioned to the whole in a way that no "collectivist" system involving fundamentally separate humans could achieve.

There is certainly a great deal more to study regarding this question. An interesting question is how different personality types might react differently to this proposal. I will make additional points below.

3 What Will It Be Like?

This is probably the most difficult question to address. A satisfactory answer is probably impossible. A cop-out would be to say that the experience would depend on how the enabling technology was designed. A slightly better question is to ask what would be the best way to engineer the technology and what effect would that have on a participant's experience. The most striking feature of the state of being is that you would not have any of your conventional senses, at least, not at the lowest level of the system. Your only physical sensations would be some portion of the collective's embodiment. Everyone in the collective would have a small responsibility to monitor the health of part of the collective. However, you would also have new senses. While it's difficult to describe, what this new sense would do is allow you to sense and communicate with nearby minds and share thoughts and dreams.

Layered on top of that level of experience, computer mediated senses and VR spaces may also be provided. Avatars or physical mobile robots may be provided through mind melding with the AI on each respective platform. The most problematic part of trying to describe this is that minds will gradually become less and less distinct as separate entities, the boundary of what a mind is will be blurred almost beyond detection. So, at some time after the merging, it will be very difficult to say that one formerly individual mind is acting and another is not.

Necessarily, there will have to be modifications to the human brain to adapt it to this mode of being. I propose that these be strictly limited to what is absolutely necessary for adjustment to take place.

4 How Would It Be Done?

The issue with this proposal that supersedes all of the others is how it would be accomplished. If a technical solution for implementing this proposal were not feasible, then this paper is nothing more than a philosophical speculation. On the other hand, if there were no method by which the proposal could be introduced into society, then the technology would only ever be used on a small scale, if at all. Because the technical problems are more important, they will be addressed first even though the sociological aspects are, arguably, more interesting.

4.1 Technical Overview

On first blush, the proposal of merging people together at a large if not species-level scale is completely absurd. Heck, we have enough trouble simply curing diseases and extending life. So, therefore, the first thing we should do is to go back to first principles and see if there are any impossible steps between the starting point and the goal. Doing so will also illustrate the details of the proposed process and the final outcome.

At the highest level, merging is a form of transformation, where you have a starting point, ie several bodies, and a finished product, ie a single body. Because this is nothing more than pushing molecules around, there is no fundamental problem here. All of the problems are technical and are, in principle, solvable, which is not to say that they can be solved with available resources.

Almost all medical problems can be stated as software problems. That is to say that you get sick or grow old because your cells lack the software to make the necessary repairs. This proposal will require capabilities well beyond what is possible with DNA. The only reasonable approach is to use molecular nanotechnology. So the first step will be to introduce nanites into human cells and tissues and add the capacity to make anatomical changes and to eliminate the accumulation of cellular level waste products such as the dopamine crystals found in the STN region of the brain. At the same time, it would be highly advantageous to make improvements to the main metabolic systems so that the ATP phosphorolation process can be accomplished by some form of electrical power instead of the complex and wasteful metabolism we have now. This change will make supporting the new lifeform much easier.

The problem then becomes designing and directing many quadrillions of these nanites. Given the number of moleculuar species found in biology and the environment, this task can only be addressed by AI. This means that the entire project requires post-singularity technologies. The term "singularity" is starting to enter the vernacular, so I won't waste precious characters on it. Needless to say, this proposal requires that it is possible to control the singularity enough to survive it and have enough freedom to choose to be something other than a mind upload.

The only trouble with nanotechnology is that it sounds suspiciously like a magic wand. Unfortunately it is difficult to say exactly where science ends and magic begins at this early date with regards to nanotechnology. Here we are only claiming the ability to re-arrange living tissues. The only requirement seems to be to maintain a functional configuration at each step of the way, which seems reasonable enough.

So if those things are easy, then what is hard? Okay, I'll tell you what will almost certainly be the most difficult, and also the simplest. The problem I'm talking about is heat. The heat problem will place more severe constraints on the physical structure of the shared body than any other engineering problem. The metabolic heat of all the cells in the combined body will, eventually, radiate all supplied energy as heat. A high-density design, such as a sphere, will quickly heat up to the temperature of molten lava. Therefore the combined body will have a fractal shape in either two or three dimensions such as that of a root system or rhizome. Additionally, active cooling through a heavily redundant chiller system will almost certainly be required.

While the exact thickness of any node in the interconnected network can't be calculated without a great deal of additional data, it becomes immediately obvious that there are strict limitations on how densely brains can intertwine too, requiring a technological solution for large-scale interconnection. I will return to this issue in section 5.

4.2 Sociological factors

It might seem unthinkable that society could possibly accept the outcome proposed here. It is, if nothing else, interesting to contemplate what a program, or, conspiracy, if you will, to implement this proposal might look like. To understand how this proposal will work, it is necessary to understand how probable future events and trends as well as intermediate components of this and related projects will interplay. Because the exact ordering of events is not yet known, the following timeline will be fairly vague.

The first thing the project to carry out this proposal needs to do is to inject the meme that it might one day be technologically feasible to create a superorganism by merging people together. It is not necessary, or even really desirable to present the idea in a positive light, just present it in such a way that the idea can take root and simmer away in the back of people's minds. This is usually done through movies, sometimes TV, though TV is in decline these days. This meme should be maintained, as necessary, for the duration of the project. This is so that the culture can adapt to the idea.

The project can't really do anything else until precursor technologies to the final objective start becoming available. During these years a number of things will likely happen. There will probably be a third world war, as was predicted in the 1880's. This war will be bought by the 1% (really 0.1%) and paid for by a hundred million or more of the 99%. It is even possible that this war will be under way by the time this is published.

The monstrous and growing level of financial inequality and disenfranchisement will provoke a series of revolutions in first world countries. These revolutions will result in some reforms but these reforms will be superficial, at best, in countries with more than a few million people. The existing power structure will make a few small sacrifices to appease the mobs and then continue on as if nothing had happened.

Around fifteen to twenty years from now, the first technological advances related to this project could become available to the public, namely neural interfaces. Neural interfaces will advance this project in a number of ways. First, even though this can be avoided, I would propose neural interfaces only offer limited capabilities when people are in a normal awake state, and only function at their full capacity when the senses are suppressed, as they would be when merged. Second, I would propose that software that permits the user to simulate the experience of merging and living as a part of a collective be a standard feature of all neural interface systems. It should just be a feature that's just there like card games on Windows. This is in order to advance the acceptance of the concept and allow people to play with it in relative safety. Finally, many people will be much more attracted to the idea of merging minds than bodies. This can be facilitated through a sufficiently advanced neural interface. However, the inherent limitations of maintaining a high reliability connection over inherently spotty and imperfect networks will naturally encourage such hive minds to consider a physical merging. To be clear, under no circumstances would I condone using the neural interface device to directly manipulate the emotional state of the user.

Around this time, technological unemployment will reach crisis levels as the same technology that makes neural interfaces possible, will also make most jobs redundant to AI. At this time, necessity will either mandate that basic goods be provided for free or that everyone will be granted a living income as a right. It is also expected that Agenda 21 will have moved forward and that the living space and conditions of the average citizen will be significantly reduced.

In the 30-40 year timeframe, the technology for manipulating living tissues should have developed. People who make use of this technology will be able to appear any way they choose and be able to pass themselves off as a teenager regardless of their chronological age. This will go a long way to reducing the revulsion one might feel about the idea of merging with someone who is already advanced in age. At about this time as well I expect the uploaders to make their move and push for everyone to be uploaded. Unfortunately, too many people appear to lack a self preservation instinct that would prevent them from killing themselves in favor of a digital copy.

I pray that the combination of physical body customization along with the ability to use neural interfaces to access VR will be sufficient to prevent the majority of people from committing suicide in that manner. Regardless of what is or is not being done with respect to the rest of this proposal, we should not allow the uploaders to stampede people into the scanning machines. Unfortunately, it won't be possible to advance the timetable on the technology for merging because it is far more important that it be done right than soon.

In the 50-60 year timeframe when the technology finally becomes available, people will be ready for it. Especially the young people who will be under extreme stresses, trying to live in a world that doesn't really need them, disconnected from their peers by technology, each living in their own VR systems, practically. These dynamics will catalyze the first uses of the technology. The technology could be slipped onto the market along with the other body modding technologies. It could be distributed in the form of a kit that would be able to accommodate only several hundred people, or roughly the size of a shipping container so that once the kit has been used, the resulting collective can be moved to a central location for eventual merging with the others.

The first users of the technology will have elected themselves the spokespeople for the entire project. It is therefore critical that their experience be as enjoyable as possible which means that the technology must be very mature before it is made available. It is also important that the process of merging doesn't trigger the disgust reflex or be painful in any way. While people probably don't, generally, have an instinct that explicitly tells them not to try to merge, they certainly do have instincts for the preservation of bodily integrity. Therefore it is necessary to engineer the system so that it doesn't trigger these instincts.

It is more probable that younger people will use the technology if it is first outlawed, becoming available on the black market for a nominal cost. There might be some more mainstream religious groups demanding access to the technology. Certain sects are strongly compatible with the idea of merging because they see people as being fragments of a single divine whole. Under such a worldview, this kind of merging might seem to be perfectly natural.

From there on, I would propose that the project simply play the numbers, simply maintain the rate of merging above the birth rate and, mathematically, the entire species will eventually join the collective. The fly in the ointment are the uploaders. Depending on how aggressive they are, the merging project should match their activities move for move so that people would be able to chose between the two options.

Yes, this is an agenda. In the broader scheme of things it is far more benevolent in its intentions and far gentler in it's approach than other agendas that are evidently in play. Furthermore, in the presence of the clear agenda by the advocates of mind uploading, this agenda of giving people the choice to merge instead seems almost imperative.

5 Hybrid Superintelligence

Lets now consider the future development and evolution of the collective and discuss how it relates to other singularitarian ideas. Consider the problem of superintelligent AI. Assuming we can get it past the "no flesh shall be spared" failure mode, how do we use it? Some would argue that something so powerful shouldn't exist. Realistically, that is not a stable solution. Other proposals on the table include programming it so that it provides for humanity. Is that really the kind of position that we want to be in? It may do exactly what we want it to but where does that leave us? We would permanently be in a second class status. From there, the options get even poorer. If we give over control of the system to any elite group, regardless of how benevolent they may actually be, they would be in a position to dictate terms to the rest of us.

But, consider the possibility presented here. Within a few hundred years of the physical merging, the minds in the collective will have adapted to being one being. This organic intelligence can be cross-linked to the digital intelligence to create an even more powerful system, a system that you, yourself, could be a part of. This would appear to be a much better solution because it doesn't try to deal with the superintelligent AI system as a separate entity, but rather provides a solution that allows everyone to take part in it.

Another interesting thing should be pointed out with respect to the total intelligence of the collective. While uploaders talk about increasing *speed*, there is no philosophically justifiable means for increasing the size and capacity of an uploaded mind. This is because the basis for producing the initial upload is based on the pattern being identical to the biological brain. The addition of more capacity requires significant structural changes to the mind, which is irreconcilable with the basis on which identity is claimed in the first step and is therefore not permissible.

In a collective situation, the massive redundancy one finds between human minds can be reduced as each mind can specialize to a much higher degree than possible as a separate entity. The tight interconnection between minds, through several layers of networking over several scales, can achieve a vastly greater cognitive capacity than an upload. Furthermore, because the basis of identity and consciousness remains simple spatial, physical, and causal continuity all the way back to the conception of each participant in the merging, there is no contradiction in growing additional neural tissue or making minor tweaks to axons and dendrites.

By cross-linking with a pure AI system, the collective will have access to the full speed of computer based cognition without the necessity of several layers of emulation and virtualization that would be required to run an upload. Even a collective of a few average people cross-linked with an AI based on one tenth the total hardware used to run an upload, should be able to out-perform said upload on every cognitive task. Similarly, on a species scale, a given collective would outclass the same number of people being uploaded, regardless of the speedup factor because the collective would be functionally much more efficient and would be able to process much larger ideas than any single human brain or scan thereof could handle.

6 Conclusion

If nothing else, I hope this essay has given you food for thought. When making Big Decisions about how the species or, more precisely, each of us should evolve, we should not limit ourselves to concepts that have been bouncing around in various forms since the 1980's, if not earlier. Please, I beg of you to think for yourself about all of the possible options, even the ones that nobody has even thought of much less spoken aloud. I, for one, absolutely do not want to be uploaded. I would much rather join a collective being, as proposed. Heck, I could even be tempted into it without any external impetus. The only thing better than this proposal is a world in which everyone gets a chance to evolve in any way they desire, unfortunately there may be some severe challenges in getting to such a future.